

CUYAMA BASIN GROUNDWATER SUSTAINABILITY AGENCY

STANDING ADVISORY COMMITTEE

Committee Members

Roberta Jaffe (Chair) Brenton Kelly (Vice Chair) Brad DeBranch Louise Draucker Jake Furstenfeld Joe Haslett Mike Post

Hilda Leticia Valenzuela

AGENDA

May 30, 2019

Agenda for a meeting of the Cuyama Basin Groundwater Sustainability Agency Standing Advisory Committee to be held on Thursday, May 30, 2019 at 4:00 PM, at the Cuyama Valley Family Resource Center, 4689 CA-166, New Cuyama, CA 93254. To hear the session live, call (888) 222-0475, code: 6375195#.

Teleconference Locations:

Cuyama Valley Family Bolthouse Properties

Resource Center 11601 Bolthouse Drive, Suite 200

4689 CA-166 Bakersfield, CA 93311

New Cuyama, CA 93254

The order in which agenda items are discussed may be changed to accommodate scheduling or other needs of the Committee, the public or meeting participants. Members of the public are encouraged to arrive at the commencement of the meeting to ensure that they are present for Committee discussion of all items in which they are interested.

In compliance with the Americans with Disabilities Act, if you need disability-related modifications or accommodations, including auxiliary aids or services, to participate in this meeting, please contact Taylor Blakslee at (661) 477-3385 by 4:00 p.m. on the Friday prior to this meeting. Agenda backup information and any public records provided to the Committee after the posting of the agenda for this meeting will be available for public review at 4689 CA-166, New Cuyama, CA 93254. The Cuyama Basin Groundwater Sustainability Agency reserves the right to limit each speaker to three (3) minutes per subject or topic.

- 1. Call to Order
- 2. Roll Call
- 3. Pledge of Allegiance
- 4. Approval of Minutes
- 5. Groundwater Sustainability Plan
 - a. Groundwater Sustainability Plan Update
 - i. Discussion on GSP Public Draft
 - 1. Summary of Comments
 - 2. Sustainability Goal Definition
 - 3. Basin-wide Undesirable Results (30% of Wells Exceeding Thresholds)

- 4. Interim Milestones for Representative Wells
- 5. Adaptive Management Triggers
- ii. Model Sensitivity Analysis
- b. Stakeholder Engagement Update
- 6. Groundwater Sustainability Agency
 - a. Report on the Standing Advisory Committee Vacancy
 - b. Report of the Executive Director
 - c. Board of Directors Agenda Review
 - d. Report of the General Counsel
- 7. Items for Upcoming Sessions
- 8. Committee Forum
- 9. Public comment for items not on the Agenda

At this time, the public may address the Committee on any item not appearing on the agenda that is within the subject matter jurisdiction of the Committee. Persons wishing to address the Committee should fill out a comment card and submit it to the Executive Director prior to the meeting.

10. Adjourn

Cuyama Basin Groundwater Sustainability Agency

Acronyms List

ARMA Autoregression Moving Average

BOD Board of Directors

CA California

CASGEM California Sustainable Groundwater Elevation Monitoring

Cuyama Valley Recreation District

CB Cuyama Basin

CBGSA Cuyama Basin Groundwater Sustainability Agency

CBWD Cuyama Basin Water District

CCSD Cuyama Community Services District
CDEC California Data Exchange Center
CVCA Cuyama Valley Community Association

DMS Data Management System

DWR California Department of Water Resources

EKI Environment & Water, Inc.

ET Evapotranspiration

FRC Cuyama Valley Family Resource Center

FY Fiscal Year

CVRD

GAMA Groundwater Ambient Monitoring and Assessment Program

GSA Groundwater Sustainability Agency
GSP Groundwater Sustainability Plan
HG Hallmark Group (Executive Director)
ITRC Irrigation Training & Research Center

IWFM Integrated Water Flow Model
JPA Joint Exercise Powers Agreement

Kern County of Kern

NOAA National Oceanic and Atmospheric Administration

NWIS National Water Information System

PRISM Parameter-elevation Regressions on Independent Slopes Model

SAC Standing Advisory Committee
Santa Barbara County of Santa Barbara

SBCWA Santa Barbara County Water Agency

SGMA Sustainable Groundwater Management Act

SLO San Luis Obispo County

SWCRB State Water Resources Control Board

TAF Thousand Acre Feet

TO Task Order

USDA U.S. Department of Agriculture

USGS U.S. Geological Survey Ventura County of Ventura

W&C Woodard & Curran (GSP Development Consultant)

WMA Water Management Area

WY Water Year

Cuyama Basin Groundwater Sustainability Agency Standing Advisory Committee Meeting

April 25, 2019

Draft Meetings Minutes

Cuyama Valley Family Resource Center, 4689 CA-166, New Cuyama, CA 93254

PRESENT:

Jaffe, Roberta – Chair
Kelly, Brenton – Vice Chair
DeBranch, Brad
Draucker, Louise
Furstenfeld, Jake
Haslett, Joe
Post, Mike (telephonic)
Valenzuela, Hilda Leticia
Beck, Jim – Executive Director
Hughes, Joe – Legal Counsel

ABSENT:

None

1. Call to Order

Chair Roberta Jaffe called the Standing Advisory Committee (SAC) to order at 4:02 p.m.

2. Roll Call

Hallmark Group Project Coordinator Taylor Blakslee called roll of the Committee (shown above).

Cuyama Basin Groundwater Sustainability Agency (CBGSA) Board of Directors Chair Derek Yurosek was present telephonically and Board Director Jane Wooster was present in person.

3. Pledge of Allegiance

The pledge of allegiance was led by Chair Jaffe.

4. Approval of Minutes

CBGSA Executive Director Jim Beck presented the March 28, 2019 SAC minutes for consideration of approval.

Committee Member Louise Draucker commented that the minutes incorrectly captured the Committee Member that made the motion on page 4 and corrected it to say, "Committee Member Louise Draucker made a motion."

MOTION

Vice Chair Brenton Kelly made a motion to adopt the March 28, 2019 CBGSA SAC meeting

minutes. The motion was seconded by Committee Member Joe Haslett, a roll call vote was made, and the motion passed.

AYES: Committee Members DeBranch, Draucker, Furstenfeld, Haslett, Jaffe, Kelly,

Valenzuela

NOES: None

ABSTAIN: Committee Member Post

ABSENT: None

Chair Jaffe asked that the dynamic version of the glide path tool be made available on the website. Woodard & Curran's (W&C) Senior Water Resource Engineer Brian Van Lienden said we will add this to the website.

CBGSA Executive Director Jim Beck complemented the SAC and said the planning roadmap really shows all the work and time the SAC put into this process and thanked them for their involvement in achieving our current position.

5. Groundwater Sustainability Plan

a. Groundwater Sustainability Plan Update

Mr. Van Lienden provided an update on Groundwater Sustainability Plan (GSP) activities, which is included in the SAC packet.

Committee Member Haslett asked how to comment on the executive summary. Mr. Van Lienden replied comments on the executive summary will be processed through the GSP comment process.

Chair Jaffe asked that the note on climate change be added to the GSP Discussion Approach and Terminology slide. Mr. Beck said this will be corrected.

Cuyama Valley Family Resource Center's (FRC) Executive Director Lynn Carlisle asked when the monitoring plan will be discussed. Mr. Van Lienden said the monitoring plan will likely be discussed in the January 2020 time period.

GSP Outreach the Catalyst Group's Mary Currie provided an update on the GSP public review and adoption process.

Chair Jaffe asked for more information regarding the period between the intent to adopt and the public hearing. Mr. Beck stated that legal counsel Joe Hughes was present telephonically and may be the appropriate person to answer her question. Mr. Hughes said the 30-day comment period we are in now is not required by the Sustainable Groundwater Management Act (SGMA), but rather a best practice, which serves as a first pass to incorporate comments that can affect the plan before the final draft is made available for review. He said wherever the public hearing is, the County's will have 30 days prior to that to schedule a meeting and express any concerns they have. Mr. Hughes said the 90-day comment period is the official comment period where the public can make their comments that will be received by the Board at the public hearing which will be conducted by the CBGSA Board. Comments at the public hearing can be written or oral.

Chair Jaffe asked how the County review period works. Mr. Hughes said they do not receive comments but make comments. He said the first 30 days is to make comments and confer with the

CBGSA on any issues they may have. Mr. Beck commented that the County also serves on the Board, so they would be effectively commenting either way.

Vice Chair Kelly asked if the County's do not have to put the GSP approval on their county agendas but can vote for the county on the CBGSA Board. Mr. Hughes confirmed this and said this is how the CBGSA was structured in the Joint Exercise of Powers Agreement.

Landowner Sue Blackshear said there is not an indication of a follow-up meeting succeeding the public hearing in October 2019. Mr. Hughes said there is nothing in the SGMA statues that specify the process concluding the public hearing, but it will likely be similar to any other document review and you would consider and incorporate comments where necessary.

Mr. Beck said you usually get feedback in the context of the public hearing regarding how comments are treated going forward.

Vice Chair Kelly asked if the additional meetings from the planning roadmap are still budgeted going forward. Mr. Beck said we plan on recommending moving to a bimonthly meeting cadence for both the Board and SAC meetings.

Mr. Blakslee said we plan to have the June 27, 2019 SAC and July 10, 2019 Board meetings in which we would discuss the draft GSP and address public comments from the 30-day comment period, and then in July 2019, issue the notice of intent to adopt kick-starting the official 90-day public comment period.

Committee Member Jake Furstenfeld asked what the worst-case scenario would be from the California Department of Water Resources (DWR) if they do not agree with our plan. Mr. Beck said the statues provide for a 2-year review period by the State, but he does not expect radio silence and expects multiple iterations of revisions to occur during that time.

Committee Member Brad DeBranch asked if DWR will be running the model. Mr. Beck said he does not expect that.

Committee Member Louise Draucker asked what they will be checking the model for then. Mr. Beck said DWR typically will check the boxes to make sure you have all the right sections, but this GSP will have a technical review component where they will be evaluating the appropriateness of the GSP components that drive sustainability.

DWR regional representative Anita Regmi said there will also be legal review of the GSP.

Ms. Blackshear asked how many plans DWR is reviewing in that 2-year period. Mr. Beck said there will be many. He said even though Kern County is in 1 out of 21 overdraft basins, they will have 17 plans just from one basin that are of similar complexity to Cuyama.

Chair Jaffe noted that we effectively have 3 comments periods: 1) an informal 30-day comment period, 2) and official 90-day comment period leading up to the public hearing, and 3) a 60-day DWR public review period. She asked if these comment periods hold equal weight. Mr. Hughes said these comment periods are aimed at different things. He said the current 30-day comment period is something the CBGSA is offering up to receive public comments where the goal is to fix any issues with the GSP. He said the 90-day period is on the clock and hardwired into SGMA. During this review

period you do not want to just hear of problems that could have been fixed in the informal 30-day comment period. Lastly, he said you have the opportunity to comment on the GSP when it goes to DWR if you feel a concern you addressed was not met.

Ms. Carlisle said she was under the impression that there would be a printed copy of the GSP at the FRC and the library. She said it is not very conducive to a disadvantaged community to not have one and asked if this can be considered. Mr. Beck said we are being consistent with the decisions to reduce printing to be green, but also to be cost sensitive. He said we will add the cost of a printed copy to the out-of-scope memo and check with the Board on this. Mr. Beck said we were hoping folks could read it on computers at the FRC. Ms. Carlisle said the library is not open all the time and they close at 4:00 p.m., therefore having a printed copy will allow residents to take it home to review.

Committee Member Leticia Valenzuela said for most of the people living in town, it is very hard to download such a large document. She also commented that the library hours are not conducive to folks' working hours. She said if we really want comments from the community, they need a hard copy.

Committee Member Haslett suggested contacting your local county representative to see what they can provide. Also, he suggested putting the document on flash drives, but Committee Member Valenzuela commented that not many people have computers.

Mr. Beck said Hallmark Group will provide 10 flash drives containing the GSP to the FRC.

Grapevine Capitol Partner's Ray Shady said he will provide a color copy of the GSP to Ms. Carlisle at the FRC.

i. Discussion on GSP Public Draft

Mr. Van Lienden provided an overview of the chapters in the draft GSP.

Vice Chair Kelly commented that there are additional appendices, and Mr. Van Lienden confirmed this and said W&C just highlighted a couple key ones in the slides.

Chair Jaffe suggested folks not get too into the weeds on chapter-related questions since the document was just recently released in its draft form.

Chair Jaffe asked if there can be comments made on chapters that have been approved by the Board. Mr. Beck confirmed that they can comment on any part of the GSP.

Chapter 1 – Agency

There were no comments from the SAC on this chapter.

Chapter 2 – Basin Setting (HCM, Groundwater Conditions, Water Budget)

Ms. Carlisle asked what level of comment would cause a change. Mr. Beck said we are interested in all comments. However, some comments may not allow for current changes due to budget and schedule, but they can be valuable as we update the plan in the next five years.

Vice Chair Kelly said there may be a number of situations impractical to change, but

something to address in the future. He asked if there is anything to prompt the Board to take some of these items back up in the future. He asked if there is a way to trigger these discussions for the future. Mr. Beck said his expectation is that we will receive comments on the implementation plan, which is the appropriate section to comment on future activities. He expects the Board to provide further direction on comments received on this section for the potential future actions they would like to take.

Mr. Van Lienden reported that he circled back with the Santa Barbara County Water Agency regarding their comments on the Groundwater Conditions section, which are reflected in the GSP draft.

Committee Member Haslett said the overdraft conversation only applies to the Central basin. He said the executive summary reads as if the entire basin is in overdraft when in fact only a specific area is. Mr. Beck said he agrees, but SGMA requires a description of the entire basin. Committee Member Haslett commented that someone who has not gone through all of the information would be very misled as to the status of the basin. Chair Jaffe said we have dealt with this by breaking the basin out into regions. Committee Member Haslett said he agrees with that, but the executive summary does not read this way. Mr. Van Lienden said reporting subbasin results is problematic because it is not clear on where to draw the lines.

Mr. Beck said Committee Member Haslett's point is well taken, but DWR will come up with one number for the basin, which is not quite fair, but that is the way DWR requires it. Committee Member Haslett said there is only one statement at the end of the executive summary that explains that.

Ms. Blackshear suggested including an additional piece of information that shows the Central basin and the entire basin, so folks can see that the problem lies predominantly in the Central basin.

Chapter 3 – Undesirable Results

Vice Chair Kelly said he had a problem with this chapter. He noted that the 30% trigger for failure of wells is surprising because they have not had a chance to review that number. He said 20 wells could fail in the Central basin and not trigger undesirable results. Mr. Van Lienden said Vice Chair Kelly is right, and W&C developed a number they thought was reasonable but are open to changes.

Mr. Beck said if any well goes below its threshold you will be required to explain how you will mitigate this in the annual report.

Ms. Carlisle said the CBGSA has had so much hands-on various topics and issues and finds this omission odd.

Mr. Beck said 30% is one of the lowest caps he has seen for non-containment in other basins. He has seen as high as 50%. Mr. Beck said he believes 30% is a reasonable number, but the SAC is right in that this is something that we should revisit with the SAC and Board.

Committee Member Draucker asked how climate change was determined. Mr. Van Lienden said DWR provides recommended approaches and W&C used those, particularly one called

the central tendency.

Chair Jaffe encouraged anyone with comments to submit them.

Chapter 4 – Monitoring Networks

Vice Chair Kelly said he understands that the CBGSA will be responsible for monitoring going forward and asked if monitoring is done by CBGSA staff, the counties, etc. Mr. Beck said it is a Board decision, but we will determine these questions after the GSP is submitted.

Chapter 5 – Minimum Thresholds, Measurable Objective, and Interim Milestones

Vice Chair Kelly said he understands that the interim milestones are in five year increments, however these have not been set. Mr. Van Lienden said they assumed the basin wanted to keep levels above the minimum thresholds between now and 2040 and so they set all interim milestones equal to minimum thresholds.

Mr. Beck said he believes there are three key milestones in this area: 1) are we making progress on the glide path, 2) do the measurable objectives equal the target area we want to operate in, and 3) have we violated minimum thresholds.

Vice Chair Kelly said early on we were looking at DWR's milestone goals to improvement and now it seems that the milestones are set to do no worse than the worst we can do. Mr. Beck said this is getting in to a discussion on revisiting the thresholds, but the Board adopted thresholds that they felt were the appropriate for each region and understands there is likely still disagreement on this, which is part of the public comment process.

Mr. Van Lienden said with setting the glide path we know levels will go down, but by setting the interim milestones and the minimum thresholds we are saying levels will not go below these levels.

Chair Jaffe asked if there has been anything that looks at the connection between the glide path and minimum thresholds. Mr. Van Lienden said not directly since with the modeling we do not have enough idea of how the pumping reductions will be done.

Mr. Beck said the Board will be determining when they will be doing modeling updates during the implementation plan.

Chair Jaffe said if the glide path keeps us below minimum thresholds we will have a problem. Mr. Beck said the data on this is raw and it is hard to say. He said the glide path will give us a starting point and we will have to modify the model going forward. He said you will need to hold all this loosely.

Ms. Wooster said in preparing the Executive Summary, W&C took it upon themselves to arbitrarily fill in certain areas such as setting milestones and asked if it would be appropriate to get a list of what these items are. Mr. Van Lienden said this was not in the draft Sustainability section and needed to be included, but since this is the first time they appear in the document, right now is the time to comment on them.

Mr. Beck said we can document these items and provide the Board with a list of these items.

Vice Chair Kelly commented that the three milestones seem to equivalent to the minimum thresholds, and asked if without any difference in milestones, will this satisfy DWR. Mr. Van Lienden said he believes it will.

Chapter 6 – Data Management System

Vice Chair Kelly asked if filling in data gaps of wells will be added in the implementation plan. Mr. Van Lienden said we still need to work out what we are doing, but his desire is to fill some of these gaps.

Chapter 7 – Project and Management Actions

Mr. Van Lienden reported the SAC and Board have not seen this chapter before, however it was written to reflect the discussions and information decided by the SAC and Board.

Ms. Carlisle asked when actual measurements will be used to true up the management area boundary. Mr. Beck said we are not looking at the actual measurements to determine model results, the actual measurements may inform the model contents. We may modify the model based on actual results. Ms. Carlisle asked how an area could come into a management area. Mr. Beck said the model could be wrong and when we update it, we could come up different results. He said there could be changes in land use, climate data and precipitation.

Chair Jaffe asked if there is flexibility with the monitoring network and Mr. Beck said the calibration runs will utilize well levels. Chair Jaffe asked if additional wells could be added to the network and Mr. Beck said they could.

Vice Chair Kelly asked if we can tweak the model every month. Mr. Beck said you could but it would not be useful. He recommended waiting 2 years before updating the model. He said you would likely review the model annually to decide the appropriate time to update it.

Vice Chair Kelly said the executive summary mentioned exchanges and transfers. Mr. Van Lienden said it is more of exploring the storm and flood water storage project.

Chapter 8 - Implementation Plan

There were no comments from the SAC on this chapter.

Executive Summary

Chair Jaffe thanked W&C for drafting the executive summary.

Committee Member Haslett commented that within the executive summary it appears that W&C is saying total dissolved solids (TDS) is bad but does not state the purpose. Mr. Van Lienden said this is referring to drinking water. Committee Member Haslett recommended adding that information to the summary and suggested further review.

Vice Chair Kelly commented that page 8 of the summary is blank. Mr. Van Lienden said this may be a PDF issue.

b. Technical Forum Update

Mr. Van Lienden provided an overview of the April 22, 2019 technical forum call. A summary of the issues discussed is provided in the SAC packet.

i. Discussion on Numerical Model

Mr. Beck said EKI's memo sought to adequately document the variability of the deficiencies with the model. He said they are fair comments, but we need a lot more work on this before we rely on them for the long haul. Mr. Beck said all modelers were complimentary of W&C efforts, but these were practical technical issues they recognized. He said the goal was to document the concerns and W&C will add this information to the GSP.

Chair Jaffe commented that previously W&C have responded to questions at the tech forums with written statements, however these statements are not available this time. Mr. Van Lienden said the tech forum normally provides comments on materials being presented, however this past meeting was more of an open forum.

Chair Jaffe asked for clarification regarding Cleath-Harris Geologist's Neil Curries' comments on potential improvements in the model's geometry in the western portion of the basin regarding the geology. Mr. Van Lienden said they are doing more detailed analysis than W&C and there is not immediate plan to change information for that area.

Chair Jaffe asked if the tech forum will continue in the implementation phase. Mr. Van Lienden said we do not have any budget or authorization, but suggested having one more to discuss the public draft comments. Mr. Beck said it would be nice to continue these meetings, but we do not have the budget, so we will bring this request up to the Board.

Committee Member Post left the meeting at 6:12 n

Committee Member Post left the meeting at 6:12 p.m.

c. Stakeholder Engagement Update

Ms. Currie provided an update on stakeholder engagement activity.

i. Review of Public Draft Comment Period

Committee Member Haslett said the 90-day period should say public comment on the slide. Ms. Currie said they distributed notices via P.O. Box holders and were able to reach more residents in the community.

Ms. Currie reminded the SAC of the upcoming stakeholder workshop on May 1, 2019 and suggested that Anita Regmi be invited to speak during the workshop. Mr. Beck said Hallmark Group will send the draft agenda for the upcoming workshop to Ms. Regmi. He commented that it may make sense to have her address DWR's roles in SGMA during the formal presentation.

6. Groundwater Sustainability Agency

a. Report of the Executive Director

Nothing to report.

b. Board of Directors Agenda Review

Mr. Beck provided an overview of the May 1, 2019 CBGSA Joint Special Board of Directors and SAC agenda. He commented that we will have an in-depth discussion on the updated cash flow, Fiscal

Year 2019-20 budget, and the 20-year implementation budget estimates.

Chair Jaffe asked where we are with the SAC appointment. Mr. Beck said we are bringing it before the Board in the out-of-scope services memo.

c.	Report of the General Counsel
	Nothing to report.

7.	Items for Upcoming Sessions Nothing to report.
8.	Committee Forum Nothing to report.
9.	Public comment for items not on the Agenda Nothing to report.
10	Adjourn Chair Jaffe adjourned the meeting at 6:31 p.m.
	utes approved by the Standing Advisory Committee of the Cuyama Basin Groundwater Sustainability Agence 30th day of May 2019.
	NDING ADVISORY COMMITTEE OF THE AMA BASIN GROUNDWATER SUSTAINABILITY AGENCY

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Vice Chair: _____



TO: Standing Advisory Committee

Agenda Item No. 5a

FROM: Brian Van Lienden, Woodard & Curran (W&C)

DATE: May 30, 2019

SUBJECT: Groundwater Sustainability Plan Update

<u>Issue</u>

Update on the Cuyama Basin Groundwater Sustainability Agency Groundwater Sustainability Plan.

Recommended Motion

None – information only.

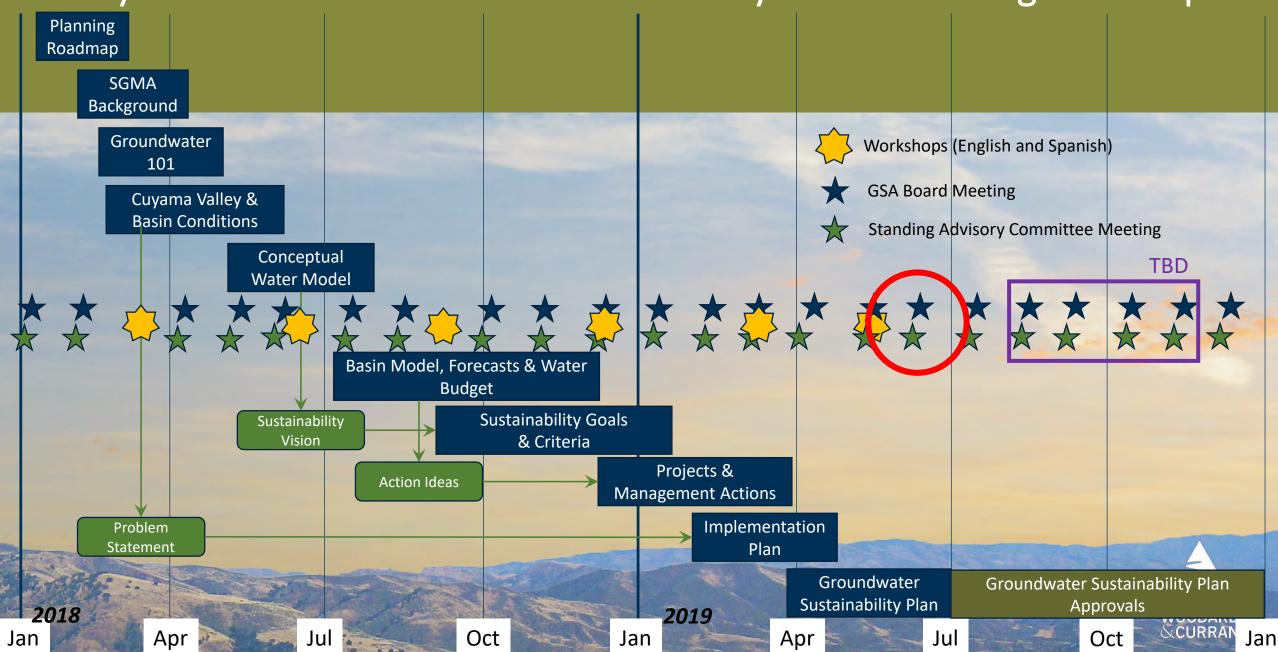
Discussion

Cuyama Basin Groundwater Sustainability Agency Groundwater Sustainability Plan (GSP) consultant Woodard & Curran's GSP update is provided as Attachment 1.

Groundwater Sustainability Plan Update



Cuyama Basin Groundwater Sustainability Plan – Planning Roadmäp



May GSP Accomplishments

- Conducted Cuyama Basin GSP Public Workshops
- ▼ Participate in discussions with Budget Ad-hoc committee
- Reviewed and developed initial responses to comments on GSP Public Draft
- ▼ Finalized invoice to DWR for payment on SGMA grant





TO: Standing Advisory Committee

Agenda Item No. 5ai

FROM: Brian Van Lienden, Woodard & Curran (W&C)

DATE: May 30, 2019

SUBJECT: Discussion on GSP Public Draft

<u>Issue</u>

Discussion on the GSP public draft.

Recommended Motion

None – information only.

Discussion

Provided as Attachment 1 are the items that W&C is seeking Board direction on to complete the draft GSP. Provided as Attachment 2 is a list of the GSP public draft commenters from the April 22nd through May 22nd 30-day public draft GSP comment period.

Groundwater Sustainability Plan Update

May 30, 2019



GSP Sections

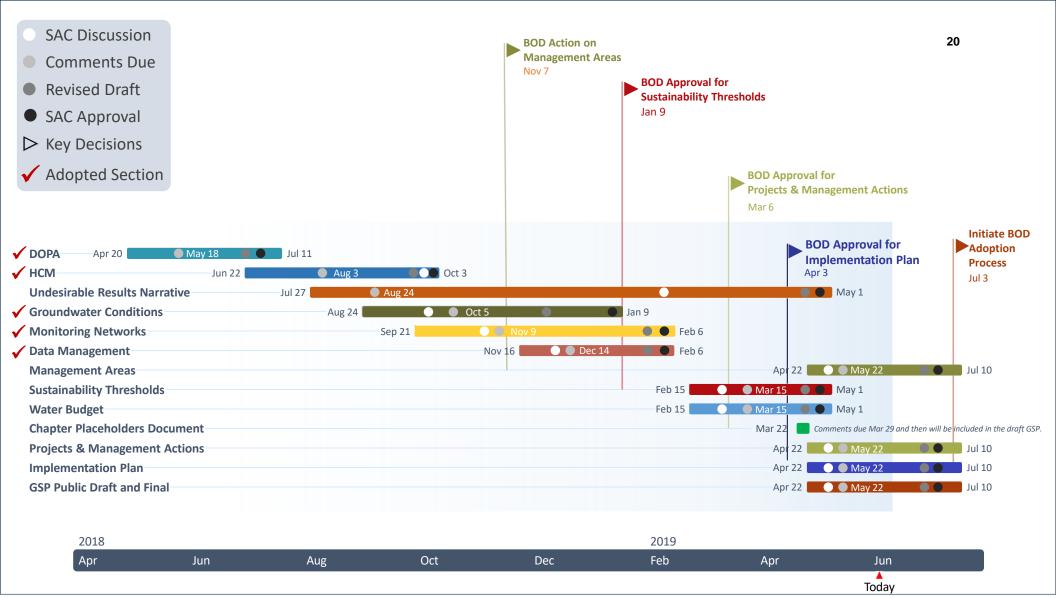
- 1. Introduction
 - 1.1 Intro & Agency Information
 - 1.2 Plan Area
 - 1.3 Notice and Communication
- 2. Basin Settings
 - 2.1 HCM
 - 2.2 GW Conditions
 - 2.3 Water Budget

Appendix: Numerical GW Model Documentation

- 3. Undesirable Results
 - 3.1 Sustainability Goal
 - 3.2 Undesirable results statements
 - 3.2 ID Current Occurrence

- 4. Monitoring Networks
 - 4.1 Existing Monitoring Used
 - **4.2** GSP Monitoring Networks
- 5. Sustainability Thresholds
 - **5.1** Threshold Regions
 - 5.2 Minimum Thresholds, Measurable Objectives, Margin of Operational Flexibility, Interim Milestones
- 6. Data Management System Appendix: DMS User Guide
- 7. Projects & Management Actions
- 8. Implementation Plan





Public Comments on Draft GSP

- Public Comments Received as of May 22
 - May 1 Workshop (40 participants, 70 comments)
 - Written comments from 27 individuals and organizations, including:
 - Central Coast Regional Board
 - CA Department of Fish and Wildlife
 - San Luis Obispo and Santa Barbara Counties
 - Cuyama Basin Water District/EKI
 - Twitchell Management Authority
 - Santa Maria Conservation District
 - The Nature Conservancy
 - Community Environmental Council
 - Cuyama Family Resource Center



Major Comments for Board Discussion and/or Direction

- Sustainability Goal
- Reporting Threshold for Basinwide Undesirable Results
- Interim Milestones for Representative Wells
- Adaptive Management Triggers
- Model Uncertainty



Other Common Public Comments

- Not specific enough about steps to achieve sustainability
- Should be more explicit about undesirable results that existed prior to 2015
- Doesn't achieve measurable objectives or improve conditions
- Should include guidance on water use efficiency
- Should include an economic evaluation
- Valley can't afford the plan

- Sustainability Criteria should be revised
 - Water quality
 - Subsidence
 - Interconnected surface water
- Groundwater Dependent Ecosystems are not documented or protected
- Pumping restrictions/allocation should apply outside Central Area
- Comments on potential impacts of stormwater capture and cloud seeding
- Moratorium on new wells
- An economic analysis should be performed on proposed changes
- Connection between glidepath and potential for undesirable results
- Cost allocation should be based on groundwater use



Sustainability Goal

April 22 Public Draft says the following (Chapter 3):

3.1 Sustainability Goal

Sustainability Goal 1: To maintain a viable groundwater resource for the beneficial use of the people and the environment of the Cuyama Groundwater Basin now and into the future.

- Is the sustainability goal appropriate? Should anything be changed?
 - Staff Recommendation: maintain current sustainability goal

Basin-Wide Undesirable Results (30% of Wells Exceeding Thresholds

April 22 Public Draft says the following (Chapter 3):

3.2.1 Chronic Lowering of Groundwater Levels

Identification of Undesirable Results

This result is considered to occur during GSP implementation when 30 percent of representative monitoring wells (i.e., 18 of 60 wells) fall below their minimum groundwater elevation thresholds for two consecutive years.

3.2.4 Degraded Water Quality

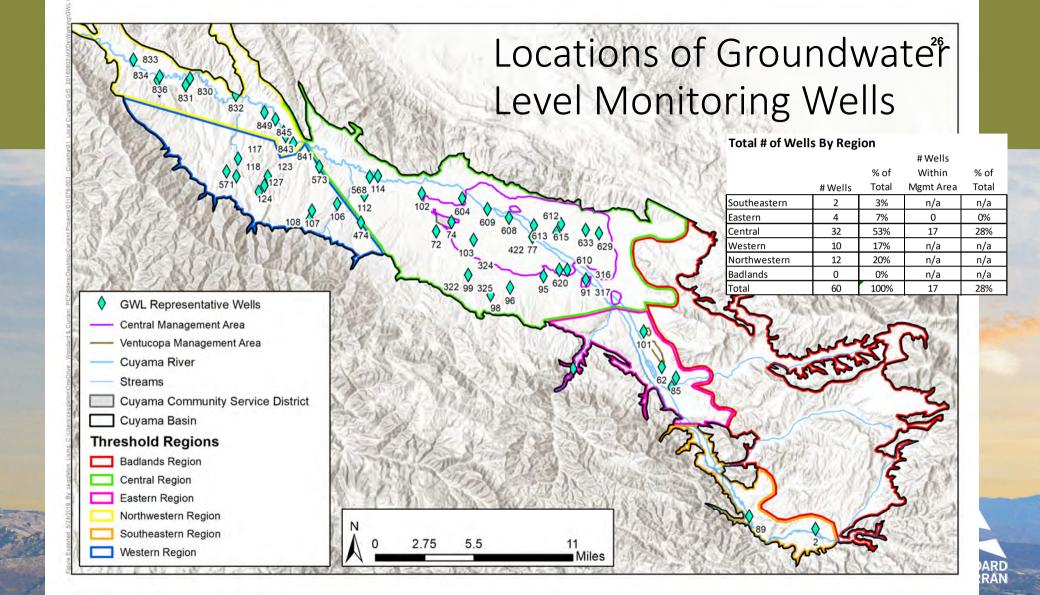
Identification of Undesirable Results

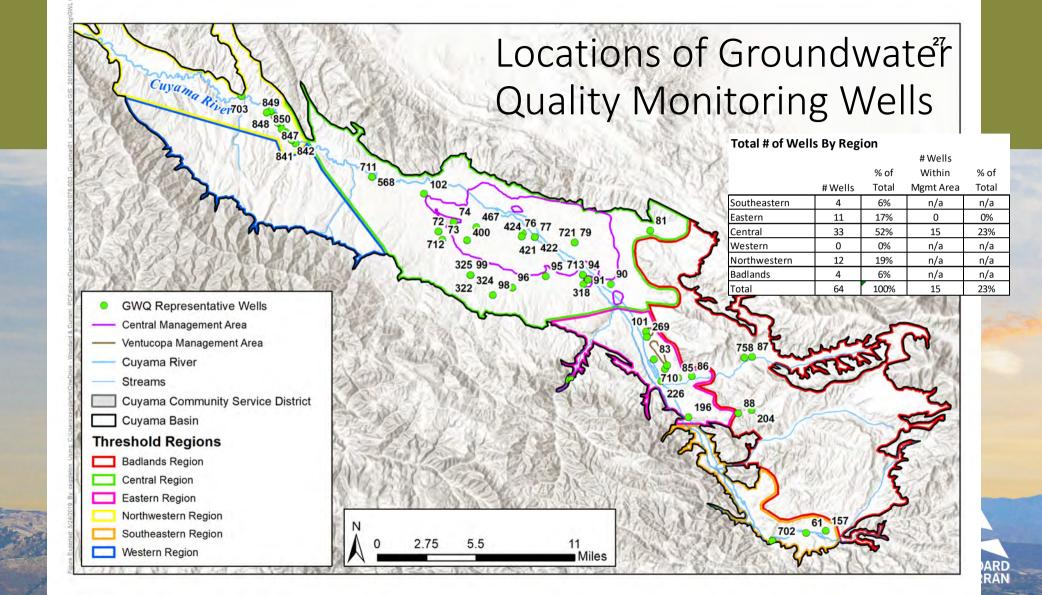
This result is considered to occur during GSP implementation when 30 percent of the representative monitoring points (i.e., 20 of 64 sites) exceed the minimum threshold for a constituent for two consecutive years.

Is the 30 percent threshold appropriate for groundwater levels and groundwater quality? Should it be increased, decreased, or remain the same?

Staff Recommendation: maintain at 30%



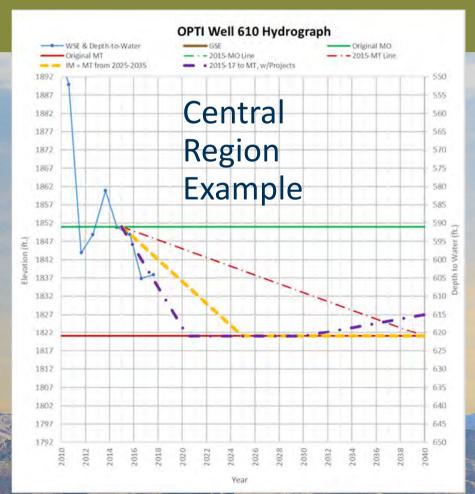


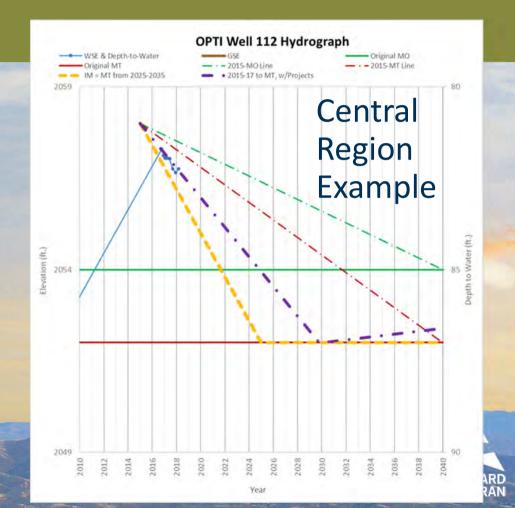


Interim Milestones for Representative Wells

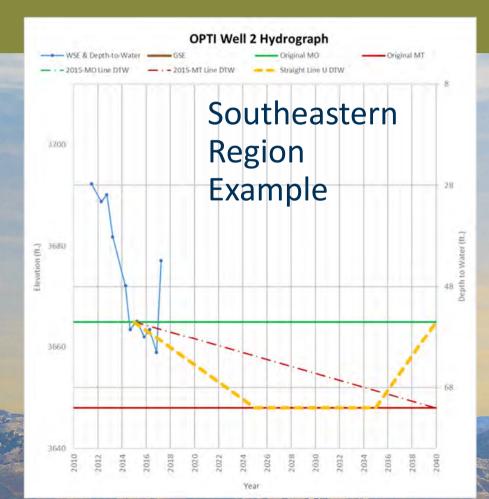
- April 22 Public Draft assumption (Chapter 5, Section 5.2 (GW Levels)
 - Interim Milestones (IMs) were set to equal the Minimum Threshold (MT) in all incremental years between 2025 and 2035.
 - This reflects a policy goal of minimizing the exceedance of MTs between now and 2040.
- Options for IMs:
 - 1. Linear trend from 2015 to MO in 2040
 - 2. Linear trend from 2015 to MT in 2040
 - 3. Set equal to MTs from 2025-2035 (current assumption)
 - 4. Use 2015-2017 trend line until levels equal MT; assume increased levels from 2030-2040 due to project implementation
- What assumption should be used for each region?
 - Staff Recommendation: Option 3 in Eastern and Central regions; Option 1 in other regions

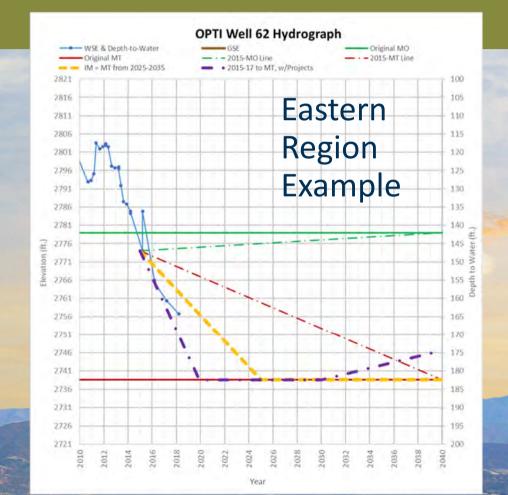
Central Region



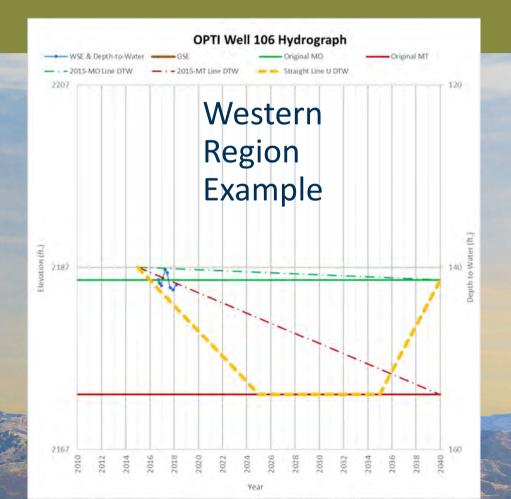


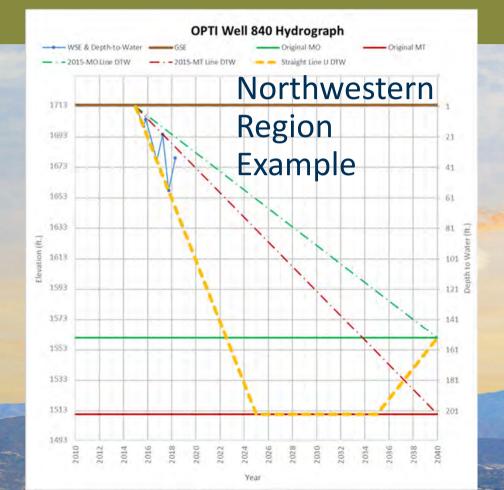
Eastern and Southeastern Regions





Western and Northwestern Regions





Adaptive Management

- April 22 Public Draft includes the following triggers (Chapter 7):
 - Pumping reductions are more than 5 percent off the glide path identified in the pumping allocation plan: CBGSA would evaluate why pumping allocations are not being met and implement additional outreach or enforcement, as appropriate. If the evaluation determines that the allocation is not feasible for users, the glide path and pumping allocation plan would be re-evaluated to confirm baseline water allocations are established correctly.
 - If the Basin is within the Margin of Operational Flexibility, but trending towards Undesirable Results, and within 10 percent of the Minimum Threshold: CBGSA will implement one or more GSP projects that have not yet been implemented, or will reconsider implementation of projects included in the GSP that were found to be less feasible.
 - If the Basin is experiencing Undesirable Results and is not demonstrating progress towards achieving Minimum Thresholds: CBGSA will implement one or more GSP projects that have not yet been implemented, and will reconsider implementation of projects included in the GSP that were found to be less favorable. If this does not result in demonstrable progress towards achieving
- Are the above triggers for adaptive management appropriate?
 - Staff Recommendation: maintain current triggers



On April 22, 2019 the Cuyama Basin draft GSP was released for public comments. The 30-day public comment period ended May 22, 2019. Please find a link to the GSP public comments and a list of the commenters below.

GSP Public Comments: https://hgcpm.sharefile.com/d-s108d27a9b62486ea

- 1. Central Coast Water Board, James Bishop
- 2. Public Comments from Stakeholder Workshop on 5/1/19
- 3. Richard and Susie Snedden, Kern County Landowner
- 4. John Comstock, New Cuyama Resident
- 5. Cheryl Tomchin, Cuyama Stakeholder
- 6. The Nature Conservancy, Sandi Matsumoto
- 7. Cottonwood Canyon Residents/Landowners
- 8. Community Environmental Council, Sigrid Wright
- 9. Jane Wooster, CBGSA Director/Landowner
- 10. Joshua Bower, Farm Intern at Quail Springs
- 11. Grapevine Capital, Neil Currie, Cleath Harris
- 12. Twitchell Management Authority, Michelle Ruiz
- 13. Brenton Kelly, SAC Vice Chair/Quail Springs Permaculture Center
- 14. Cuyama Basin Water District, Matt Klinchuch
- 15. Dept of Fish and Wildlife, Julie Vance
- 16. Joe Haslett, SAC Member/Landowner
- 17. John Orcutt, Cuyama Stakeholder
- 18. Karen Lewis, Cuyama Landowner
- 19. Kern Ridge Growers, LLC., Bob Giragosian
- 20. Cuyama Valley Family Resource Center, Lynn Carlisle
- 21. Meg Brown, Cuyama Stakeholder
- 22. Robbie Jaffe, SAC Chair; Steve Gliessman, Condor's Hope
- 23. County of San Luis Obispo, Cathy Martin
- 24. Santa Barbara County Water Agency, Matt Young
- 25. Santa Maria Conservation District, Tom Gibbons
- 26. Sue Blackshear, Cuyama Stakeholder
- 27. Santa Barbara Pistachio Company, Dennis Gibb
- 28. Dept of Fish and Wildlife, Erinn Wilson



TO: Standing Advisory Committee

Agenda Item No. 5aii

FROM: Ali Taghavi, Woodard & Curran (W&C)

DATE: May 30, 2019

SUBJECT: Model Sensitivity Analysis

<u>Issue</u>

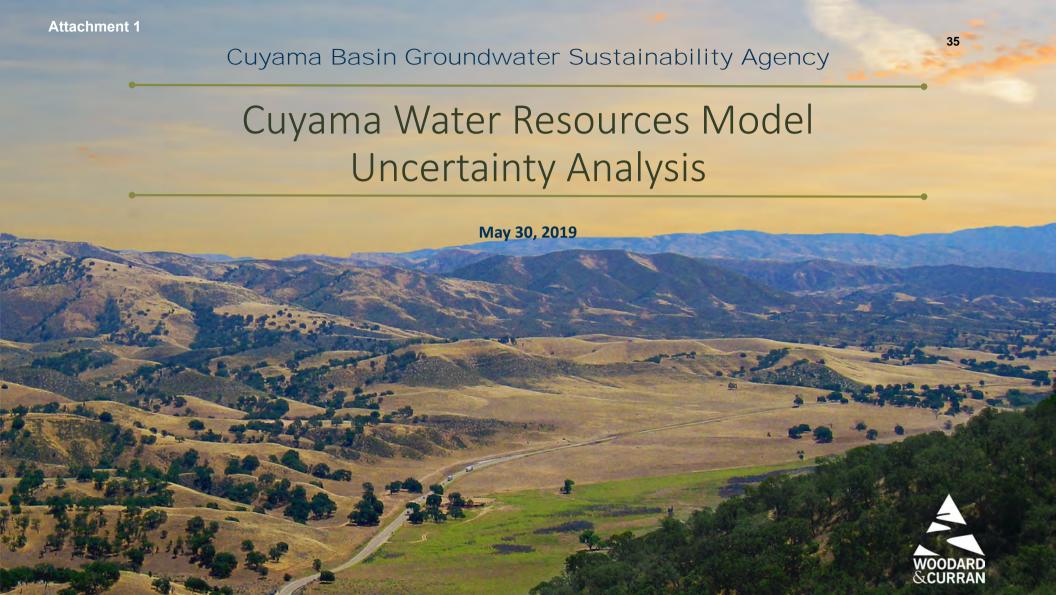
Discussion on the model sensitivity analysis.

Recommended Motion

None – information only.

Discussion

W&C's Senior Technical Practice Leader Ali Taghavi's model sensitivity analysis is provided as Attachment 1.



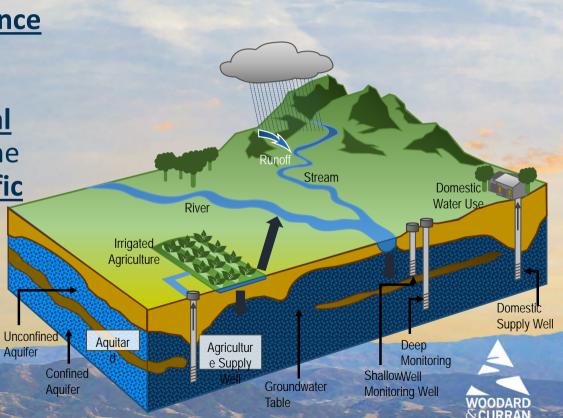
Agenda

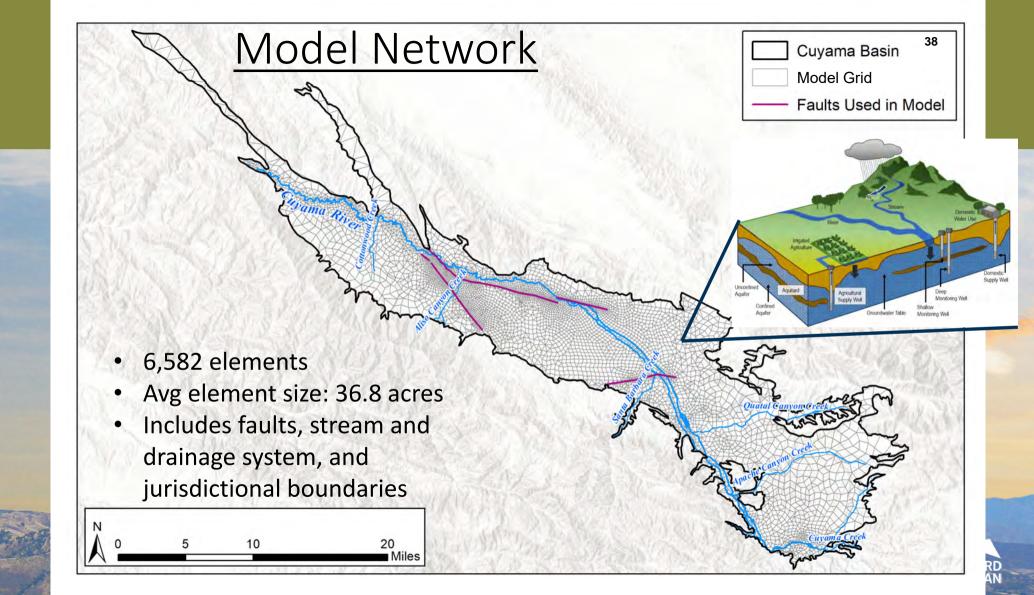
- Recap on Model Status
- Uncertainty Analysis
- Conclusions and Recommendations



Hydrologic Modeling

Hydrologic modeling is the <u>Science</u> and <u>Art</u> of understanding the <u>natural hydrologic system</u> and analysis of <u>the effects of natural</u> <u>and anthropogenic forces</u> on the hydrologic system using <u>scientific</u> <u>principles and methods</u>





Primary Model Features

Model Period: 1967-2017

Calibration Period: 1995-2015

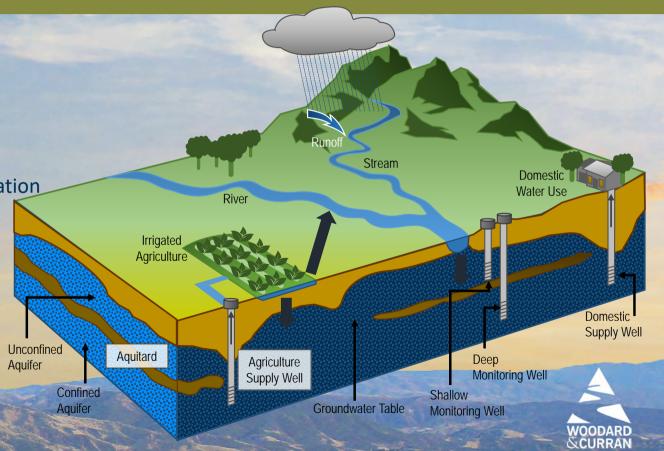
Daily Rainfall Data

Daily Streamflow Reconstruction

Geologic & Hydrogeologic Characterization

Land Use and Cropping Patterns

- Soil Conditions
- Population and Domestic Water Use
- Groundwater Wells
- Irrigation Practices and Operations



Cuyama Basin Water Resources Model (CBWRM) ** Status

- Draft model calibration results presented at:
 - Public Workshops on December 3
 - Technical Forum calls during November, December and January
- Refinements were made to model calibration based on Technical Forum and Public Workshop comments
- Cuyama GSA Board decided to use the model for Sustainability
 Analysis, which was presented to the Board in February and March
- Model was also used to evaluate potential benefits from water supply projects, which was also presented to the Board in March

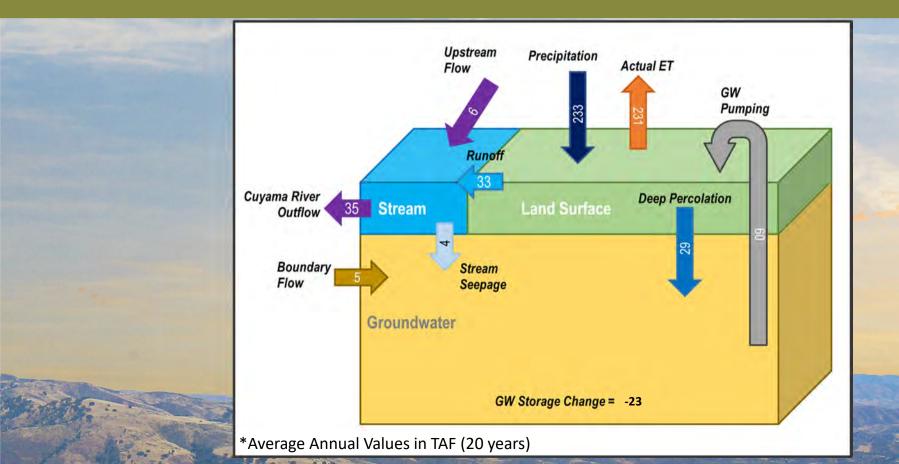


Model Calibration

- Calibration Goals:
 - Develop water budgets to reasonably represent the conditions for each area
 - Match short and long-term model groundwater levels to observed groundwater levels at select target wells
 - Match model stream flows to observed (or reconstructed) stream flows
 - Minimize overall uncertainties between model results and reported and/or observed data

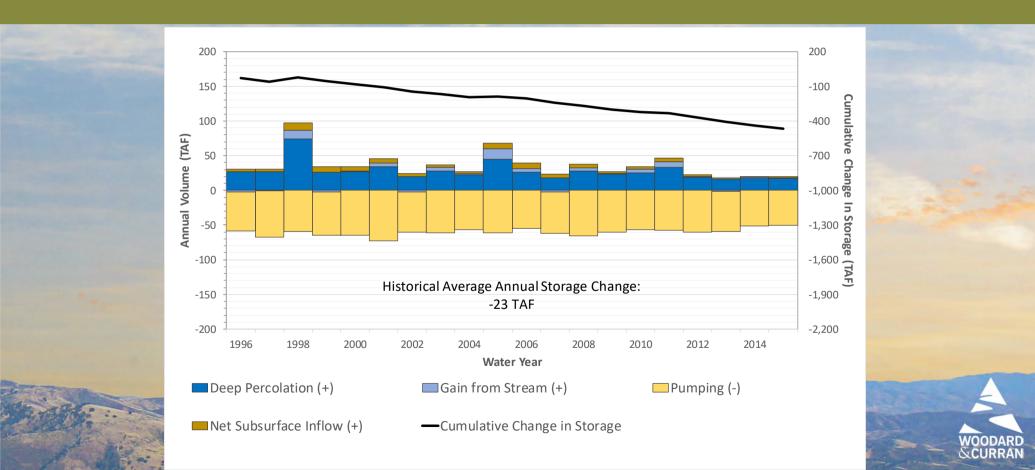


Draft Overall Water Budget: Basin-Wide

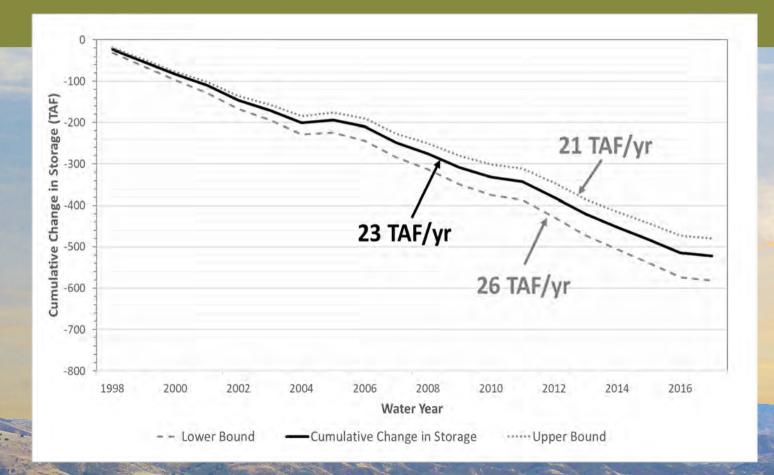




Historical Change in GW Storage

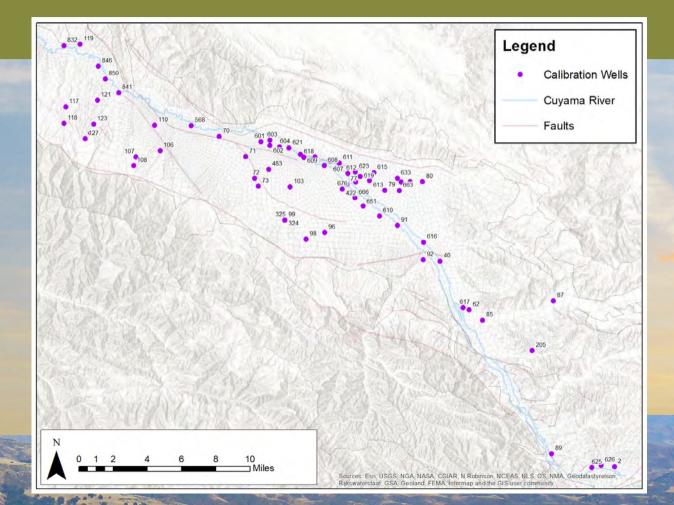


Historical Change in GW Storage

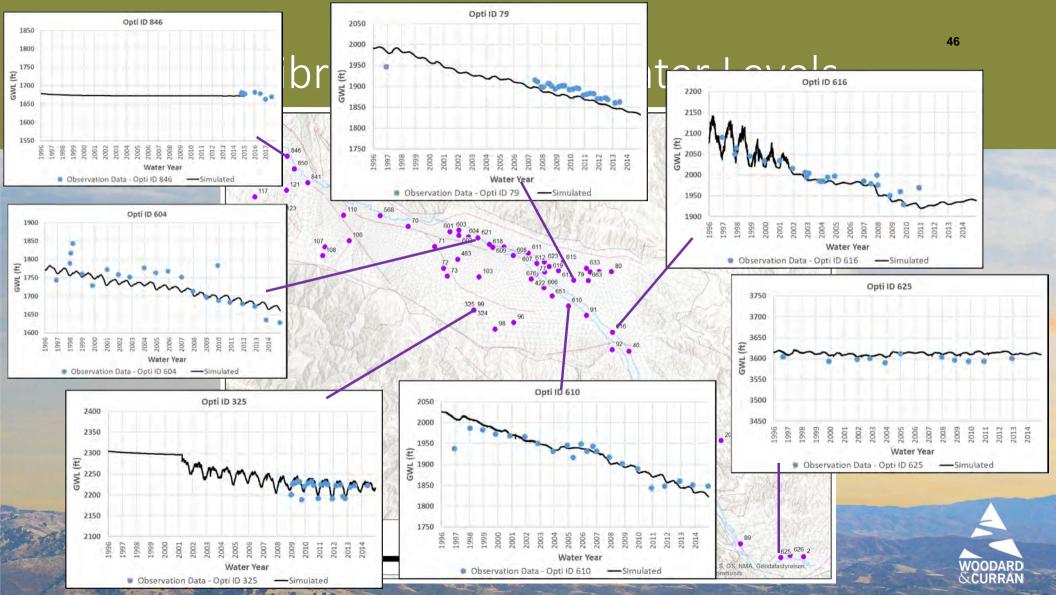




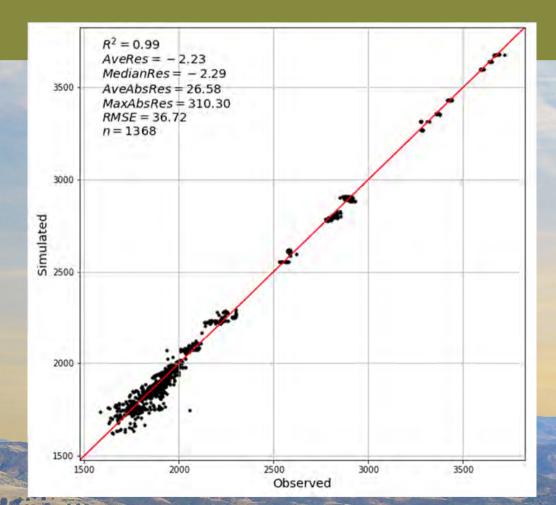
Model Calibration: Groundwater Levels





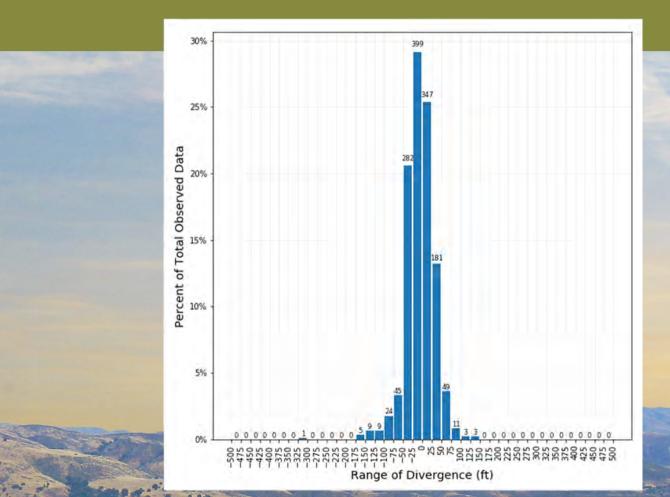


Model Calibration Statistics – Basin Wide





Uncertainty Histogram





Modeling Uncertainties are Due to Various Factors

Structural Uncertainties

- Theoretical Concepts and Representation of the Natural and Physical System Formulation, Code Development, Solution Techniques and Assumptions Representation of Physical Features

- Model Spatial and Temporal Resolution

Data Uncertainties

- Data and Information Accuracy, Data Gaps and Estimations
 Data Spatial and Temporal Resolution

Calibration Uncertainties

- Calibration Approach, Target Characteristics, Accuracy Estimates of Hydrologic and Hydrogeologic Parameters

Projection Uncertainties

- Primarily due to Data Projections and Forecasting Methods on:

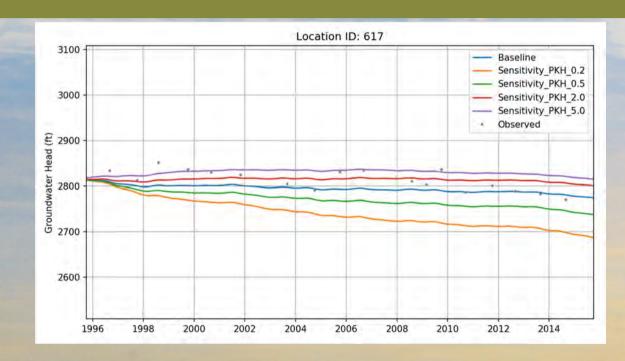
 Land Use and Population
 Water Supply Conditions
 Climatic Conditions

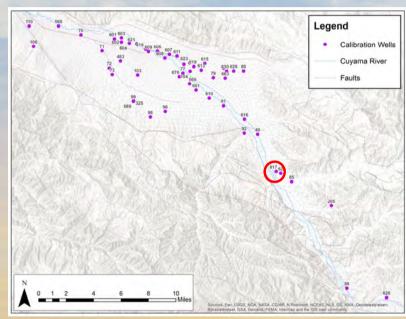


Uncertainty Analysis

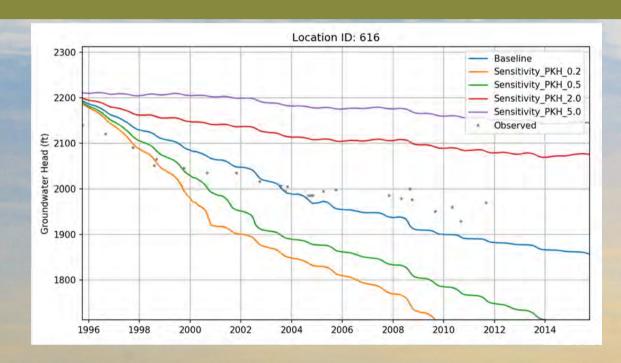
- Model Water Budget Components:
 - Ag Demand & GW Pumping
- Aquifer Hydraulic Parameters:
 - Hydraulic Conductivity
 - Specific Yield
 - Specific Storage
- Other Parameters:
 - Streambed Hydraulic Conductivity
 - Soil K
 - Boundary Flows

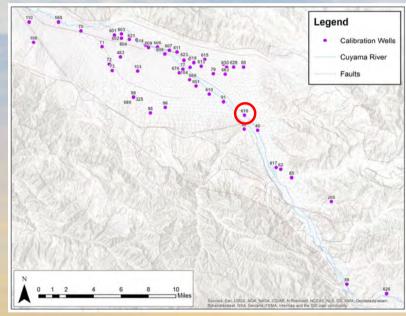




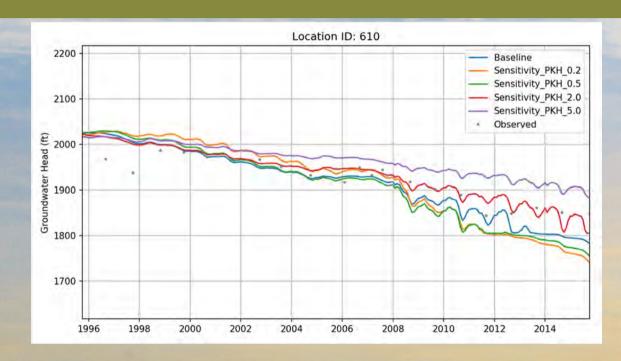


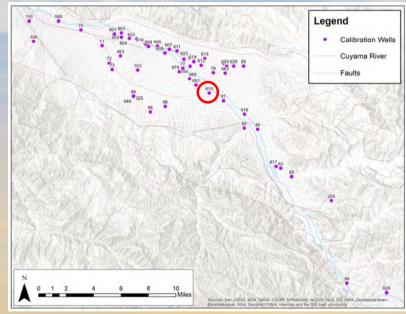




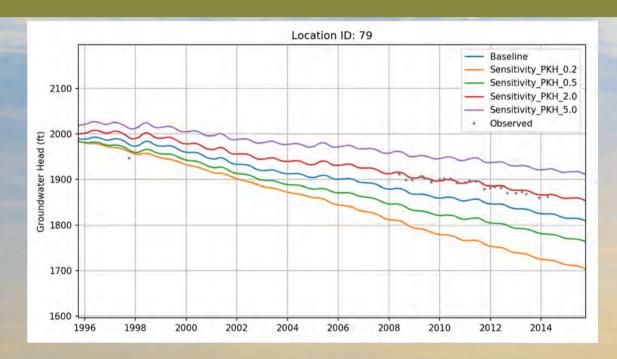


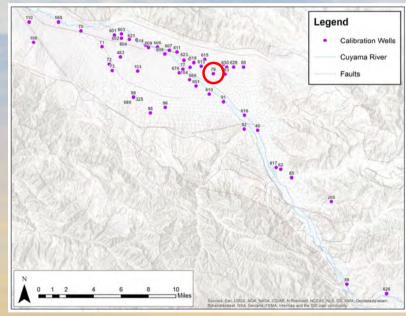




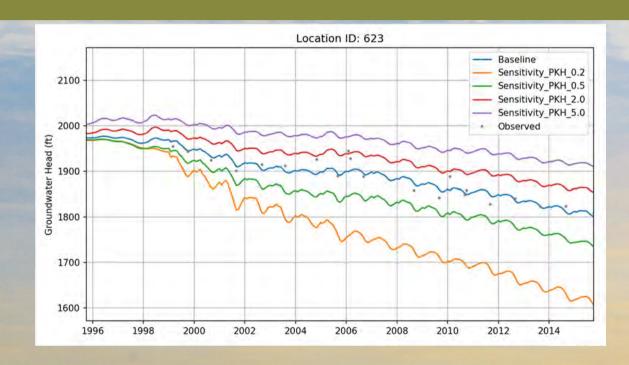


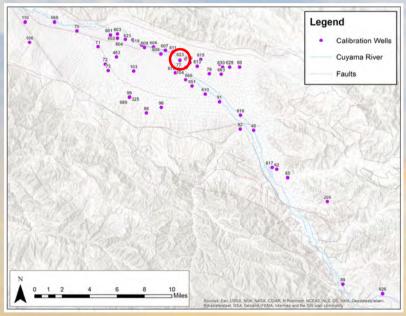




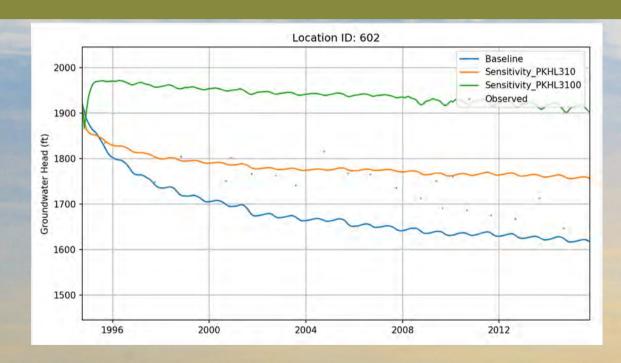


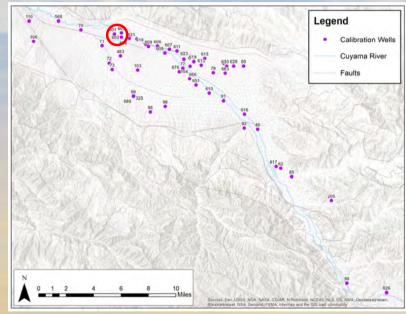




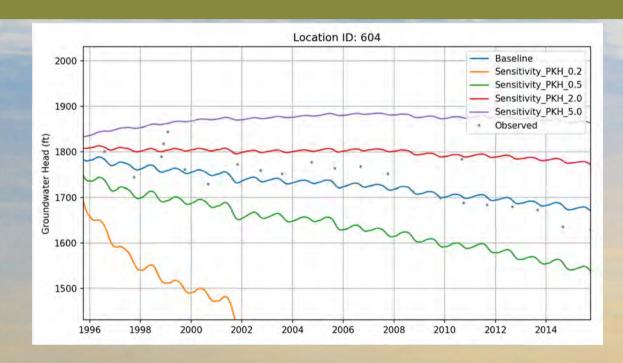


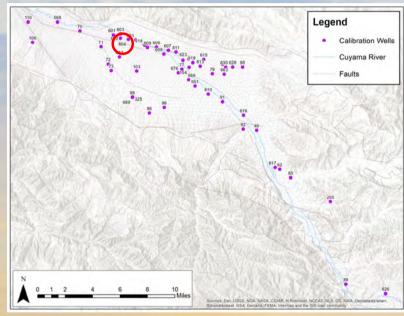






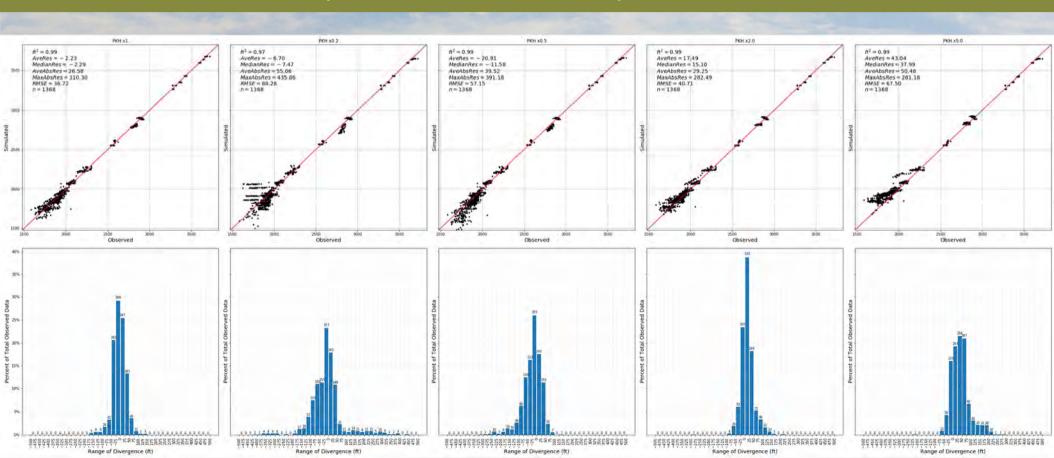






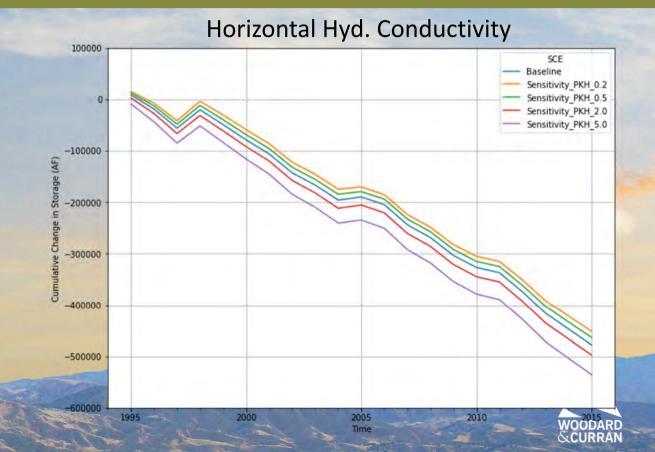


Uncertainty Statistics: Horizontal Hyd. Conductivity



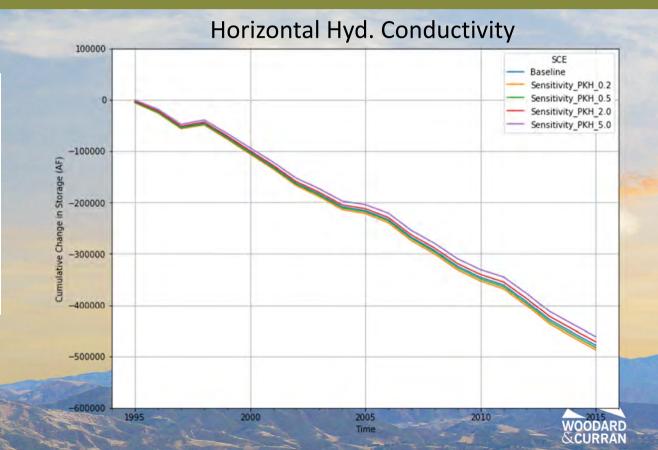
Storage Change Basin-Wide

Run	Average Annual Storage Change (AFY)
Baseline	-22,761
PKH x0.2	-21,494
PKH x0.5	-22,072
PKH x2.0	-23,687
PKH x5.0	-25,507



Storage Change in Central Region

Run	Average Annual Storage Change (AFY)
Baseline	-22,785
PKH x0.2	-23,211
PKH x0.5	-23,000
PKH x2.0	-22,465
PKH x5.0	-21,998



Groundwater Storage Change Sensitivity Analysis Summary (Basin-Wide)

	Kh	Sy	Ss	K (Stream)	K Soil	Boundary Flow	
Calibrated Model	-22,761	-22,761	-22,761	-22,761	-22,761	-22,761	
X 0.2 (x0.1 for Ss)	-21,494	-24,988	-22,695	-28,586	-25,702	-23,824	
X 0.5	-22,072	-22,310	-22,699	-26,083	-24,370	-22,992	
X 2.0	-23,687	-23,269	-22,776	-18,290	-20,289	-22,699	
X 5.0 (x10.0 for Ss)	-25,507	-23,861	-22,756	N/A	-15,136	-22,693	



Groundwater Storage Change Sensitivity Analysis Summary (Central Region)

	Kh	Sy	Ss	K (Stream)	K Soil	Boundary Flow	
Calibrated Model	-22,785	-22,785	-22,785	-22,785	-22,785	-22,785	
X 0.2 (x0.1 for Ss)	-23,211	-25,943	-22,755	-27,377	-24,062	-23,158 -22,892	
X 0.5	-23,000	-22,933	-22,759	-25,428	-23,477		
X 2.0	-22,465	-22,597	-22,802	-18,977	-21,757	-22,743	
X 5.0 (x10.0 for Ss)	-21,998	-22,097	-22,785	N/A	-19,689	-22,722	



Uncertainty Parameters Ranked

		Basin Wide			Central Region						
Parameter	Change Factor	Max	% Dev. Max	Min	% Dev. Min	% Range of Deviation	Max	% Dev. Max	Min	% Dev. Min	% Range of Deviation
Groundwater Pumping	"+/- 20%"	33,767	48%	11,670	-49%	97	32,360	42%	13,181	-42%	84
Soil Percolation Potential	x0.2 / x5.0	25,702	13%	15,136	-34%	46	24,062	6%	19,689	-14%	19
Streambed Seepage Potential	x0.2 / x2.0	28,586	26%	18,290	-20%	45	27,377	20%	18,977	- 17 %	37
Aquifer Hydraulic Conductivity	x0.2 / x5.0	25,507	12%	21,494	-6%	18	23,211	2%	21,998	-3%	5
Specific Yield for Shallow Aquifer System	x0.2 / x5.0	24,988	10%	22,310	-2 %	12	25,943	14%	22,097	-3%	17
Tributary Watershed Flows	x0.2 / x5.0	23,824	5%	22,693	0%	5	23,158	2%	22,722	0%	2
Specific Storage for Semi-confined Aquifer Systems		22,776	0%	22,695	0%	<1%	22,802	0%	22,755	0%	<1%

CWRM Calibrated GW Deficit is within the Reported Range

Study	Method	Time Period	Annual Net Recharge	Annual Net Usage	Deficit/Surplus	CUVHM Deficit/ Surplus
Singer & Swarzenski, 1970	Mass Balance	1939-1946	16,000 AFY	18,000 AFY	-2,000 AFY	N/A
Singer & Swarzenski, 1970	Mass Balance	1947-1966	12,000 AFY	33,000 AFY	-21,000 AFY	-32,851 AFY ¹
SBCWA, 1977	Mass Balance	1966-1975	13,000 AFY	51,000 AFY	-38,000 AFY	-24,099 AFY
USDA,1988	Safe Yield	1975-1986	26,500 AFY	56,800 AFY	-30,300 AFY	-39,596 AFY
DWR, 1998	Specific Yield	1982-1993	N/A	N/A	-14,600 AFY	-44,098 AFY
TNC, 2008	Mass Balance	2008	11,500 AFY	42,000 AFY	-30,500 AFY	-9,301 AFY
USGS, 2014 (CUVHM)	Numerical Model	2000-2010	N/A ²	N/A ²	-33,912	AFY
USGS, 2014 (CUVHM)	Numerical Model	1950-2010	N/A ²	N/A ²	-34,166	S AFY
Cuyama Water Resources Model (W&C)	Numerical Model	1995-2015	~37,400 AFY	~60,200 AFY	-22,761 AFY	

¹ USGS-CUVHM simulation period begins in 1950

² Analogous values for net recharge and net usage cannot be readily extracted from USGS model outputs due to the complex methodolog deriving water balance estimates

Conclusions & Recommendations

- Cuyama Basin Water Resources Model (CBWRM) has been reasonably calibrated to the available published/reported data
- The CBWRM calibration meets the intended needs to support GSP development
- The uncertainty analysis does NOT warrant additional refinements to the model data & parameters at this point in time
- Given the quality of calibration, the range of uncertainties, and the data available, the Model is a sufficiently robust analytical tool that has been accepted for use for the GSP and the Projected Baseline. The Sustainability analysis performed can be relied on for development of the GSP
- As part of the GSP implementation, additional monitoring is recommended to obtain better understanding of the GW operations in the basin:
 - GW Pumping
 - Annual Cropping including Double Cropping Acreages
 - GW Levels
 - Stream flows
- Additional hydrogeologic exploration and testing are recommended to obtain better information on:
 - Basin hydrogeologic characteristics for the Principal Aquifers
 - Effectiveness of the various faults in movement of GW
 - Stream seepage rates
 - Soil properties
- The CWRM will need to be updated as part of the GSP update process, using the additional data and information obtained as part of the GSP implementation monitoring program



Technical Forum Update

May 30, 2019



Technical Forum Update

- No Technical Forum meeting was held this month
- No additional Technical Forum meetings are scheduled



Technical Forum Members

- Catherine Martin, San Luis Obispo County
- Matt Young, Santa Barbara County Water Agency
- Matt Scrudato, Santa Barbara County Water Agency
- Matt Klinchuch, Cuyama Basin Water District
- Jeff Shaw, EKI
- Anona Dutton, EKI
- John Fio, EKI
- Dennis Gibbs, Santa Barbara Pistachio Company
- Neil Currie, Cleath-Harris Geologists
- Matt Naftaly, Dudek





TO: Standing Advisory Committee

Agenda Item No. 5b

FROM: Mary Currie, Catalyst Group

DATE: May 30, 2019

SUBJECT: Stakeholder Engagement Update

<u>Issue</u>

Update on the Cuyama Basin Groundwater Sustainability Agency Groundwater Sustainability Plan stakeholder engagement.

Recommended Motion

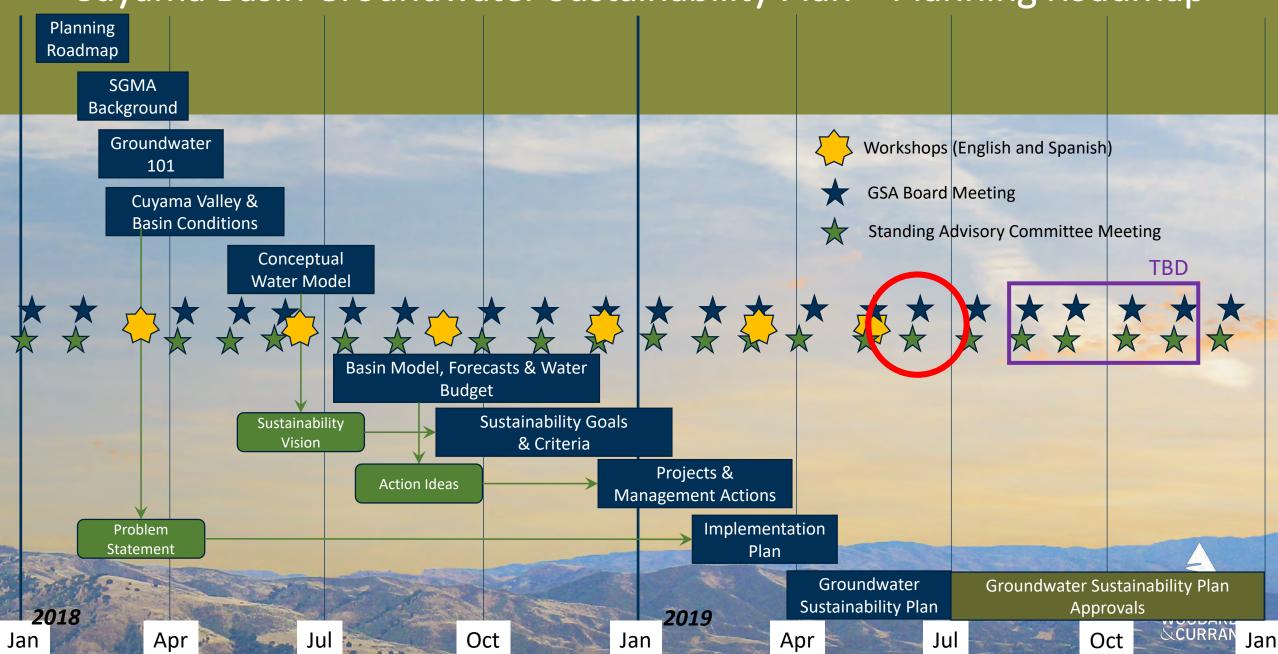
None – information only.

Discussion

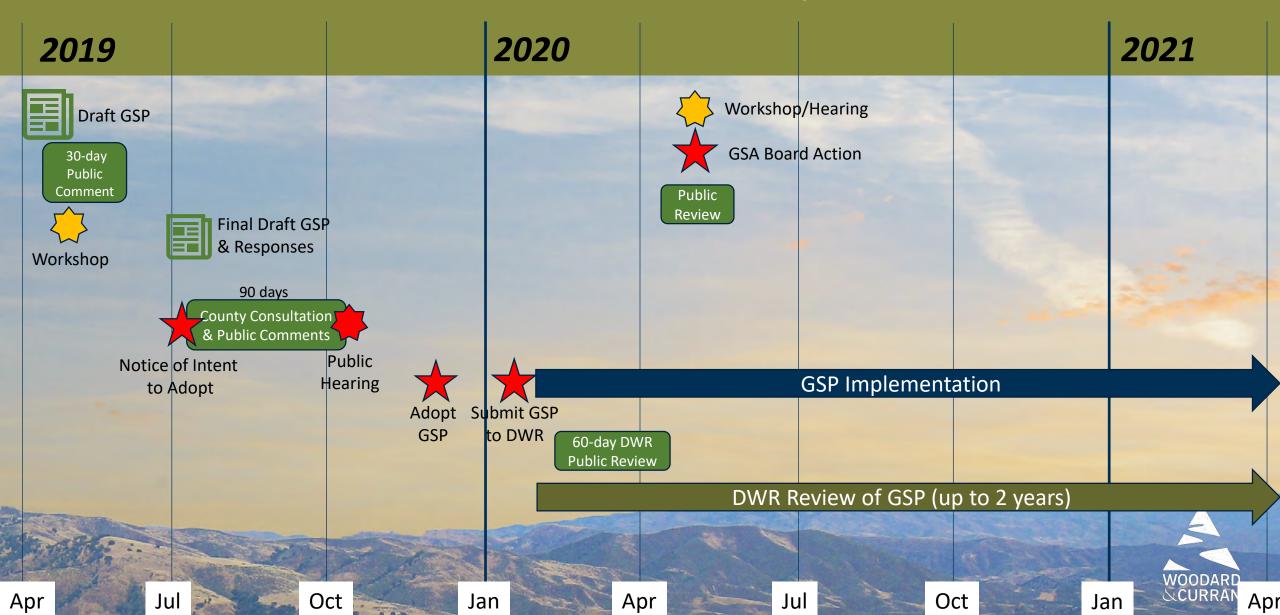
Cuyama Basin Groundwater Sustainability Agency (CBGSA) Groundwater Sustainability Plan (GSP) outreach consultant the Catalyst Group's stakeholder engagement update is provided as Attachment 1.



Cuyama Basin Groundwater Sustainability Plan – Planning Roadmäp



GSP Public Review and Adoption Process





TO: Standing Advisory Committee

Agenda Item No. 6c

FROM: Jim Beck, Executive Director

DATE: May 30, 2019

SUBJECT: Board of Directors Agenda Review

<u>Issue</u>

Review of the June 5, 2019 Cuyama Basin Groundwater Sustainability Agency Board of Directors meeting agenda

Recommended Motion

None – information only.

Discussion

The June 5, 2019 Cuyama Basin Groundwater Sustainability Agency Board of Directors meeting agenda is provided as Attachment 1 for review.



CUYAMA BASIN GROUNDWATER SUSTAINABILITY AGENCY BOARD OF DIRECTORS

Board of Directors

Derek Yurosek Chairperson, Cuyama Basin Water District Lynn Compton Vice Chairperson, County of San Luis Obispo Das Williams Santa Barbara County Water Agency Cory Bantilan Santa Barbara County Water Agency Glenn Shephard County of Ventura Zack Scrivner County of Kern Paul Chounet Cuyama Community Services District George Cappello Cuyama Basin Water District Byron Albano Cuyama Basin Water District Jane Wooster Cuyama Basin Water District Tom Bracken Cuyama Basin Water District

AGENDA

June 5, 2019

Agenda for a meeting of the Cuyama Basin Groundwater Sustainability Agency Board of Directors to be held on Wednesday, June 5, 2019 at 4:00 PM, at the Cuyama Valley Family Resource Center, 4689 CA-166, New Cuyama, CA 93254. To hear the session live call (888) 222-0475, code: 6375195#.

Teleconference Locations:

Cuyama Valley Family County Government Center

Resource Center 1055 Monterey Street, Room D361

4689 CA-166 San Luis Obispo, CA 93408

New Cuyama, CA 93254

The order in which agenda items are discussed may be changed to accommodate scheduling or other needs of the Board or Committee, the public, or meeting participants. Members of the public are encouraged to arrive at the commencement of the meeting to ensure that they are present for discussion of all items in which they are interested.

In compliance with the Americans with Disabilities Act, if you need disability-related modifications or accommodations, including auxiliary aids or services, to participate in this meeting, please contact Taylor Blakslee at (661) 477-3385 by 4:00 p.m. on the Friday prior to this meeting. Agenda backup information and any public records provided to the Board after the posting of the agenda for this meeting will be available for public review at 4689 CA-166, New Cuyama, CA 93254. The Cuyama Basin Groundwater Sustainability Agency reserves the right to limit each speaker to three (3) minutes per subject or topic.

- Call to Order
- Roll Call
- 3. Pledge of Allegiance
- 4. Approval of Minutes
 - a. May 1, 2019
- 5. Report of the Standing Advisory Committee
- 6. Groundwater Sustainability Plan
 - a. Groundwater Sustainability Plan Update

- b. Discussion on GSP Public Draft
 - i. Summary of Comments
 - ii. Direction on Sustainability Goal Definition
 - iii. Direction on Basin-wide Undesirable Results (30% of Wells Exceeding Thresholds)
 - iv. Direction on Interim Milestones for Representative Wells
 - v. Direction on Adaptive Management Triggers
- c. Discuss Model Sensitivity Analysis
- d. Fiscal Year 2019-20 Budget Adoption
- e. Adopt Funding Structure
- f. Review GSP Development Cash Flow
- g. Stakeholder Engagement Update
- 7. Groundwater Sustainability Agency
 - a. Report of the Executive Director
 - b. Progress & Next Steps
 - c. Report of the General Counsel
 - d. Report on Prop 68 Funding Opportunity
- 8. Financial Report
 - a. Financial Management Overview
 - b. Financial Report
 - c. Selection of Audit Firm
 - d. Payment of Bills
- 9. Reports of the Ad Hoc Committees
- 10. Directors' Forum
- 11. Public comment for items not on the Agenda

At this time, the public may address the Board on any item not appearing on the agenda that is within the subject matter jurisdiction of the Board. Persons wishing to address the Board should fill out a comment card and submit it to the Board Chair prior to the meeting.

12. Adjourn