JOINT MEETING OF CUYAMA BASIN GROUNDWATER SUSTAINABILITY AGENCY SPECIAL BOARD OF DIRECTORS AND STANDING ADVISORY COMMITTEE

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

Standing Advisory Committee

Roberta Jaffe Chairperson
Brenton Kelly Vice Chairperson
Claudia Alvarado
Brad DeBranch
Louise Draucker
Jake Furstenfeld
Joe Haslett
Mike Post
Hilda Leticia Valenzuela

AGENDA

March 6, 2019

Agenda for a meeting of the Cuyama Basin Groundwater Sustainability Agency Board of Directors to be held on Wednesday, March 6, 2018 at 2:00 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#.

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.

1. Call to Order
2. Roll Call
3. Pledge of Allegiance
4. Approval of Minutes
    a. February 6, 2019
5. Report of the Standing Advisory Committee
6. Technical Forum Update
7. Groundwater Sustainability Plan

a. Groundwater Sustainability Plan Update
b. Discussion on Water Budgets
c. Discussion on Sustainability Thresholds
d. Direction on Management Areas
e. Projects and Management Actions
    i. Direction on Projects
    ii. Direction on Pumping Allocation Approach
f. Direction on Implementation Plan
g. Stakeholder Engagement Update

8. Groundwater Sustainability Agency
    a. Report of the Executive Director
    b. Progress & Next Steps
    c. Report of the General Counsel
9. Financial Report
    a. Financial Management Overview
    b. Direction on Annual Audit
    c. Financial Report
    d. Payment of Bills
10. Reports of the Ad Hoc Committees
11. Directors' Forum
12. 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.

13. Public Workshops (6:30 pm) – New Cuyama High School Cafeteria, 4500 CA-166, New Cuyama, CA 93254
14. Adjourn (8:30 pm)

Cuyama Basin Groundwater Sustainability Agency

Acronyms List

ARMA	Autoregression Moving Average
BOD	Board of Directors
CA	California
CASGEM	California Sustainable Groundwater Elevation Monitoring
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
CVRD	Cuyama Valley Recreation District
DMS	Data Management System
DWR	California Department of Water Resources
EKI	EKI Environment & Water, Inc.
ET	Evapotranspiration
FRC	Cuyama Valley Family Resource Center
FY	Fiscal Year
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
Board of Directors Meeting

February 6, 2019

Draft Meeting Minutes

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

PRESENT:
Yurosek, Derek – Chair
Compton, Lynn – Vice Chair
Albano, Byron
Bantilan, Cory
Bracken, Tom
Cappello, George
Chounet, Paul
Christensen, Alan – *Alternate for Zack Scrivner*
Shephard, Glenn
Williams, Das
Wooster, Jane
Beck, Jim – Executive Director
Hughes, Joe – Legal Counsel

ABSENT:
None

1. **Call to order**
   Chair Derek Yurosek called the meeting to order at 4:01 p.m.

2. **Roll call**
   Hallmark Group Project Coordinator Taylor Blakslee called roll (shown above) and informed Chair Yurosek that there was a quorum of the Board.

3. **Pledge of Allegiance**
   The pledge of allegiance was led by Chair Yurosek.

4. **Approval of Minutes**

   a. **January 9, 2019**
      Chair Yurosek opened the floor for comments on the January 9, 2019 meeting minutes of the Cuyama Basin Groundwater Sustainability Agency (CBGSA) Board of Directors.

      MOTION
      Director Glenn Shephard made a motion to adopt the January 9, 2019 CBGSA Board meeting minutes. The motion was seconded by Vice Chair Lynn Compton and passed.

AYES:	Directors Albano, Bracken, Cappello, Chounet, Compton, Shephard, Wooster, Yurosek
NOES:	None
ABSTAIN:	None
ABSENT:	Directors Bantilan, Christensen, Williams

5. Report of the Standing Advisory Committee
CBGSA SAC Chair Robbie Jaffe provided a report on the January 31, 2019 SAC meeting.

Alternate Director Christensen arrived at 4:05 pm
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6. Technical Forum Update
Mr. Melton provided an overview of the January 25, 2019 Technical Forum meeting, which is summarized in the Board packet.

Directors Bantilan and Williams arrived at 4:08 pm
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7. Groundwater Sustainability Plan

a. Groundwater Sustainability Plan Update
Mr. Melton provided an update on GSP activities, which is included in the Board packet.

i. Water Budget Update
Mr. Melton provided an overview of the water budget and described the assumptions used for the historical, current and future conditions.

Chair Yurosek asked if historical data is being used for correlation when forecasting precipitation and agriculture, and Mr. Melton confirmed that is correct.

SAC Chair Jaffe asked about the precipitation amount listed for inflows in the land surface water budget and Mr. Melton said the 11.4" is accurate since it represents the precipitation over the groundwater basin, not in the watershed.

Vice Chair Compton asked that acronyms on the water budget be spelled out in future publications, and Mr. Melton confirmed they would do this.

SAC Chair Jaffe commented that the Northwestern Region does not have a depth of data. Mr. Melton said there is limited data availability for wells in this region and we will gain better data as we begin regular monitoring of the representative wells.

Mr. Melton reported that the Eastern Region model projects that groundwater levels will stabilize but will be below the minimum thresholds and will discuss this more in detail.

Mr. Beck reported that when we set minimum thresholds we said the model will inform thresholds and that is what we are seeing in the Eastern Region.

SAC Vice Chair Brenton Kelly commented that Opti wells 62, 85 and 100 are not that deep and the forecast shows levels below those well depths. Mr. Melton said they will look into that, but the point of the modeling in this area is to determine basin sustainability.

Mr. Melton recommended that the Board revisits thresholds in the eastern region.

Director Wooster said she does not think the Board has been given enough information to necessitate changing threshold levels. She said they need more well data. Mr. Melton said he does not disagree, but they only have 6 representative wells, and the bigger question is can we reach sustainability in this region.

Chair Yurosek asked what direction W&C is looking for from the Board. Mr. Melton said he wants to know if the Board wants W&C to evaluate new threshold numbers in the Eastern Region. Chair Yurosek asked W&C to come back next month with a comparative analysis and more information on the process.

Director Albano commented that there are very specific problems we face with each well, and we are making things overly broad. He said the wells in the Ventucopa area are fairly inexpensive, shallow wells. He said he would like to know how many domestic wells are in the area. He asked if W&C is trying to balance the area based on two representative wells and commented that he thinks we need to hear more from the residents. However, he said that understands they do not have the time and it is not in the scope, but advocates against taking action in the dark.

Director Chounet said his concern is that the well that serves the townsite is not effective anymore to serve everyone.

Director Albano said the issues in Ventucopa are very complex, there ordinances that Santa Barbara has affecting wells drilled near septic and the Board needs to be very careful of trying to solve issues not germane to SGMA.

The Board expressed consensus to do a more-in-depth analysis of the Eastern Region thresholds.

Mr. Beck suggested showing the representative wells and the triggers that would violate the minimum thresholds in each of the areas.

Santa Barbara County Water Agency's Water Resources Program Manager Matt Young suggested informing the Board of modeled land changes around 2040.

Vice Chair Compton asked what the accuracy of the model is and Mr. Melton said within 10-15% for the entire Basin.

ii. Preliminary Discussion on Project and Management Actions

Vice Chair Compton asked if the Board needs to evaluate every option and what the criteria is in whether or not to include it. Mr. Melton said the Board does not need to evaluate every option and the criteria of what is considered for evaluation is determined by if the Board says yes or no.

Vice Chair Compton asked about rebate reductions program, and Mr. Melton said they can add that.

Mr. Melton presented an overview of the projects presented so far.

Chair Yurosek asked how W&C developed these options initially. Mr. Melton said they collected input from Board and SAC members, the technical forum, public workshops, and internal brainstorming.

<u>New Pumping Well for CCSD and Ventucopa</u>

Director Chounet said they have an application in for the Integrated Regional Water Management grant, but Ventucopa is not eligible.

Vice Chair Compton asked if the CBGSA can own a well. Legal Counsel Joe Hughes said there are provisions in SGMA after you adopt your GSP plan to own assets such as wells.

Director Cappello said potential projects, such as a new well, need to relate to SGMA and not occur just because a well is old. Mr. Beck said for each action he assumes the Board wants included what the SGMA nexus is.

Director Albano commented that Ventucopa is a private system and that he is concerned with suggesting the CBGSA can do programs that address their issues. Chair Yurosek said W&C will evaluate this option next month.

The Board reached consensus to evaluate this option.

<u>Flood/Stormwater Capture</u>

Vice Chair Compton asked if this option is a bladder dam. Mr. Melton said the concept is to divert storm flows to percolate into the groundwater. He said you could have a bladder dam, but that level of refinement has not been identified.

Director Wooster said she has a letter from a Twitchell Reservoir stakeholder attorney stating that they filed for downstream water rights and we should figure this issue out before pursuing this option in depth. Mr. Melton said there are systems historically that are deemed to be fully prescribed, but different analysis may open those systems up to additional water users.

Director Williams asked how deeply should we venture into these options based on costs. Director Shephard suggested that they are just evaluating options to include in the model and determining costs and funding mechanisms will be determined at a later time.

The Board reached consensus to evaluate this option.

Municipal Area Rainwater Capture
The Board reached consensus to not include for consideration.

Rangeland and Forest Management
W&C initially recommended to not include for consideration, but reported the SAC recommended this option be added to a future study list.

Director Wooster said she is in favor of this suggestion and Director Albano agreed.

Vice Chair Compton said there are grants for these types of forest management programs. Director Wooster said the Department of the Interior has allocated funds for these types of programs.

Director Bantilan said he is not in favor of this suggestion.

Director Williams said he thinks this program will have various levels of productivity.

SAC Vice Chair Kelly said he is interested in exploring this option, but commented that this program would likely take years to implement due to regulatory issues.

Chair Yurosek said he is interested in determining the yield and the environment restrictions but said to check the environment restrictions first.

The Board reached consensus to evaluate this option.

Water Supply Imports via Pipeline
The Board reached consensus to not include for consideration.

Water Supply Imports via Exchange
W&C recommended to include, and the Board reached consensus to evaluate this option.

Precipitation Enhancement
Director Williams said Santa Barbara County used to provide this service, but they were not sure how effective it is. Mr. Melton said it is very difficult to assess the effectiveness of this practice. Mr. Young said companies providing these services show a 10-15% increase in precipitation; however, he reported that Santa Barbara ultimately determined it was not helpful for them.

The Board reached consensus to evaluate this option.

Demand Management / Allocation Approach:
Mr. Melton provided a brief over of potential management actions.

Mr. Melton presented an overview of potential allocation methods which include: (1) pro rata allocation per overlying acre, (2) pro rata allocation per irrigated overlaying

acre, (3) allocation based on fraction of historic pumping, and (4) hybrid option (combination of all three).

Director Albano asked if different categories of irrigated acres are contemplated. Mr. Hughes said if you allocate on historic pumping you shut out the dormant pumpers. If you allocate pro rata across the acreage, then everyone with overlying land will get a water right. There is a principle of subordination where a court can say, equitably, it is fair to give a landowner more water because he has been making more economic use of the resource, therefore a hybrid approach may make sense to protect against lawsuits.

Director Albano said he thinks that different land use should be spelled out. Director Cappello asked how you can do that with so many variations possible. He said he thinks you need to narrow it down to two options and let the market and allocation decide the specifics.

Mr. Beck said his assumption is that costs will follow the allocation and that will come into consideration when determining the allocation for Cuyama.

Mr. Melton said they will report sustainability results at the next tech, SAC and Board meeting.

iii. Presentation on Groundwater Dependent Ecosystems

Director Williams asked when we will be discussing management areas. Mr. Melton said this will be discussed next month.

Mr. Melton provided an overview of the Groundwater Dependent Ecosystems (GDEs) field study that a certified biologist performed in the Cuyama basin. He reported that of the roughly 2,700 acres of GDEs determined by the Nature Conservancy data set, 497 acres were verified by the biologist as GDEs. Mr. Melton reported that regional monitoring is not adequate to measure GDEs and suggested that specifics sites be measured with piezometers.

Director Williams asked for clarification of what a piezometer is. Mr. Young said it is a device that uses pressure to measure water levels in a localized area.

Director Wooster said in the interest of full disclosure, the 497 acres verified was done partially using Google Maps. Mr. Melton confirmed this and let the Board know the biologist visited specific sites and then applied his knowledge to similar sites using Google Maps. SAC Chair Jaffe said W&C Senior Hydrogeologist John Ayres reported that the biologist did not go on private land.

b. Monitoring Networks Adoption

Mr. Van Lienden provided an overview of Monitoring Networks chapter.

MOTION

Director Shephard made a motion to adopt the Monitoring Networks chapter. The motion was seconded by Director Bracken and passed with a supermajority vote of 100%.

AYES: Directors Albano, Bantilan, Bracken, Cappello, Chounet, Christensen, Compton, Shephard, Williams, Wooster and Yurosek
NOES: None
ABSTAIN: None
ABSENT: None

c. Data Management Adoption

Mr. Van Lienden provided an overview of Data Management chapter.

MOTION

Director Shephard made a motion to adopt the Data Management chapter. The motion was seconded by Director Bracken and passed with a supermajority vote of 100%.

AYES: Directors Albano, Bantilan, Bracken, Cappello, Chounet, Christensen, Compton, Shephard, Williams, Wooster and Yurosek
NOES: None
ABSTAIN: None
ABSENT: None

d. Stakeholder Engagement Update

GSP Outreach the Catalyst Group's Charles Gardiner provided an update on stakeholder engagement activity. He noted that the goal of the upcoming March 6, 2019 public workshops is to provide a broad overview of the water budget, projects and management actions and implementation plan. He reported that the newsletter was distributed on February 1, 2019.

SAC Vice Chair Kelly asked if postcards are going out. Catalyst Group Outreach Consultant Mary Currie confirmed they will go out on Friday, February 8, 2019.

8. Groundwater Sustainability Agency

a. Report of the Executive Director

Mr. Beck suggested the March 6, 2019 Joint Board and SAC meeting start early to accommodate the public workshops. Vice Chair Compton said she has a conflict until 2:00 pm. Mr. Beck said we could start around 2:00 pm to ensure full participation.

Mr. Beck reported that Form 700s are due from Board Directors, Board Alternates, and Consultants by March 25, 2019 to Melissa Ballard.

Mr. Beck reported that staff was able to accommodate distribution of redline strikeout versions of the recent GSP chapters at the request of multiple parties. He said they are to be used as a tool to identify comments made within the chapter, but not to cause another round of iterations of the document itself due to budget constraints.

Mr. Beck reported that the GSP development is trending over budget for the first time. He mentioned that the additional Special Joint Board and SAC Meeting on December 18, 2018 was not in the scope. Mr. Beck reported that an additional meeting costs roughly $10,000 for administration of the meeting and the December 18 Special Board cost an additional $15,000 in technical preparation, therefore resulting in a $25,000 expenditure.

He said additional activities that have affected the budget, and that were not in the original scope, include the technical forum, the California Department of Water Resources (DWR) Technical Support Services (TSS) effort, and the multiple cycles of redline strikeout document reviews where we only anticipated one. Mr. Beck said the current shortfall is projected to be $211,000. He said there are options to defer certain work items and recommends we work with the budget ad hoc to discuss potential cost saving reductions. Mr. Beck also said we budgeted $20,000 per year in contingency funds for a total of $60,000 that we have not utilized. He also thanked Santa Barbara County Water Agency for securing a grant that allowed the Hallmark Group to receive reimbursement of $40,000 above their expected contribution.

Chair Yurosek said he is a big stickler for staying on budget and looks forward to the budget ad hoc coordinating with staff to resolve this issue.

b. Progress & Next Steps

Mr. Beck provided an update on the near-term GSP schedule and accomplishments and next steps, which are summarized in the Board packet.

c. Report of the General Counsel

i. Election of Officers

Mr. Hughes reported that there are five positions required by the CBGSA Joint Exercise Powers Agreement: (1) Chair, (2) Vice Chair, (3) Secretary, (4) Treasurer and (5) Auditor. He said that the Auditor and Treasurer position can be consolidated into one position. He reported that the Board has already appointed the Hallmark Group to handle the treasurer duties but recommends designating a director to serve as the Auditor/Treasurer.

Director Cappello recommended the Chair and Vice Chair to remain the same and the other officer positions can be volunteers. Director Cappello volunteered to be the Auditor/Treasurer and Director Bantilan volunteered to be the Secretary.

MOTION

Director Cappello made a motion to appoint Derek Yurosek as the Chair, Lynn Compton as the Vice Chair, Cory Bantilan as Secretary, and George Cappello as the Auditor/Treasurer to serve during calendar year 2019. The motion was seconded by Director Wooster and passed unanimously.

AYES:	Directors Albano, Bantilan, Bracken, Cappello, Chounet, Christensen, Compton, Shephard, Williams, Wooster and Yurosek
NOES:	None
ABSTAIN:	None
ABSENT:	None

9. Financial Report

a. Financial Management Overview

Mr. Blakslee provided an overview of the CBGSA's financial activities.

b. Financial Report

Mr. Blakslee provided an overview of the December 2018 financial report and is included in the Board packet.

c. Annual Insurance Coverage

Mr. Blakslee provided an overview of the annual insurance coverage and is included in the Board packet.

MOTION

Director Cappello made a motion to authorize annual insurance coverage with Walter Mortensen Insurance / INSURICA. The motion was seconded by Vice Chair Compton and passed unanimously.

AYES:	Directors Albano, Bantilan, Bracken, Cappello, Chounet, Christensen, Compton, Shephard, Williams, Wooster and Yurosek
NOES:	None
ABSTAIN:	None
ABSENT:	None

d. Annual Audit

Mr. Blakslee reported that the CBGSA Fiscal Policies, Procedures, and Internal Controls document that was adopted on March 7, 2018 directed the CBGSA to perform an annual audit. This audit will be for the Fiscal Year 2017-18 which encompasses only nine months of financial activity, therefore the Hallmark Group's recommendation is to defer the audit to fall 2019 to cover a two-year period, thus saving some money.

Chair Yurosek asked if there are any County issues that would impact not having an annual audit performed and asked Mr. Hughes if he had any concerns. Mr. Hughes said his only concern is that a two-year audit is inconstant with Fiscal Controls Policy. Mr. Blakslee said he will coordinate with the Counties regarding any potential issues they have with performing a biennial audit.

e. Payment of Bills

Mr. Blakslee reported on the payment of bills for the month of December 2018.

MOTION

A motion was made by Vice Chair Compton and seconded by Director Shephard to approve payment of the bills through the month of December 2018 in the amount of $124,583.44, pending receipt of funds. The motion passed unanimously.

AYES:	Directors Albano, Bantilan, Bracken, Cappello, Chounet, Christensen, Compton, Shephard, Williams, Wooster and Yurosek
NOES:	None
ABSTAIN:	None
ABSENT:	None

10. Reports of the Ad Hoc Committees

Chair Yurosek appointed the following for the Budget and Audit ad hoc: Director Bantilan, Bracken, Chounet and Cappello, and Matt Klinchuch and Matt Young.

Chair Yurosek appointed the following ad hoc for the DWR TSS effort: Directors Chounet and Yurosek, and SAC Committee members Kelly and Debranch.

11. Directors' Forum

Director Albano asked if W&C will release the water budget source files. Mr. Melton said he believes they are ready to release them but will confirm this and release them before the next technical forum.

On a process issue, Director Albano said he was a little disappointed that the SAC is spending so much time deliberating over recommendations for the Board opposed to providing their input. Chair Yurosek thanked Director Albano for the feedback and said the Board will do better on directing the SAC by prioritizing what feedback is needed.

12. Public comment for items not on the Agenda

A man identified as Jake provided a public comment to the Board on his efforts to remove Paul Chounet from the Cuyama Community Services District (CCSD) Board because he does not reside in the CCSD's boundaries.

13. Adjourn

Chair Yurosek adjourned the CBGSA Board at 6:15 p.m.

Minutes approved by the Board of Directors of the Cuyama Basin Groundwater Sustainability Agency the 6th day of March 2019.

BOARD OF DIRECTORS OF THE
CUYAMA BASIN GROUNDWATER SUSTAINABILITY AGENCY

Chair: _____

ATTEST:

Secretary: _____

TO: Board of Directors
Agenda Item No. 5

FROM: Roberta Jaffe, Standing Advisory Committee Chair

DATE: March 6, 2019

SUBJECT: Report of the Standing Advisory Committee

Issue
Report on the Standing Advisory Committee meeting.

Recommended Motion
None – information only.

Discussion
Provided as Attachment 1 is a report on the February 28, 2019 Standing Advisory Committee (SAC) from SAC Chair Roberta Jaffe and Vice Chair Brenton Kelly.

The purpose of this report is to provide the Cuyama Basin Groundwater Sustainability Agency Board of Directors with SAC input on the various Groundwater Sustainability Plan (GSP) components and issues that will better equip the Board when making decisions on GSP-related issues.

Attachment 1

Standing Advisory Committee Report
Meeting: February 28, 2019
Submitted to the GSA Board March 4, 2019
By Roberta Jaffe, SAC Chair
Brenton Kelly SAC Vice-Chair

8 of 9 SAC members were present (1 over telephone) throughout the 4 hour special session. There were approximately 12 people in the audience including 1 Cuyama Basin Water District (CBWD) Director who also serves as a GSA Board Member. GSA Board Chair Yurosek joined us via phone.

There were 5 main areas of discussion:

1. Water budget and Sustainability Thresholds Chapters introduced
2. Management Areas proposed with SAC recommendation
3. Project proposal update with SAC recommendation
4. Pumping allocation with SAC recommendation
5. Implementation plan

Recommendations to the GSA Board:
The SAC unanimously recommends the following based on Woodard & Curran staff recommendations:

• Management Areas: accept the staff recommendation to set two preliminary management areas in the Central Basin and Ventucopa area where modeled overdraft conditions are greater than two feet per year and subject for future review no later than five years.
• Project Proposals: accept the staff recommendation to include all of the recommended projects for additional analysis in the GSP implementation plan.
• Pumping Allocation: allocation approach should be decided by the entity managing the management area.
• Implementation Plan: There was consensus to accept the implementation change with the following changes: Move "Allocation program beings phase-in" to the 2020-2025 section on slide 118 and reword to "Allocation program development and phase-in." And placing an asterisk by timeline components that are specific to the management areas.

Key Discussions:
Several important discussions and questions were asked throughout the meeting and are summarized below:

Climate Change:
Both SAC members and audience asked questions about the incorporation of climate change in the model and water budget and how it could impact any changes in the GSP.
Woodard & Curran staff, Brian Van Lienden said they will be doing a water budget with and without climate change in the GSP draft. Brian said W&C plans on estimating the sustainable yield with just pumping reductions and then with pumping reductions and projects, and then with a separate climate change analysis.

Management Areas:

Joe Hughes introduced Kern County's model for how to manage management areas. Kern County has taken a strategies of keeping management as local as possible, thus in most cases designated management areas will be managed by the local water district. There were many questions regarding how Management Area boundaries will be established; what type of agreement would need to be set up between the designated management area authority and the GSA; could Management Areas change and others be added. While specifics were not answered, it was agreed that the details would be very important.

Eastern/Ventucopa Sub-region:
Brian Van Lienden re-introduced the challenges of setting minimum thresholds in the Eastern Region due to the lack of monitoring wells. Jim Wiggis , resident and farmer in the Ventucopa/Eastern region, was in the audience and was able to provide information and feedback for the area saying that he thought there were additional monitoring wells that could be used including his. Brian presented Woodard & Curran recommendation to reset MTs at 2017 levels minus 20% and install additional rep wells going forward.

Projects and Management Actions:
While the projects as proposed were approved by the SAC, there was concern and discussion regarding how little the cumulative projects will improve the groundwater storage and questioning of the cost-benefit of the proposed projects. In addition discussion took place regarding water markets. Questions were asked how water markets could work and if these could just be intra-subregion transfers or if they could be inter-subregion transfers. Jim Beck said that ultimately this is up to the GSA Board, but can be very complicated.

Summary:

The SAC unanimously approved for recommendation to the GSA Board Woodard and Curran's recommendations regarding Management Areas; Project Proposals; and Pumping Allocation Management. Consensus was reached with specific modifications for the timeline implementation. Key discussions took place regarding how Management Areas would be defined and managed; if water markets were established if inter-subregion transfers could be allowed; how climate change will be incorporated in the model and water budget. Further discussion took place regarding Minimum Thresholds in the Eastern Region.

TO: Board of Directors
Agenda Item No. 6

FROM: Lyndel Melton, Woodard & Curran

DATE: March 6, 2019

SUBJECT: Technical Forum Update

Issue
Update on the Technical Forum.

Recommended Motion
None – information only.

Discussion
At the request of Cuyama Valley landowners, Cuyama Basin Groundwater Sustainability Agency Groundwater Sustainability Plan (GSP) consultant Woodard & Curran (W&C) has been meeting monthly with technical consultants representing landowners to discuss W&C's approach and to provide input where appropriate.

A summary of the topics discussed at the February 22, 2019 technical forum meeting is provided as Attachment 1, and the next forum date is March 22, 2019.

COMMITMENT & INTEGRITY
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1545 River Park Drive | Suite 425
Sacramento, California 95815
www.woodardcurran.com

T 916.999.8700

MEETING MEMORANDUM

PROJECT: Cuyama Basin Groundwater Sustainability Plan Development

MEETING DATE: 2/22/2019

MEETING: Technical Forum Conference Call

ATTENDEES: Matt Young (Santa Barbara County Water Agency)
Fray Crease (Santa Barbara County Water Agency)
Spencer Harris (Cleath-Harris Geologists)
Neil Currie (Cleath-Harris Geologists)
John Fio (EKI)
Jeff Shaw (EKI)
Dave Leighton (EKI)
Matt Klinchuch (Provost & Pritchard)
Dennis Gibbs (Santa Barbara Pistachio Company)
Brian Van Lienden (Woodard & Curran)
Sercan Ceyhan (Woodard & Curran)
Micah Eggleton (Woodard & Curran)
Ali Taghavi (Woodard & Curran)
Sebastien Poore (Woodard & Curran)

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1. AGENDA

- Numerical Model and Water Budget Update
- Projects and Management Actions
- Groundwater Dependent Ecosystems

2. DISCUSSION ITEMS

The following table summarizes comments raised during the conference call and the response and plan for resolution (if appropriate) identified for each item.

Item No.	Comment	Commenter	Response/Plan for Resolution
1	The model input and output files were provided to the Technical Forum members earlier this week.	W&C	The Technical Forum members did not have any questions or comments on them at the time of the call.
2	How does the integrated model account for precipitation onto upper watershed areas that would flow into the Basin area?	Spencer Harris	Areas outside of the groundwater basin are simulated in the model based on precipitation and assumed land cover to estimate runoff and subsurface inflow from each upper watershed area.
3	Can you add an accounting of the water flows in the upper watershed areas?	Spencer Harris	W&C will provide the Technical Forum members with the model data files for the upper watersheds.

4	Do the sustainability runs maintain the same crop mix as current conditions?	Dennis Gibbs	For modeling purposes, the sustainability runs assumed that annual crops would be reduced proportionally while perennial crops would be unchanged.
5	It is not appropriate to make a distinction between annual and perennial crops in implementing pumping reductions.	Multiple	This assumption was used for modeling purposes and does not reflect a recommendation for implementation. To avoid confusion, the language used in the SAC and Board slides has been modified to remove the distinction.
6	Is there any opportunity to switch to less water intensive crops to reduce the financial impact?	Spencer Harris	This is something that could be evaluated using economic analysis, most likely during the GSP implementation phase.
7	It would be helpful to see some error bars – have you done any sensitivity analysis on model inputs?	Jeff Shaw	This has not been done yet for Cuyama GSP, but it could be considered in future analysis.
8	The assumptions used for cloud seeding probably overestimate the benefit because in practice cloud seeding would typically be applied only on a subset of storms throughout the year.	Matt Young	The current analysis is only intended to provide an initial estimate of the benefits that may be accrued. However, to improve this initial analysis, W&C has requested additional information from Santa Barbara Co staff on the timing of when cloud seeding would be applied.
9	On the North side of Highway 166 where the river is the widest, that is the historical channel. There are areas there that are prime for detention storage.	Dennis	Alternative areas for recharge of stormwater can be considered in a future study.
10	The estimates of benefits for the three water supply projects are reasonably accurate for use in the GSP.	Dennis	Comment noted.
11	Has climate change analysis been applied to any of these scenarios?	Jeff	Climate change has not yet been evaluated for the GSP. An analysis will be developed for inclusion in the Public Draft.

Cuyama Basin Groundwater Sustainability Agency

Technical Forum Update

March 6, 2019

WOODARD &CURRAN

February 22nd Technical Forum Discussion

- Numerical Model Development Update
  - Water Budgets
  - Projects Analysis
- Discussion on Sustainability Thresholds
- Next Meeting – Friday, March 22

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: Board of Directors
Agenda Item No. 7a

FROM: Lyndel Melton, Woodard & Curran (W&C)

DATE: March 6, 2019

SUBJECT: Groundwater Sustainability Plan Update

Issue
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.

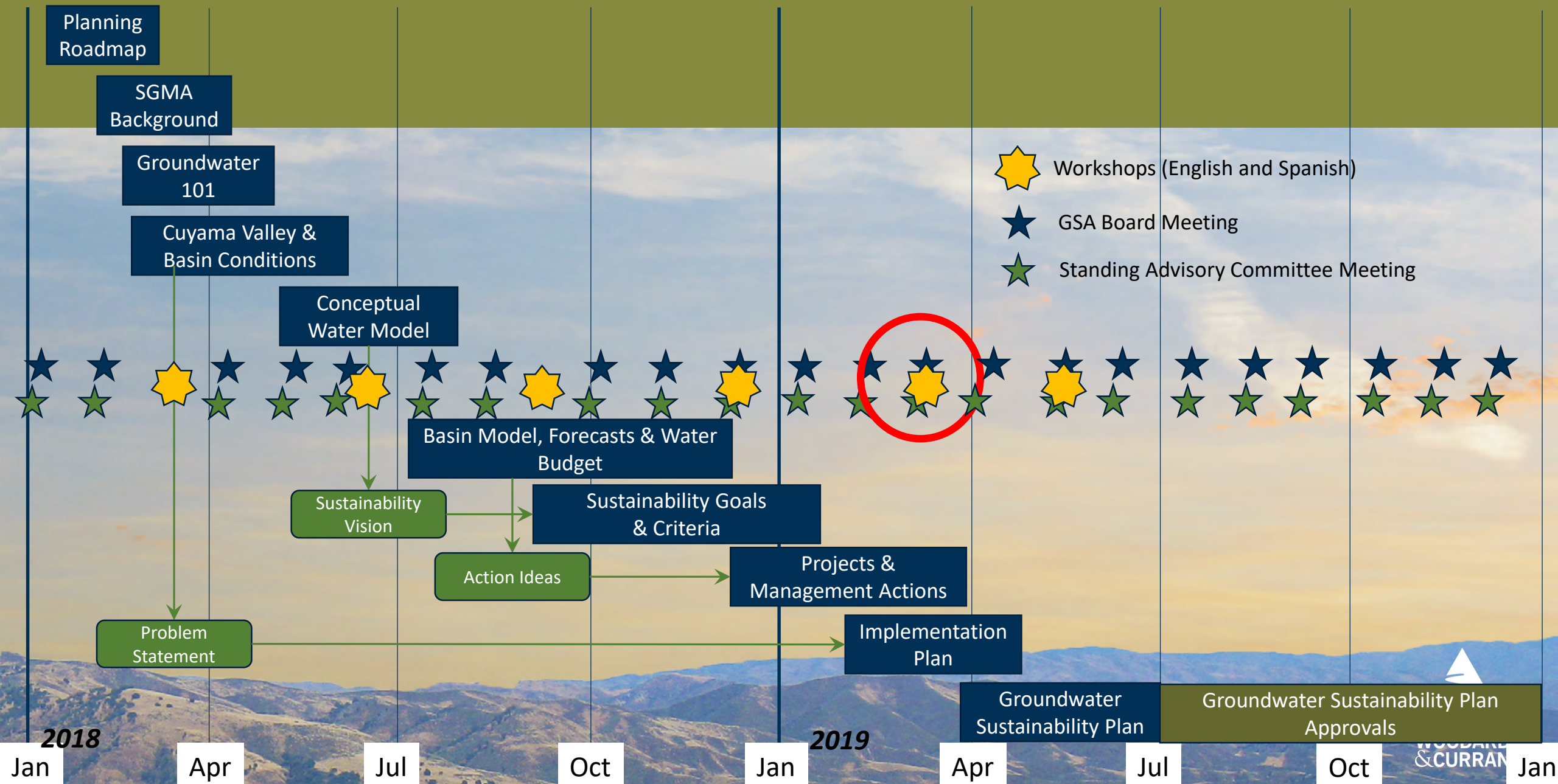
Cuyama Basin Groundwater Sustainability Agency

Groundwater Sustainability Plan Update

March 6, 2019

WOODARD &CURRAN

Cuyama Basin Groundwater Sustainability Plan – Planning Roadmap



February GSP Accomplishments

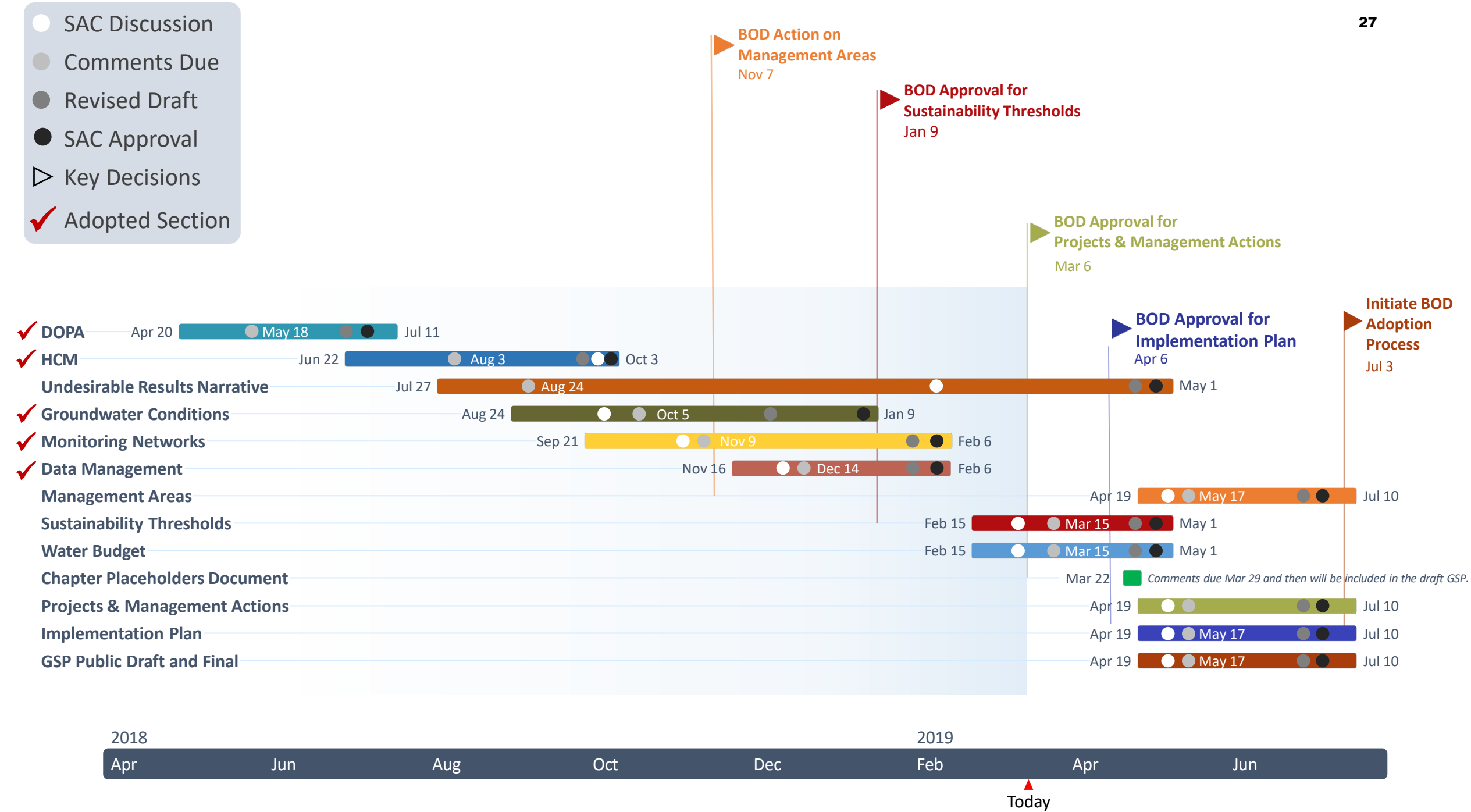
- ✓ Submitted draft Water Budget GSP Section for review
- ✓ Submitted draft Sustainability Thresholds GSP Section for review
- ✓ Developed draft future sustainability scenario using the Cuyama Basin numerical model
- ✓ Performed technical analysis of potential water supply options using the Cuyama Basin numerical model
- ✓ Initiated development of invoice to DWR for payment on SGMA grant

WOODARD &CURRAN

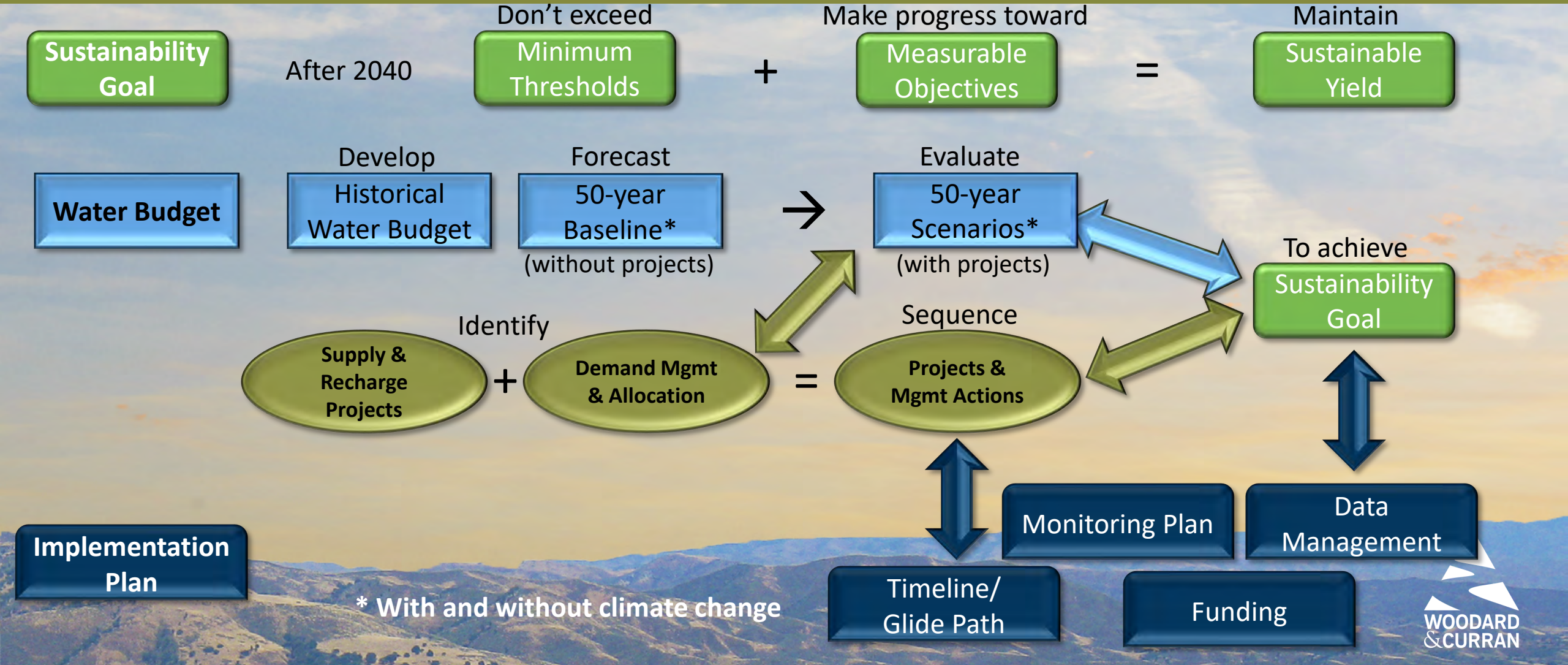
GSP Sections

1. Introduction
   - 1.1 GSA Authority & Structure
   - 1.2 Plan Area
   - 1.3 Outreach Documentation
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 Narrative/Effects
   - 3.2 ID Current Occurrence
4. Monitoring Networks
   - 4.1 Data Collection/Processing
   - 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. GSP Implementation

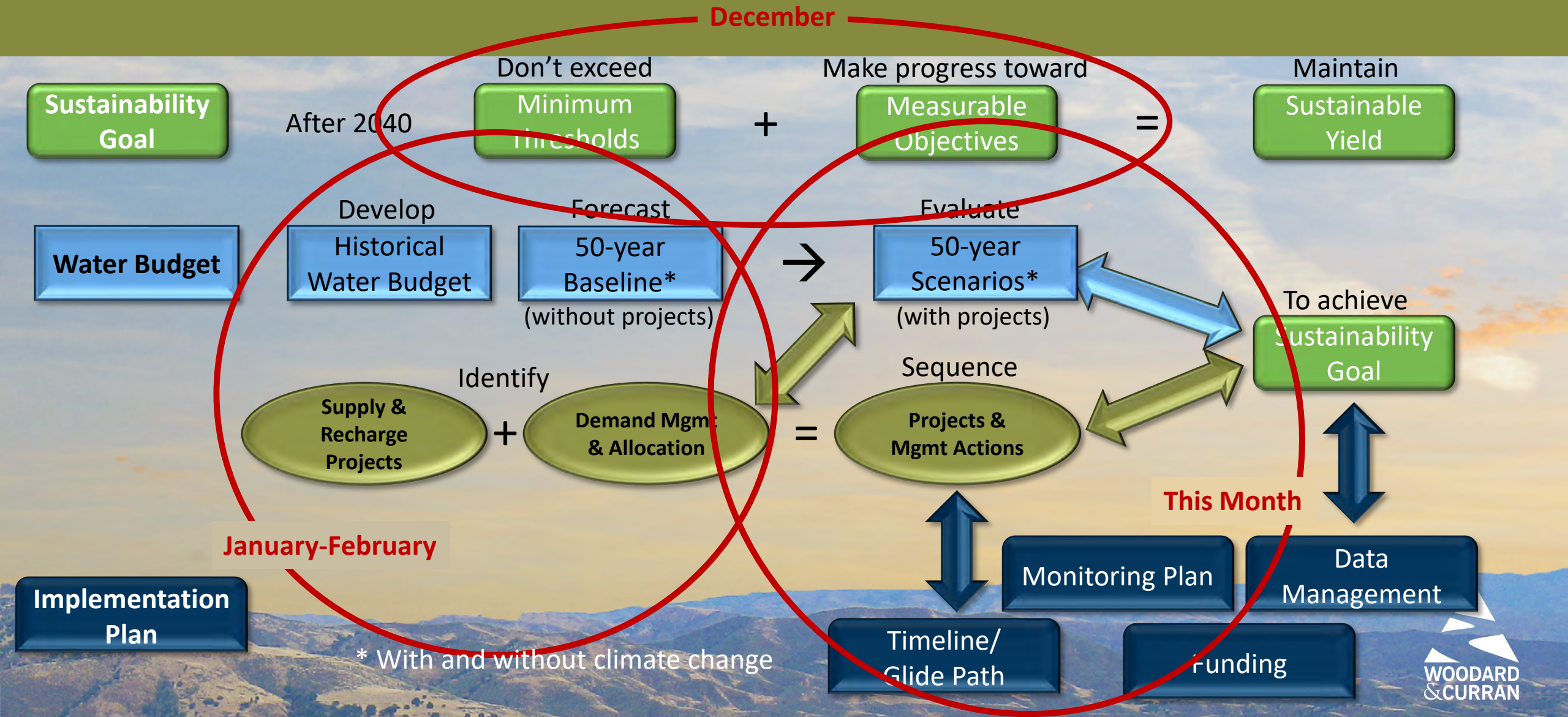
WOODARD &CURRAN


SAC Discussion
Comments Due
Revised Draft
SAC Approval
Key Decisions
Adopted Section
BOD Action on Management Areas
Nov 7
BOD Approval for Sustainability Thresholds
Jan 9
BOD Approval for Projects & Management Actions
Mar 6
BOD Approval for Implementation Plan
Apr 6
Initiate BOD Adoption Process
Jul 3
DOPA Apr 20 May 18 Jul 11
HCM Jun 22 Aug 3 Oct 3
Undesirable Results Narrative Jul 27 Aug 24 May 1
Groundwater Conditions Aug 24 Oct 5 Jan 9
Monitoring Networks Sep 21 Nov 9 Feb 6
Data Management Nov 16 Dec 14 Feb 6
Management Areas Apr 19 May 17 Jul 10
Sustainability Thresholds Feb 15 Mar 15 May 1
Water Budget Feb 15 Mar 15 May 1
Chapter Placeholders Document Mar 22
Comments due Mar 29 and then will be included in the draft GSP.
Projects & Management Actions Apr 19 Jul 10
Implementation Plan Apr 19 May 17 Jul 10
GSP Public Draft and Final Apr 19 May 17 Jul 10
2018
2019
Apr Jun Aug Oct Dec Feb Apr Jun
Today

GSP Discussion Approach & Terminology



GSP Discussion Approach & Terminology



TO: Board of Directors
Agenda Item No. 7b

FROM: Lydnel Melton, Woodard & Curran (W&C)

DATE: March 6, 2019

SUBJECT: Discussion on Water Budgets

Issue
Discussion on the Water Budget chapter.

Recommended Motion
None – information only.

Discussion
An overview of the Water Budget chapter is provided as Attachment 1 and the draft Water Budget chapter is provided as Attachment 2.

Cuyama Basin Groundwater Sustainability Agency

Discussion on Water Budgets

March 6, 2019

WOODARD &CURRAN

Water Budget GSP Section

- Draft GSP Section provided to SAC and Board for on February 19th
- Water Budget section describes:
  - Water budget information and hydrologic periods
  - Usage of IWFM model and associated data
  - Water Budget definitions and assumptions
  - Water Budget estimates
    - Historical water budget
    - Current and projected water budget
  - Sustainable yield estimate (placeholder)
- Comments are due on March 15th

WOODARD &CURRAN

Water Budgets - Time Frames

Historical Conditions

Historical hydrology, land use and population (1995-2015)

Current Conditions

2017 land use and population

1967 - 2017 historical hydrology

Future Conditions

Year 2040 land use and population

- Assumed to be the same as Current Conditions

1967- 2017 historical hydrology

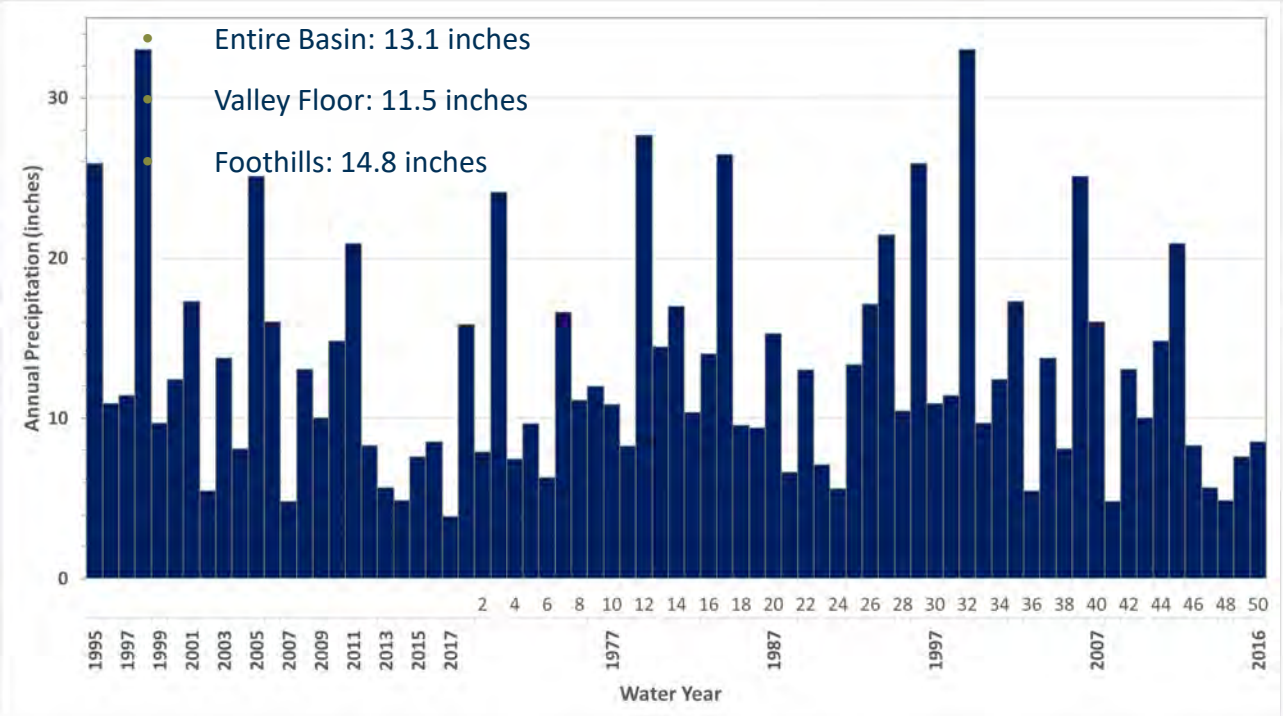
With and without climate change

Future Conditions

Annual Precipitation

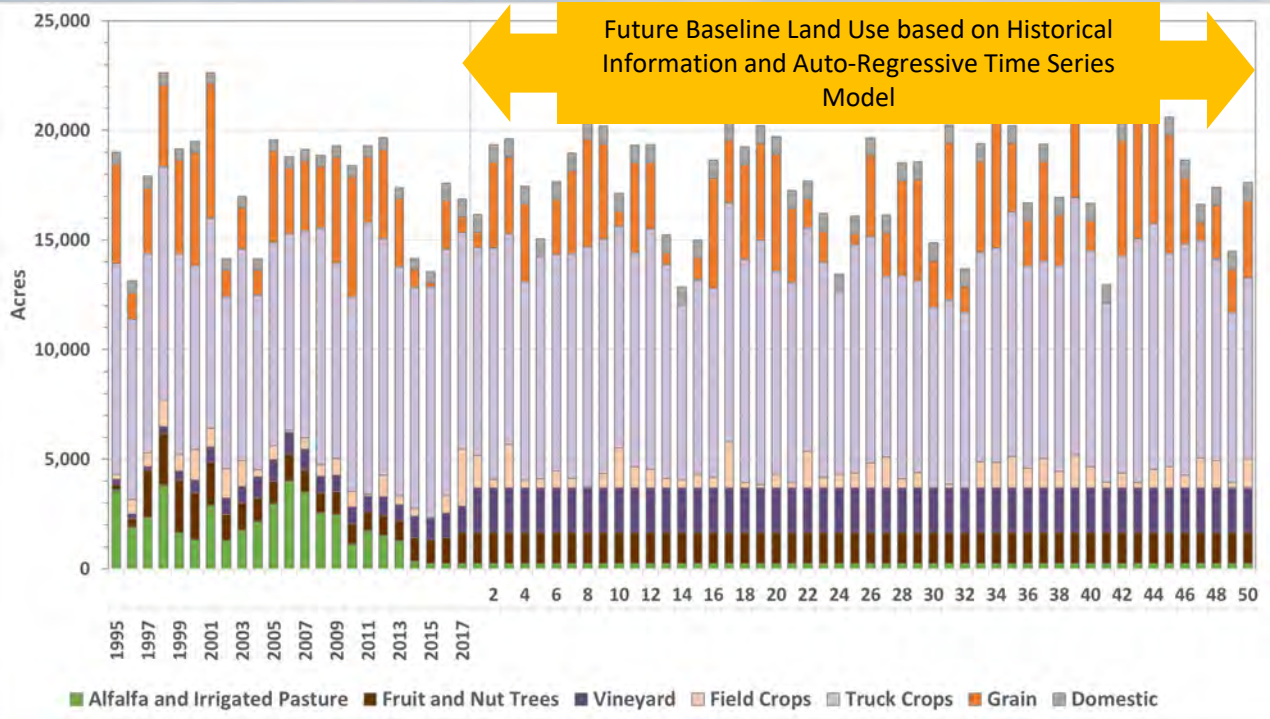
(based on adjusted PRISM dataset)

Average Annual Precipitation (50 years)

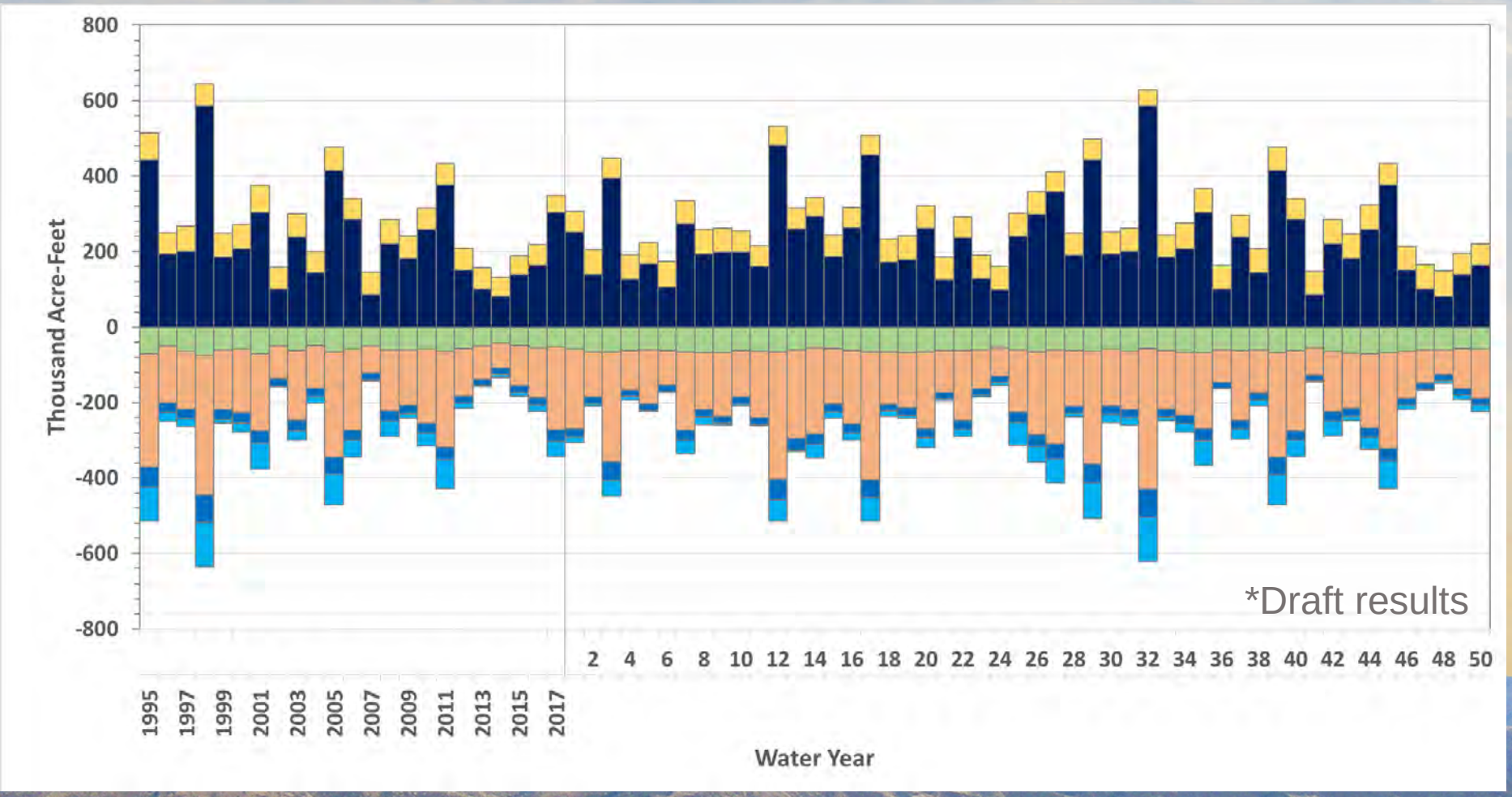


Land Use

(based on historical information and ARMA Model)



Future Conditions Land Surface Water Budget: Basin-Wide



Average Annual (50 years)

Inflows

Precipitation (~11.4”)	230 TAF
Applied Water	60 TAF

Outflows

Agriculture Evapotranspiration	57 TAF
Native Vegetation Evapotranspiration	182 TAF
Domestic Evapotranspiration	<0.1 TAF
Deep Percolation	24 TAF
Runoff	27 TAF

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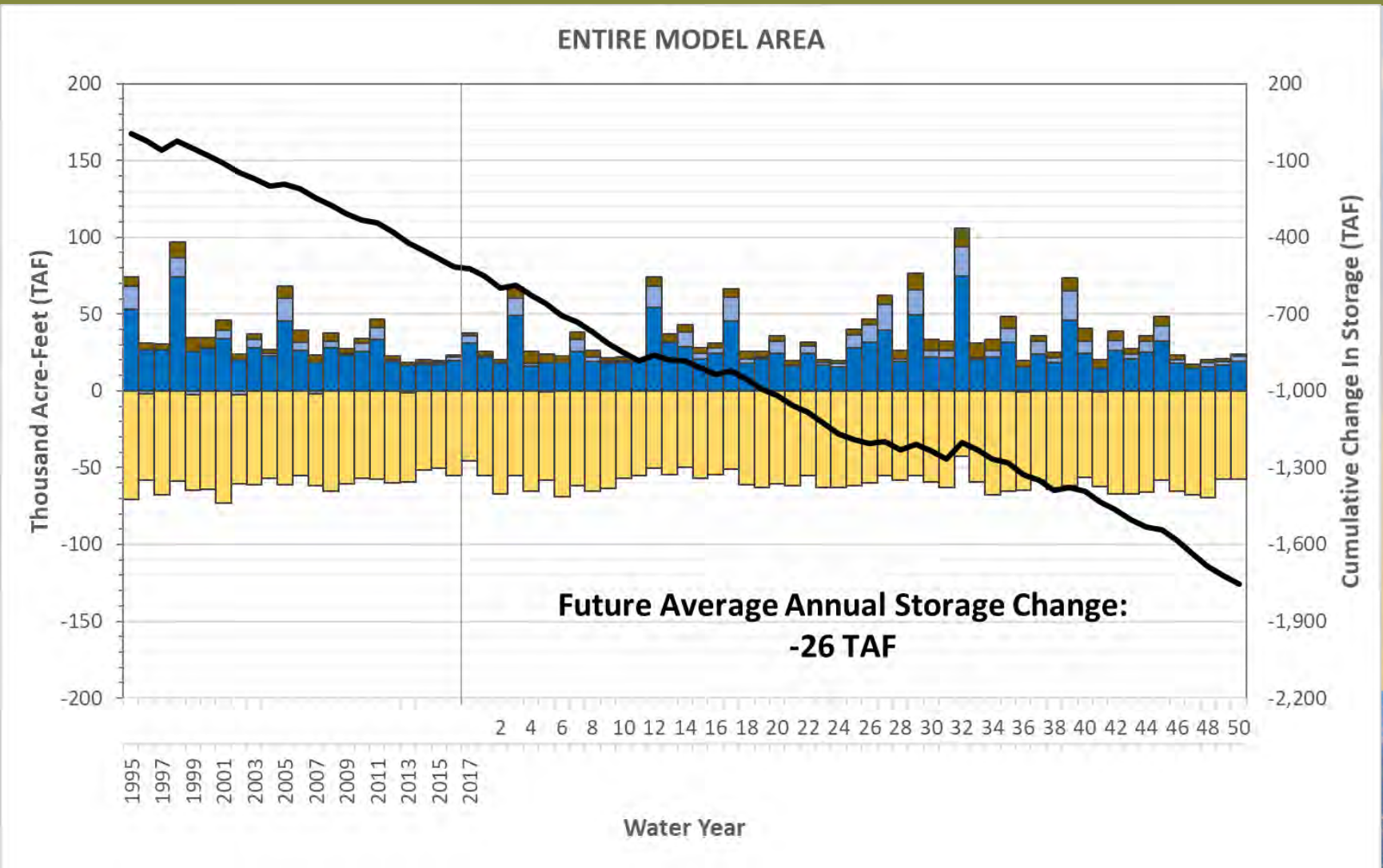
Future Conditions Groundwater Budget: Basin-Wide



Average Annual (50 years)

Inflows:

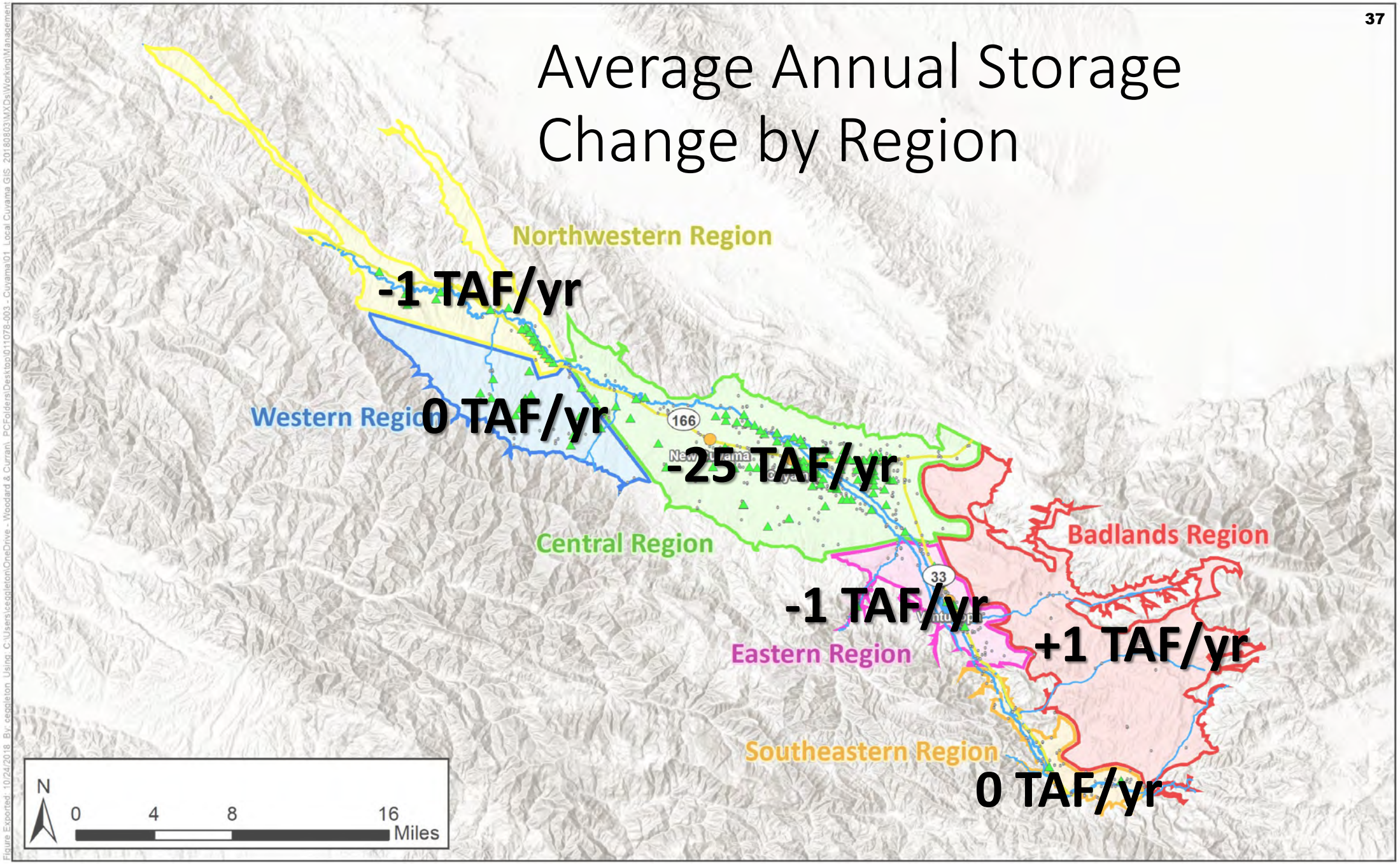
Deep Percolation	24 TAF
Stream Seepage	5 TAF
Boundary Flow	5 TAF

Outflows:

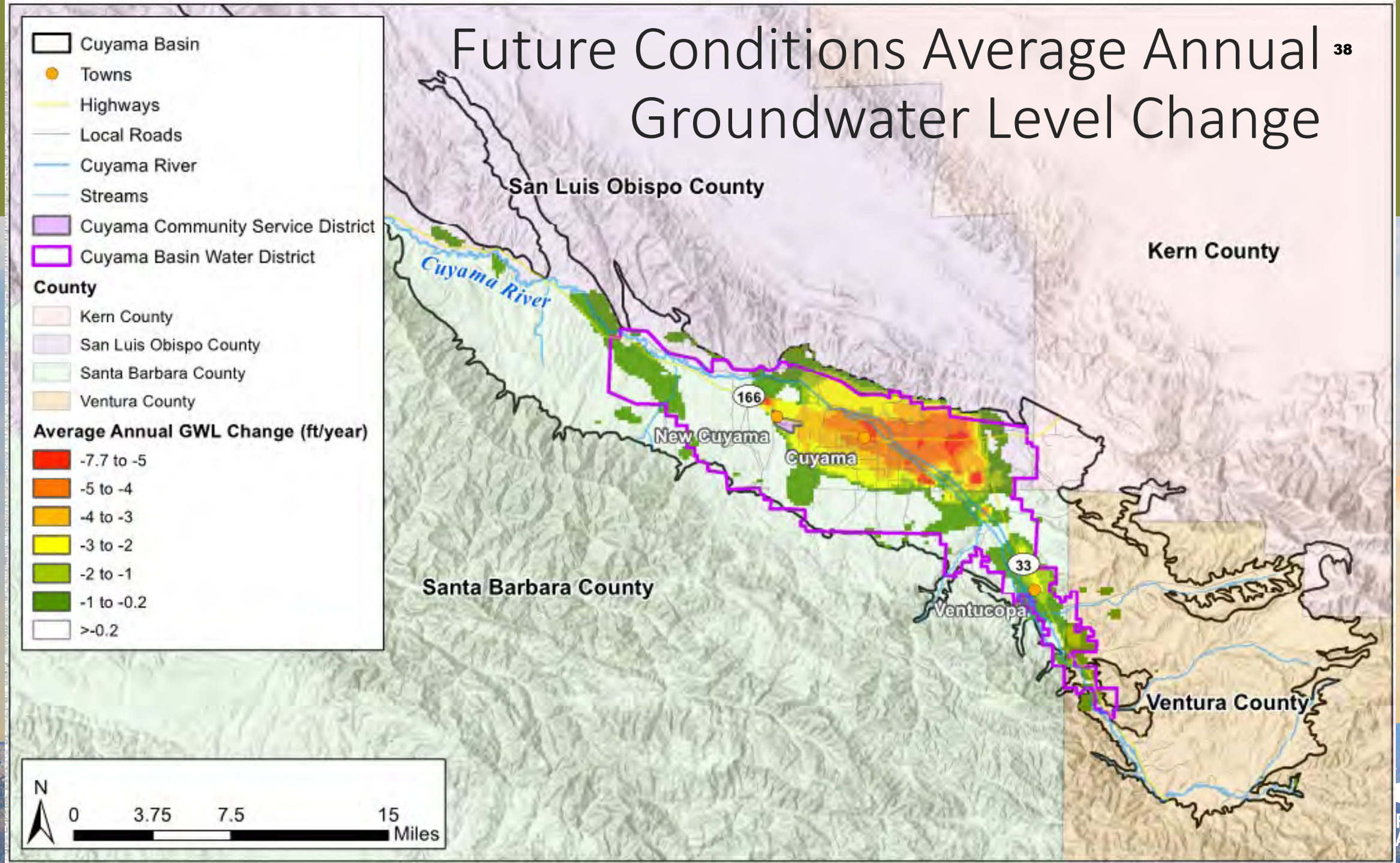
GW Pumping	60 TAF

WOODARD &CURRAN

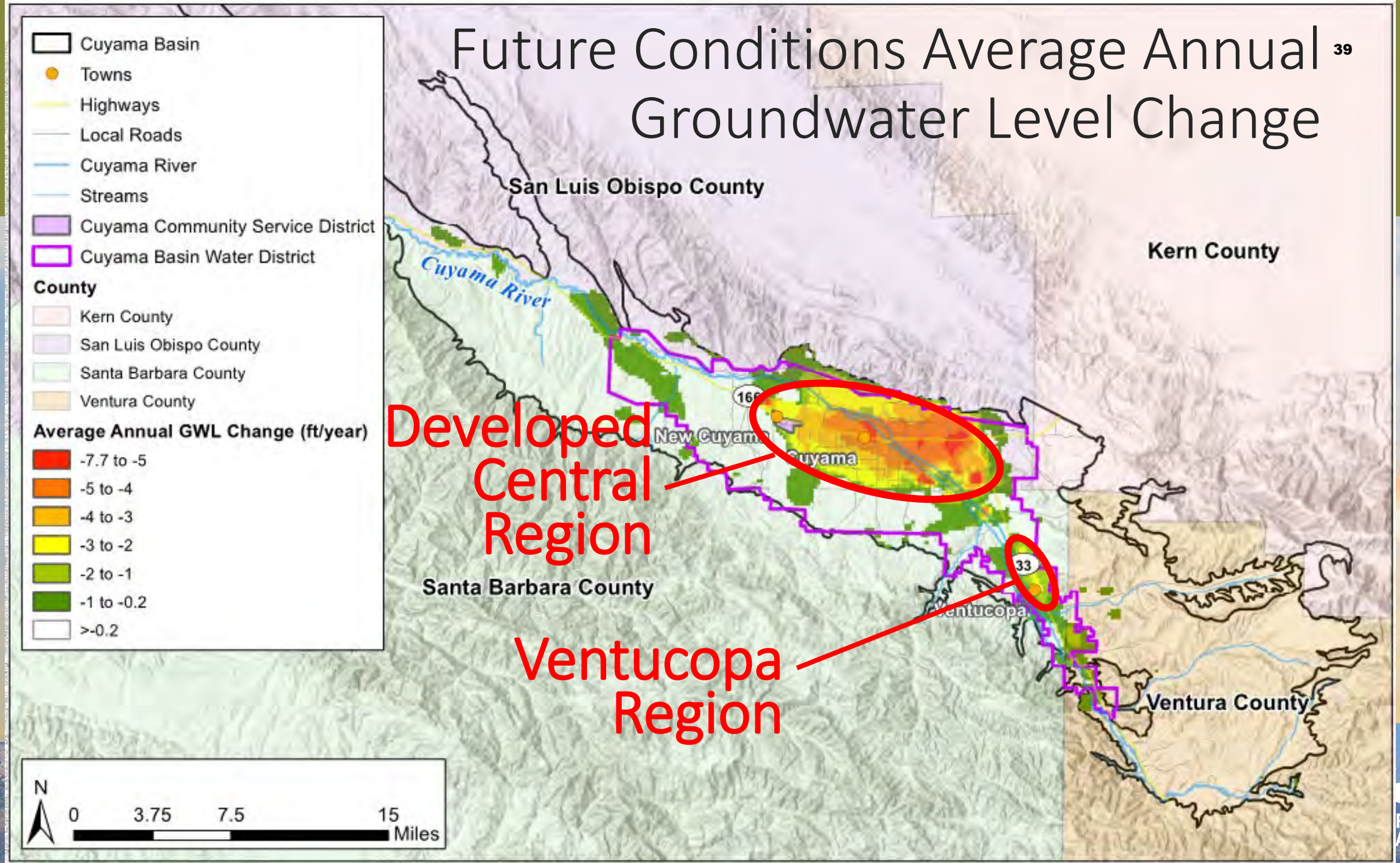
Average Annual Storage Change by Region



Future Conditions Average Annual Groundwater Level Change



Future Conditions Average Annual Groundwater Level Change



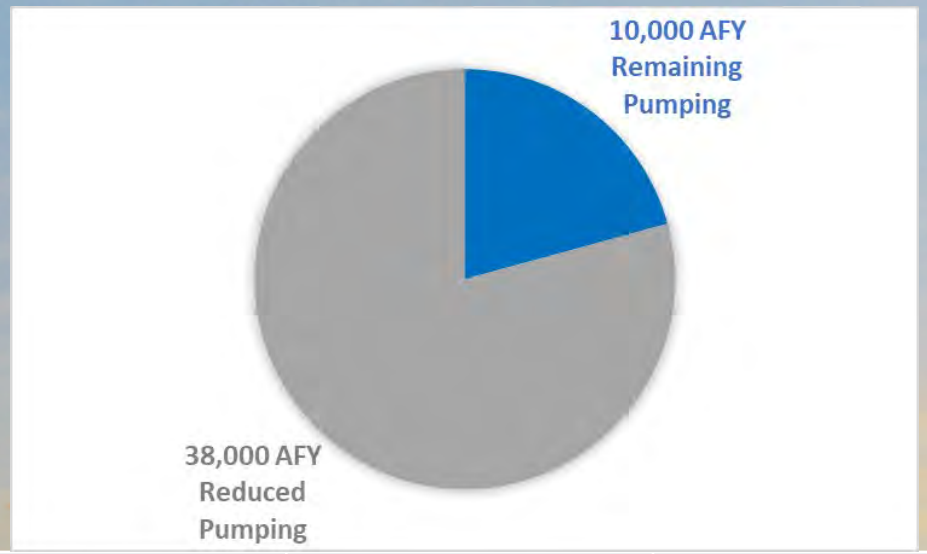
Future Conditions – Pumping Reductions Only Scenario

Assumptions for reducing pumping volumes:

- Idle lands are converted to native vegetation.
- In each scenario run, total crop acreage was reduced by a constant percentage through the 50 year period.
- Reduction applied independently for Central Developed Area and Ventucopa.
- Decrease in crop acreage results in a decrease in groundwater pumping and agricultural evapotranspiration.

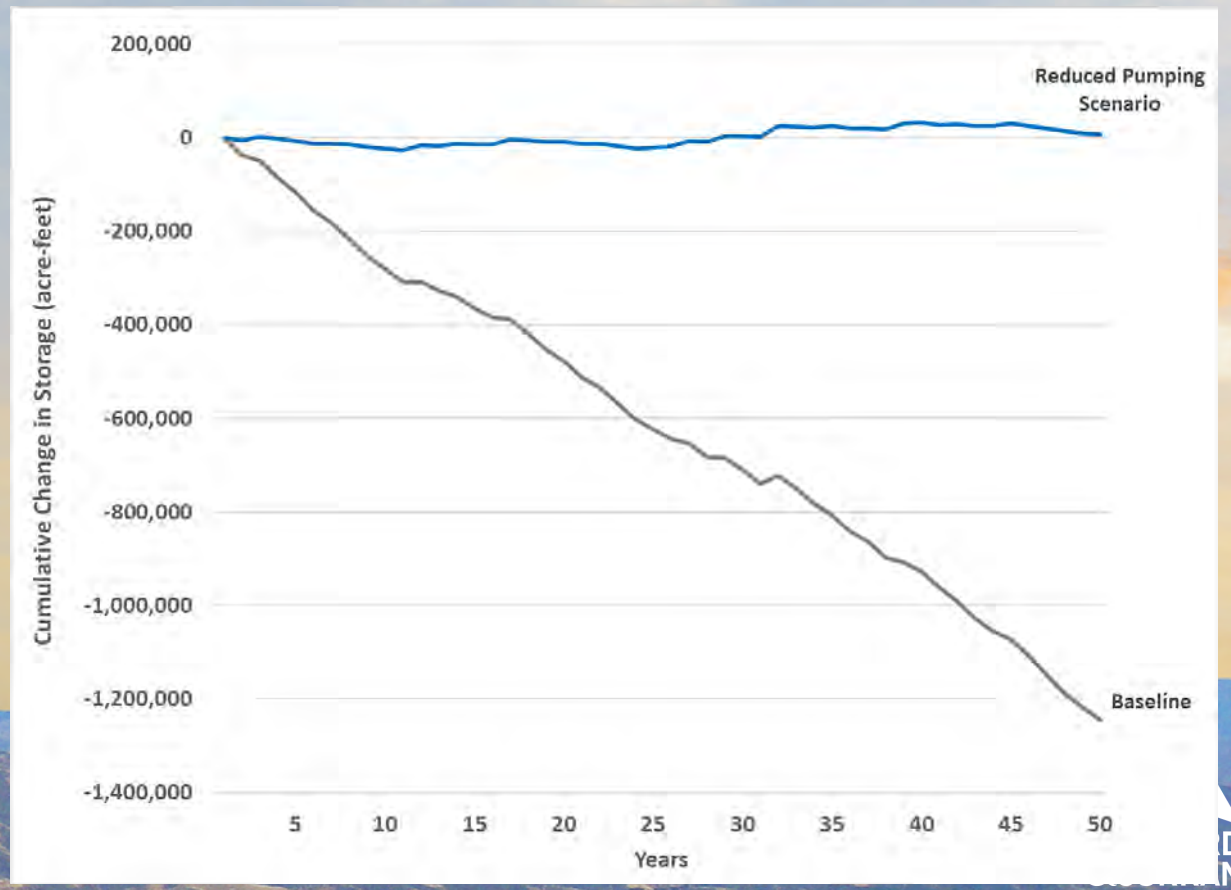
Future Conditions – Pumping Reductions Only Scenario – Central Developed Region

Pumping reductions needed to eliminate cumulative decline in storage



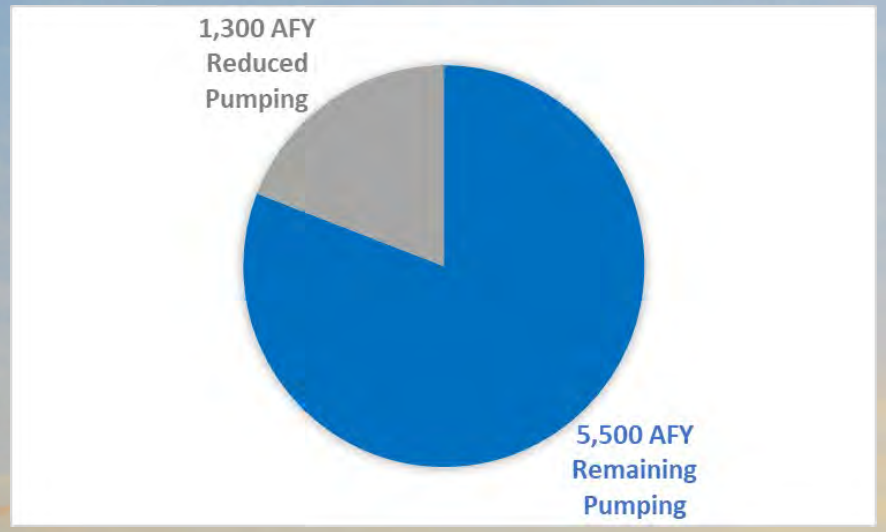
	BASELINE	REDUCED PUMPING SCENARIO
INFLOWS		
Deep Percolation (+)	17,000	4,000
Gain from Stream (+)	5,000	5,000
Subsurface Inflow(+)	1,000	1,000
OUTFLOWS		
Pumping (-)	48,000	10,000
STORAGE CHANGE	**-25,000**	**0**

Projected change in Storage under Baseline and reduced pumping conditions



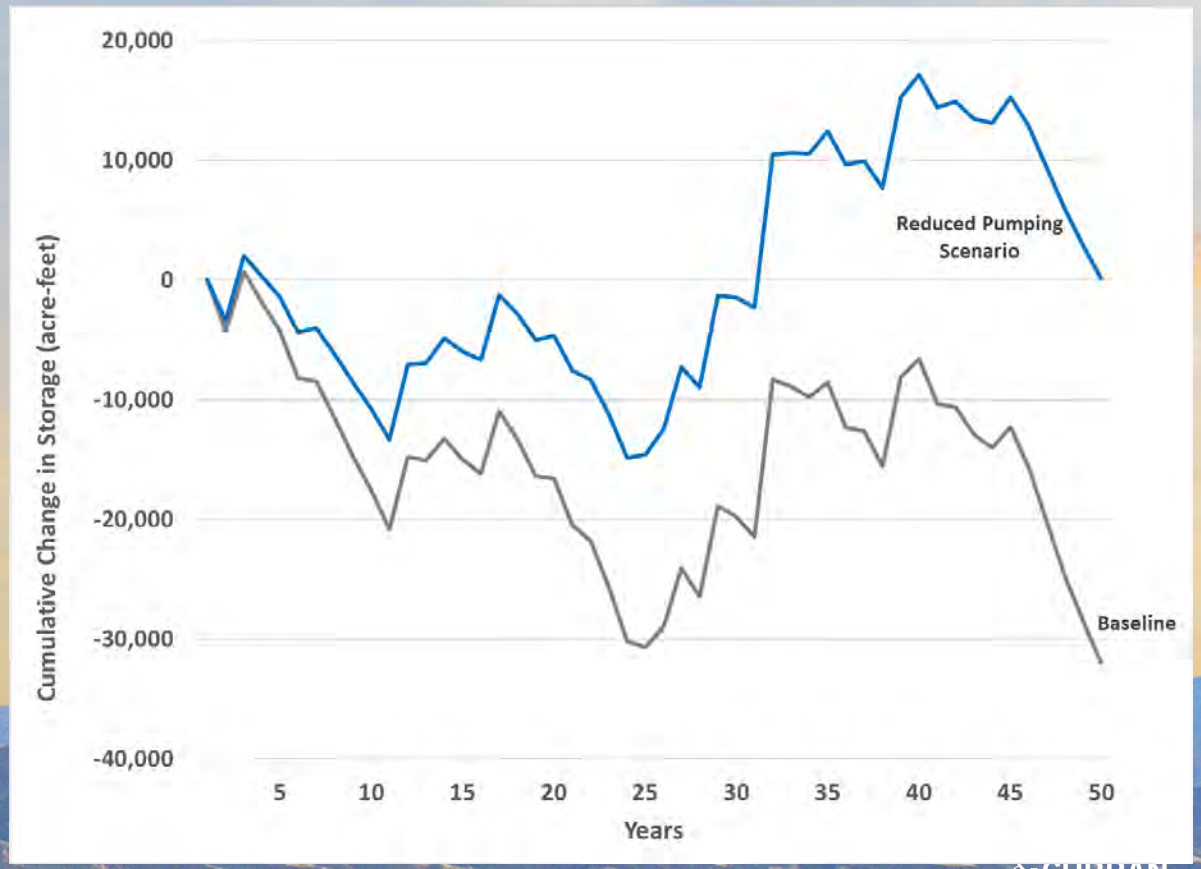
Future Conditions – Pumping Reductions Only Scenario – Ventucopa Region

Pumping reductions needed to eliminate cumulative decline in storage



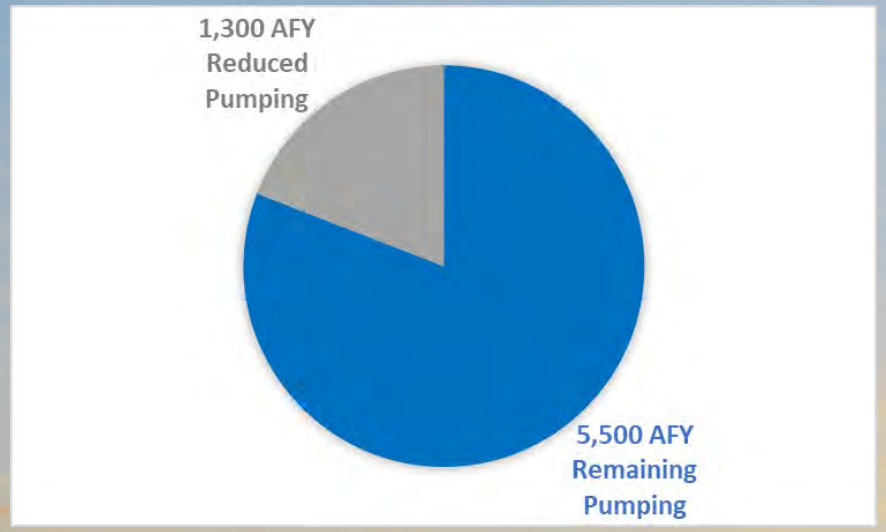
	BASELINE	REDUCED PUMPING SCENARIO
INFLOWS		
Deep Percolation (+)	4,200	3,500
Gain from Stream (+)	1,300	1,300
Subsurface Inflow(+)	700	700
OUTFLOWS		
Pumping (-)	6,800	5,500
STORAGE CHANGE	**-600**	**0**

Projected change in storage under Baseline and reduced pumping conditions



Future Conditions – Pumping Reductions Only Scenario – Ventucopa Region

Pumping needed required to eliminate cumulative decline in storage



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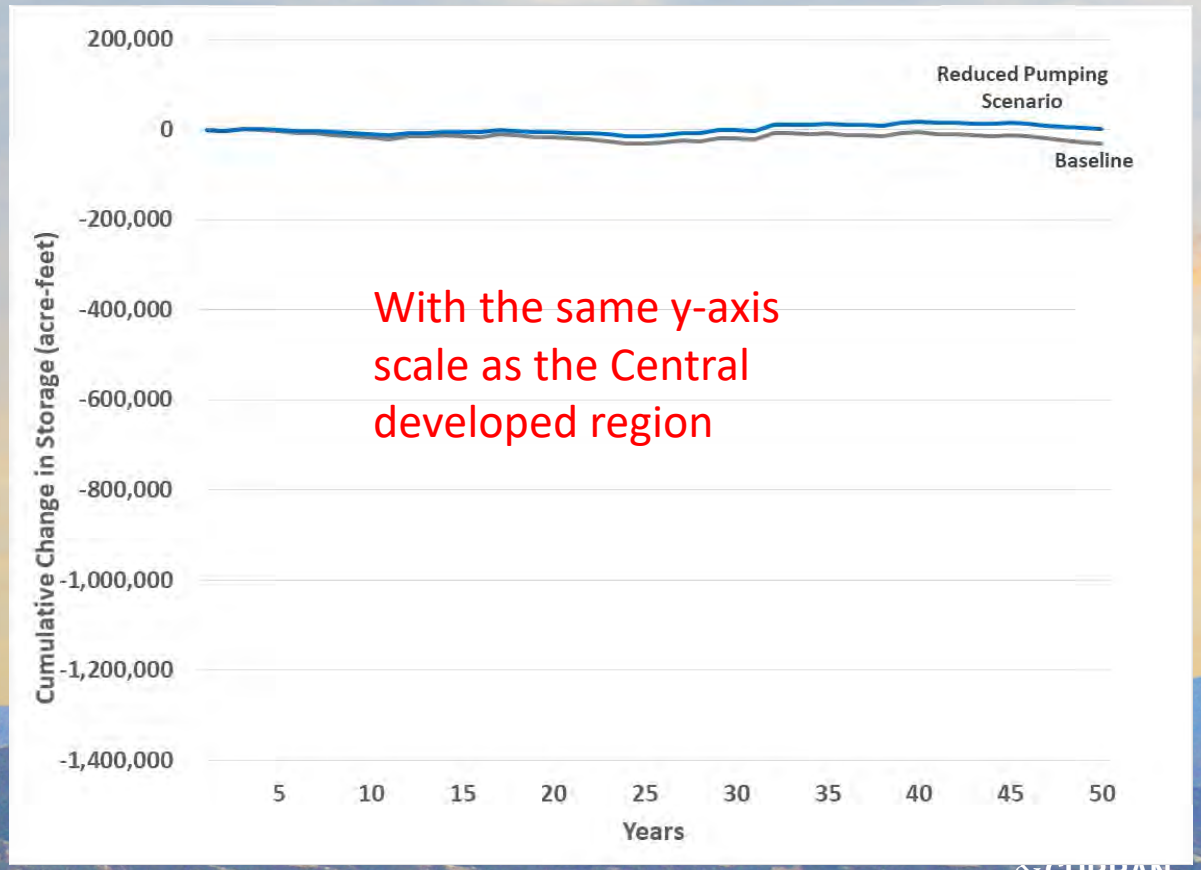
Projected change in storage under Baseline and reduced pumping conditions



Attachment 2

Cuyama Valley Groundwater Basin Groundwater Sustainability Plan Water Budget Draft

Prepared by:

February 2019

Table of Contents

List of Figures

Chapter 2 Basin Setting

This document includes the Water Budget Section will be included as part of a report section in the Cuyama Basin Groundwater Sustainability Plan that satisfies § 354.18 of the Sustainable Groundwater Management Act Regulations. The Water Budget section is a portion of the Basin Settings portion of a Groundwater Sustainability Plan. The Basin Settings contains three main subsections:

- Hydrogeologic Conceptual Model – This section provides the geologic information needed to understand the framework that water moves through in the basin. It focuses on geologic formations, aquifers, structural features, and topography.
- Groundwater Conditions - This section describes and presents groundwater trends, levels, hydrographs and level contour maps, estimates changes in groundwater storage, identifies groundwater quality issues, addresses subsidence and surface water interconnection.
- Water Budget – This section, presented here, provides the data used in water budget development, discusses how the budget was calculated, and provides water budget estimates for historical conditions, current conditions and projected conditions.

Acronyms

AF	Acre-feet
AFY	Acre-feet per year
Basin	Cuyama Valley Groundwater Basin
CALSIMETAW	California Simulation of Evapotranspiration of Applied Water
CBGSA	Cuyama Basin Groundwater Sustainability Agency
CCSD	Cuyama Community Services District
DWR	Department of Water Resources
ET	Evapotranspiration
IDC	IWFM Demand Calculator
IWFM	Integrated Water Flow Model
METRIC	Mapping Evapotranspiration at High Resolution and Internalized Calibration
PRISM	Precipitation-Elevation Regressions on Independent Slopes Model

2.3 Water Budget

This section describes the historical, current and projected water budgets for the Cuyama Valley Groundwater Basin (Basin).

As defined by the Groundwater Sustainability Plan (GSP) regulations promulgated by the California Department of Water Resources (DWR), the water budgets section is intended to quantify the following:

(1) Total surface water entering and leaving a basin by water source type.

(2) Inflow to the groundwater system by water source type

(3) Outflows from the groundwater system by water use sector

(4) The change in the annual volume of groundwater in storage between seasonal high conditions

(5) If overdraft conditions occur, a quantification of overdraft over a period of years during which water year and water supply conditions approximate average conditions.

(6) The water year type associated with the annual supply, demand, and change in groundwater stored.

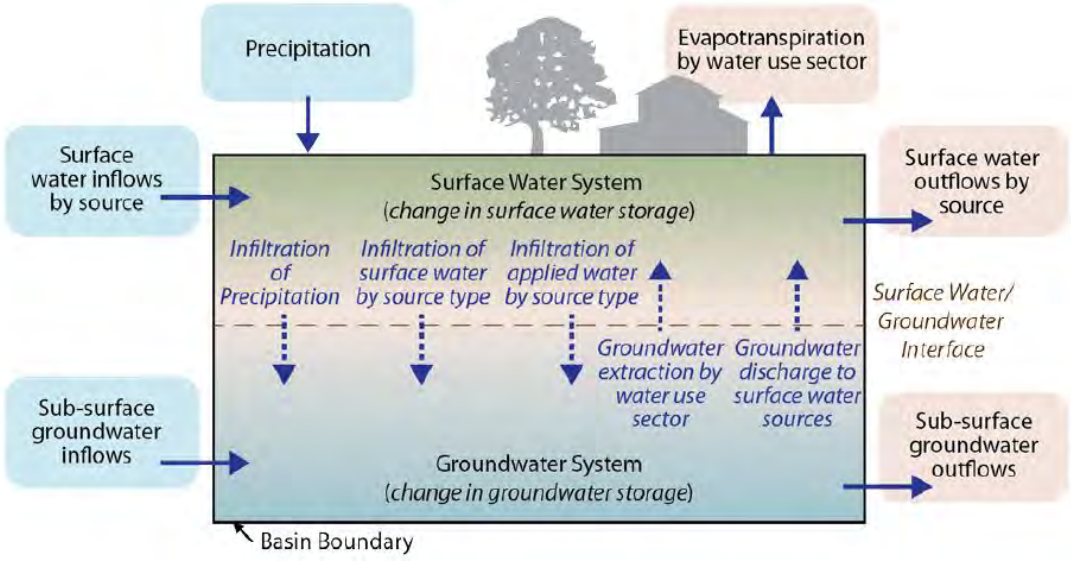
(7) An estimate of sustainable yield for the basin.

2.3.1 Water Budget Information

Water budgets were developed to provide a quantitative accounting of water entering and leaving the Basin. Water entering the Basin includes water entering at the surface and entering through the subsurface. Similarly, water leaving the Basin leaves at the surface and through the subsurface. Water enters and leaves naturally, such as precipitation and streamflow, and through human activities, such as pumping and recharge from irrigation. Figure 2.3-1 presents a vertical slice through the land surface and aquifer to summarize the water balance components utilized in this analysis.

The values presented in the water budget provide information on historical, current, and projected conditions as they relate to hydrology, water demand, water supply, land use, population, climate change, sea level rise (not applicable in the Basin), groundwater and surface water interaction, and subsurface groundwater flow. This information can assist in management of the Basin, by identifying the scale of different uses, highlighting potential risks, and identifying potential opportunities to improve water supply conditions, among others.

Figure 2.3-1: Generalized Water Budget Diagram



(source: DWR)

Water budgets can be developed on different spatial scales. In agricultural use, water budgets may be limited to the root zone, improving irrigation techniques by estimating the inflows and outflows of water from the upper portion of the soil accessible to plants through their roots. In a pure groundwater study, water budgets may be limited to water flow within the subsurface, aiding in understanding how water flows beneath the surface. Global climate models simulate water budgets that incorporate atmospheric water, allowing for simulation of climate change conditions. In this document, consistent with the Regulations (California Code of Regulations), the water budgets investigate the combined surface water and groundwater system in the Basin.

Water budgets can also be developed at different temporal scales. Daily water budgets may be used to demonstrate how evaporation and transpiration increase during the day and decrease at night. Monthly water budgets may be used to demonstrate how groundwater pumping increases in the dry, hot summer months and decreases in the cool, wet winter months. In this document, consistent with the Regulations, the water budgets focus on the full water year (12 months spanning October of the previous year to September), with some consideration to monthly variability.

The Regulations require the annual water budgets be based on three different conditions: historical, current, and projected. Budgets are developed to capture typical conditions during these time periods. Typical conditions are developed through averaging over hydrologic conditions that incorporate droughts, wet periods, and normal periods. By incorporating these varied conditions within the budgets, analysis of the system under certain hydrologic conditions, such as drought, can be performed along with analysis of long-term averages. Information is provided in the following subsections on the hydrology dataset used to identify time periods for budget analysis, the usage of the Cuyama Basin Integrated Water Flow Model (IWFM) and associated data in water budget development, and on the budget estimates.

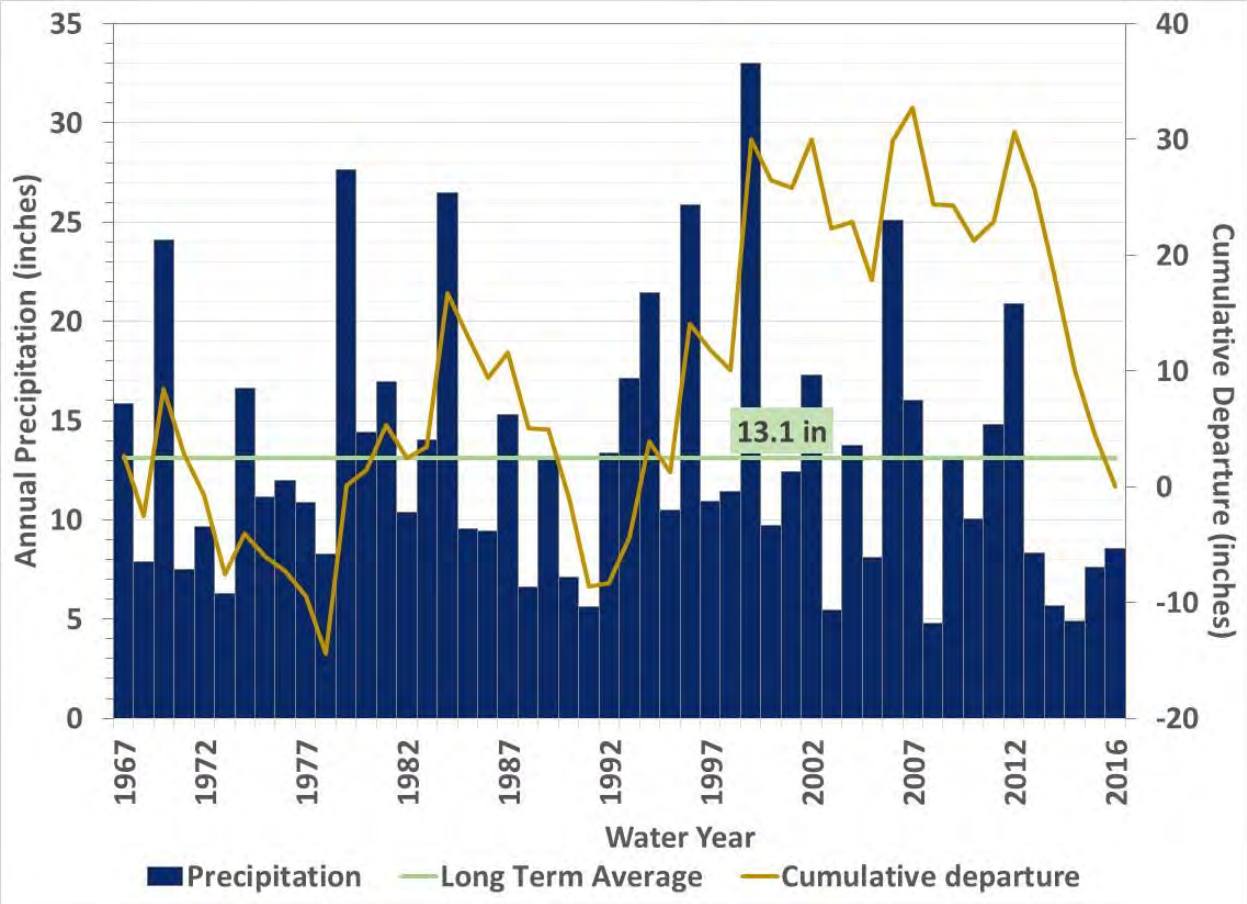
2.3.2 Identification of Hydrologic Periods

Hydrologic periods were selected to meet the needs of developing historical, current, and projected water budgets. The Regulations require that the projected water budget reflect 50 years of historical hydrology, in order to reflect long-term average hydrologic conditions. Historical precipitation data for the Basin was utilized to identify hydrologic periods that would provide a representation of wet and dry periods and

long-term average conditions needed for budget analyses. Analysis of a long-term historical period time provides information that is expected to be representative of long-term future conditions.

Figure 2.3-2 shows annual precipitation in the Basin for water years 1968 to 2017. The chart includes bars displaying annual precipitation for each water year and a horizontal line representing the mean precipitation of 13.1 inches. Rainfall data for the Basin is derived from the PRISM (Precipitation-Elevation Regressions on Independent Slopes Model) dataset of the DWR's CALSIMETAW (California Simulation of Evapotranspiration of Applied Water) model. Identification of periods with a balance of wet and dry periods was performed using the cumulative departure from mean precipitation method. Under this method, the long-term average precipitation is subtracted from annual precipitation within each water year to develop the departure from mean precipitation for each water year. Wet years have a positive departure and dry years have a negative departure; a year with exactly average precipitation would have zero departure. Starting at the first year analyzed, the departures are added cumulatively for each year. So, if the departure for Year 1 is 5 inches and the departure for Year 2 is -2 inches, the cumulative departure would be 5 inches for Year 1 and 3 inches (5 plus -2) for Year 2. The cumulative departure of the spatially averaged of the rainfall within the Basin is shown on the figure. The cumulative departure from mean precipitation is based on these data sets and is displayed as a line that starts at zero and highlights wet periods with upward slopes and dry periods with downward slopes. More severe events are shown by steeper slopes and greater changes. Thus, the period from 2013 to 2014 illustrates a short period with a dramatically dry conditions (16-inch decline in cumulative departure over 2 years).

Figure 2.3-2: 50-Year Historical Precipitation and Cumulative Departure from Mean Precipitation in the Cuyama Valley Groundwater Basin



2.3.3 Usage of the IWFM Model and Associated Data in Water Budget Development

Water budgets were developed utilizing the Cuyama Basin IWFM model, a fully integrated surface and groundwater flow model that covers the entire Basin. The model integrates the groundwater aquifer with the surface hydrologic system and land surface processes and operations. The IWFM model was calibrated for the hydrologic period of October 1995 to September 2015 by comparing simulated evapotranspiration, groundwater levels, and streamflow records with historical observed records. Development of the model involved the study and analysis of hydrogeologic conditions, agricultural and urban water demands, agricultural and urban water supplies, and an evaluation of regional water quality conditions.

Additional information on the development and calibration of the IWFM model will be included as an appendix to the GSP.

IWFM model simulations were developed to allow for the estimation of water budgets. Model simulations were used to develop the water budgets for historical, current, and projected conditions, which are discussed in detail below:

- The **historical water budget** was based on a simulation of historical conditions in the Basin.
- The **current water budget** was based on a simulation of current (2015) land and water use over historical hydrologic conditions, assuming no other changes in population, water demands, land use, or other conditions.
- The **projected water budget** was based on a simulation of future land and water use over the historical hydrologic conditions. Since future land and water use in the Cuyama Basin is assumed to be the same as current conditions, the projected water budget is the same as the current water budget.

2.3.4 Water Budget Definitions and Assumptions

Definitions and assumptions for the historical, current, and projected water budgets are provided below. Table 2.3-1 provides a summary of the assumptions.

Historical Water Budget

The historical water budget is intended to evaluate availability and reliability of past surface water supply deliveries, aquifer response to water supply, and demand trends relative to water year type. The hydrologic period of 1998 through 2017 was selected for the historical water budget to provide a period of representative hydrology while capturing recent Basin operations. The period 1998 through 2017 has an average annual precipitation of 12.2 inches, nearly the same as the long-term average of 13.1 inches and includes the recent 2012-2017 drought, the wet years of 1998 and 2005, and periods of normal precipitation.

Current and Projected Water Budget

While a budget indicative of current conditions could be developed using the historical calibration model, like the historical water budget, such an analysis would be difficult to interpret due to the extreme weather conditions of the past several years and its effect on local agricultural operations. Instead, in order to analyze the effects of current land and water use on groundwater conditions and to accurately estimate current inflows and outflows for the basin, a current and projected conditions baseline scenario was developed using the IWFM model. This baseline uses current land and water use conditions approximating year 2017 conditions with a historical precipitation sequence. Because there is no basis to assume any changes in Cuyama Basin population or land use in the future as compared to current conditions (in the absence of projects or actions), a single baseline has been developed that reflects both current and projected conditions.

The current and projected conditions baseline includes the following conditions:

- Hydrologic period:
    - Water Years 1968-2017 (50-year hydrology)
- Precipitation is based on:
    - PRISM dataset for the 1968-2017 period
- Land use is based on:
    - Land use estimates developed by the DWR and the CBGSA using remote sensing data
    - Land use information for historical years provided by private landowners
- Domestic water use is based on:
    - Current population estimates
    - Cuyama Community Services District (CCSD) delivery records
- Agricultural water demand is based on:
    - The IWFM Demand Calculator (IDC) in conjunction with historical remote sensing technology, Mapping Evapotranspiration at High Resolution and Internalized Calibration (METRIC)

Table 2.3-1: Summary of Groundwater Budget Assumptions

Water Budget Type	Historical	Current and Projected
Scenario	Historical Simulation	Current and Projected Conditions Baseline
Hydrologic Years	WY 1998-2017	WY 1968-2017
Development	Historical	Current
Ag Demand	Historical Land Use	Current Conditions
Domestic Use	Historical Records	Current Conditions

2.3.5 Water Budget Estimates

Land surface and groundwater budgets are reported for the historical period and for current and projected conditions.

The following components are included in the land surface water budget:

- Inflows:
    - Precipitation
    - Applied Water

- Outflows:
  - Evapotranspiration
    - Agriculture
    - Native vegetation
  - Domestic water use
  - Deep percolation
    - From precipitation
    - From applied water
  - Runoff
    - Stream seepage to groundwater
    - Flow out of Basin

The following components are included in the groundwater budget:

- Inflows:
  - Deep percolation
  - Stream seepage
  - Subsurface inflow
- Outflows:
  - Groundwater pumping
- Reduction in storage

The estimated average annual water budgets are provided in Tables 2.3-2 and 2.3-3 for the historical period and for current and projected conditions. The following sections provide additional information regarding each water budget.

Table 2.3-2: Average Annual Land Surface Water Budget

Component	Historical Water Volume (AFY)	Current and Projected Water Volume (AFY)
Inflows		
Precipitation	226,000	230,000
Applied Water	58,000	59,000
Total Inflow	285,000	289,000
Outflows		
Evapotranspiration		
Agriculture	58,000	63,000
Native vegetation	167,000	174,000
Domestic water use	300	400
Deep percolation		
From precipitation	18,000	15,000
From applied water	10,000	11,000
Runoff	32,000	26,000
Total Outflow	285,000	289,000

Table 2.3-3: Average Annual Groundwater Budget

Component	Historical Water Volume (AFY)	Current and Projected Water Volume (AFY)
Inflows		
Deep percolation	28,000	25,000
Stream seepage	3,000	5,000
Subsurface inflow	5,000	5,000
Total Inflow	36,000	35,000
Outflows		
Groundwater pumping	59,000	60,000
Total Outflow	59,000	60,000
Change in Storage	(23,000)	(25,000)

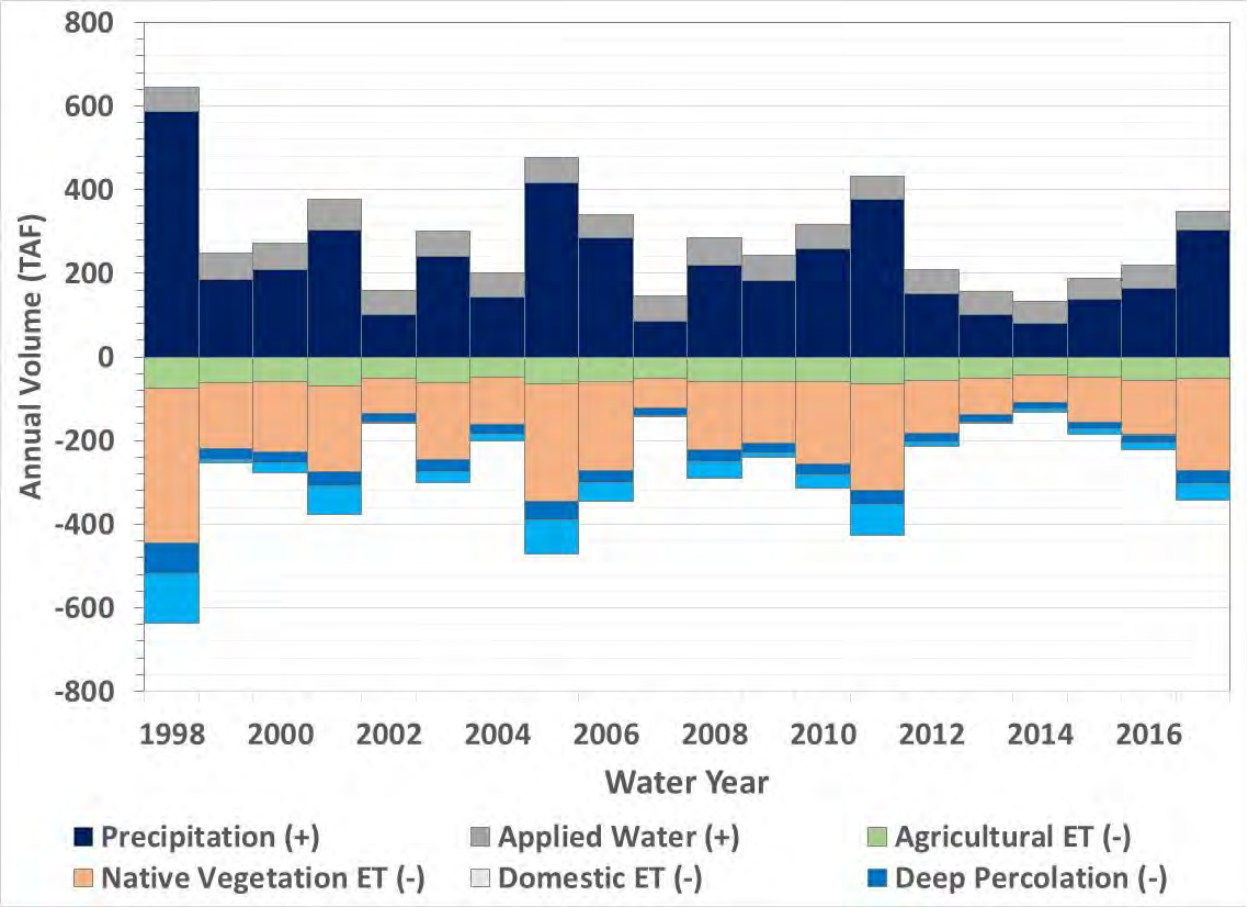
2.3.6 Historical Water Budget

The historical water budget is a quantitative evaluation of the historical surface and groundwater supply covering the 20-year period from 1998 to 2017. This period was selected as the representative hydrologic period to calibrate and reduce the uncertainty of the IWFM model. Proper analysis and calibration of water budgets within IWFM model ensures the hydrologic characteristics of the groundwater basin are accurately represented. The goal of the water budget analysis is to characterize the supply and demand, while summarizing the hydrologic flow within the Basin, including the movement of all primary sources of water such as rainfall, irrigation, streamflow, and subsurface flows.

Figure 2.3-3 summarizes the average annual historical land surface inflows and outflows in the Basin. Figure 2.3-4 shows the annual time series of historical land surface inflows and outflows.

Figure 2.3-3: Historical Average Annual Land Surface Water Budget

Figure 2.3-4: Historical Land Surface Water Budget Annual Time Series



The Basin experiences about 285,000 AF of inflows each year, of which 226,000 AF is from precipitation and the remainder is from applied water. About 225,000 AFY is consumed as evapotranspiration or domestic use, with the remainder either recharging the groundwater aquifer as deep percolation or stream seepage or leaving the Basin as river flow.

The annual time series shows large year-to-year variability in the availability of water, with land surface inflows ranging from a low of about 132,000 AF to a high of 645,000 AF. These year-to-year changes in inflows result in corresponding differences in outflows, with total annual agricultural, native vegetation and domestic evapotranspiration ranging from 108,000 AF to 444,000 AF.

Figure 2.3-5 summarizes the average annual historical groundwater inflows and outflows in the Basin. Figure 2.3-6 shows the annual time series of historical groundwater inflows and outflows. The Basin average annual historical groundwater budget has greater outflows than inflows, leading to an average annual decrease in groundwater storage of 23,000 AF. The groundwater storage decreases consistently over time, despite year-to-year variability in groundwater inflows.

Figure 2.3-5: Historical Average Annual Groundwater Budget

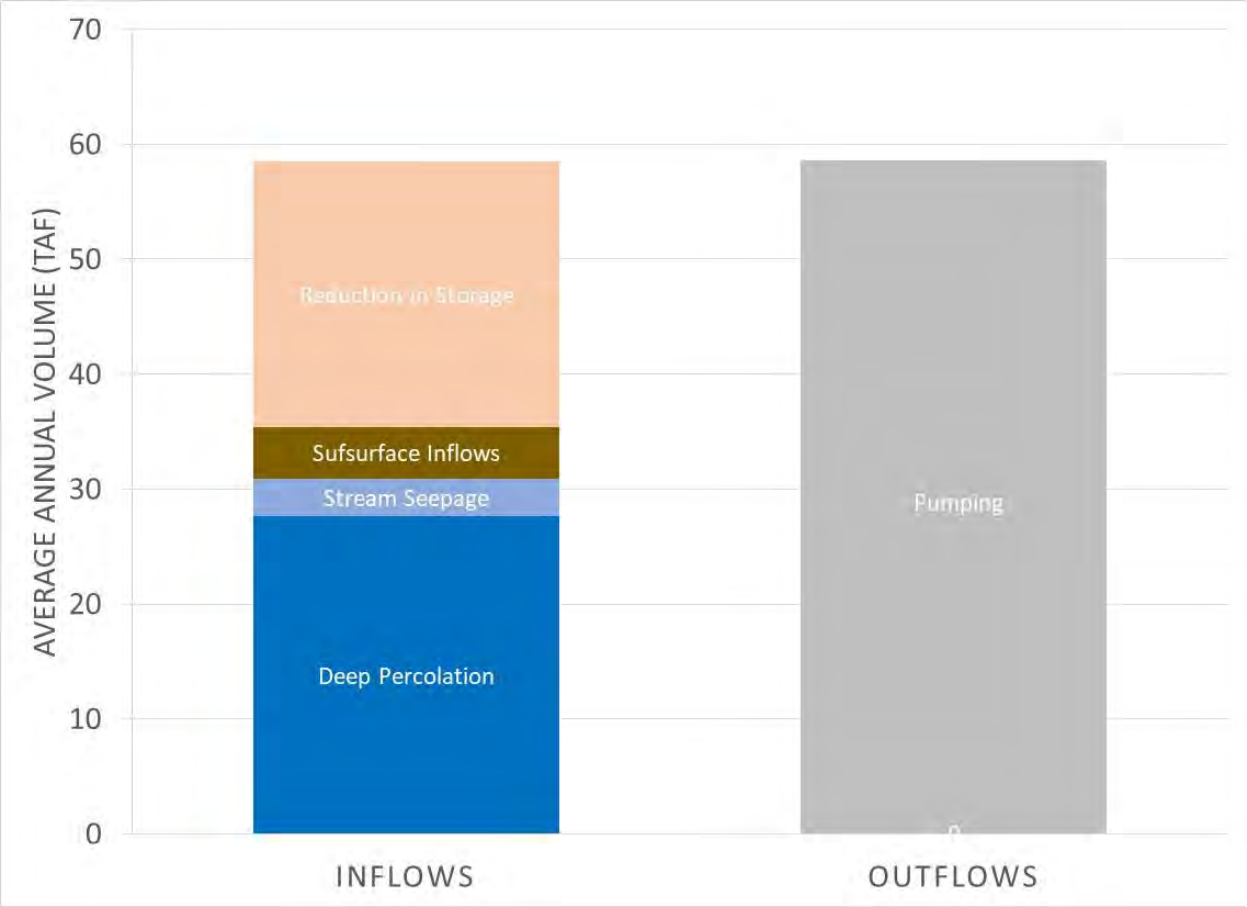
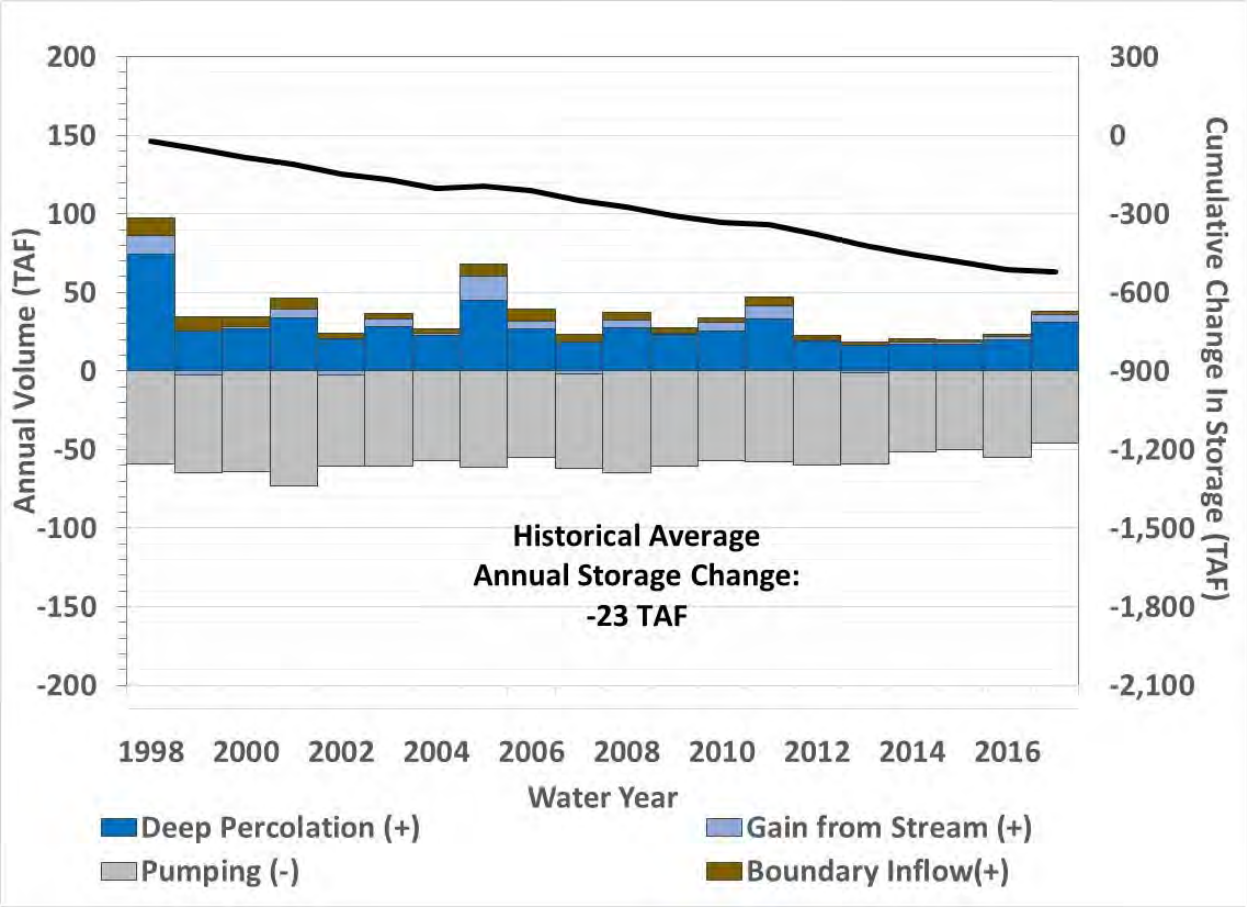


Figure 2.3-6: Historical Groundwater Budget Annual Time Series



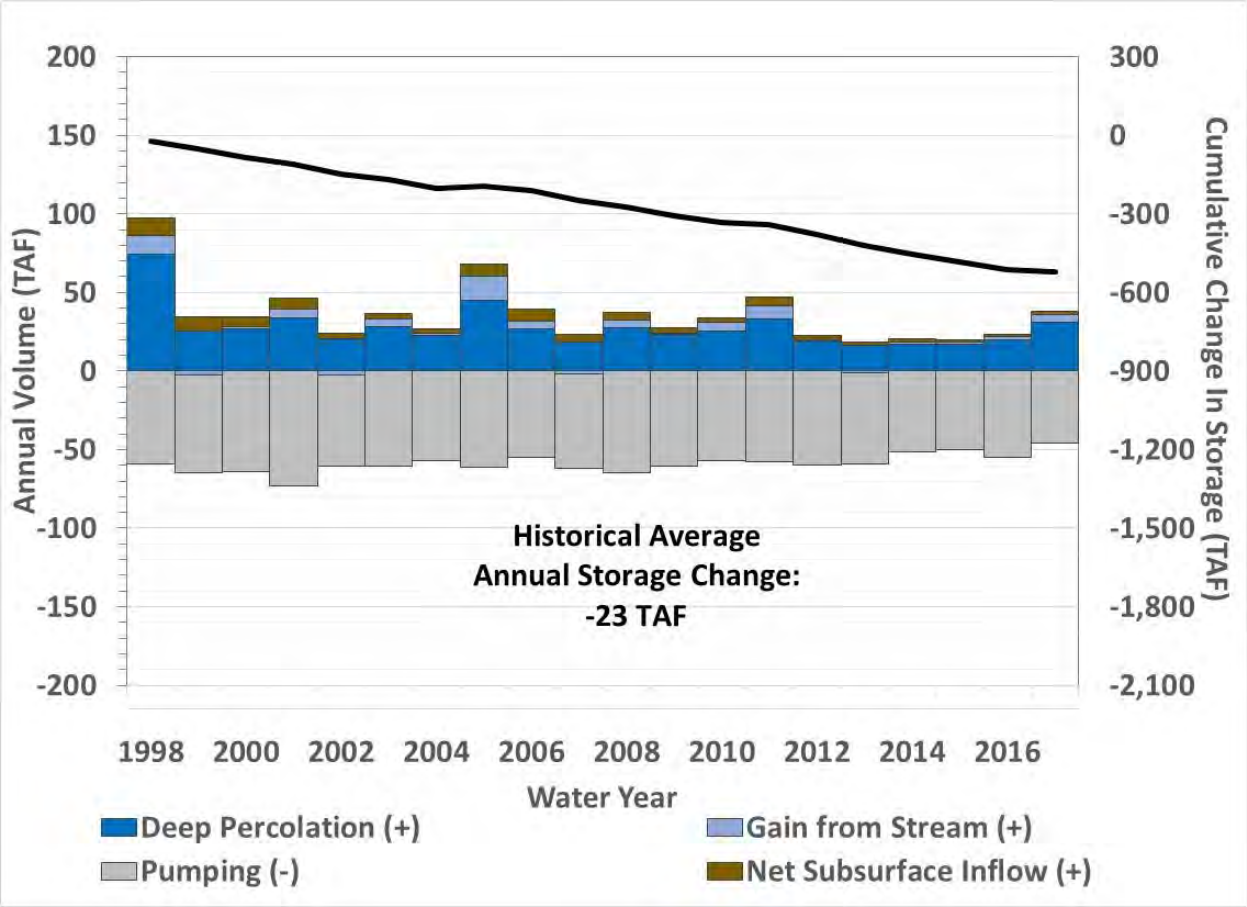
2.3.7 Current and Projected Water Budget

The current and projected water budget quantifies inflows to and outflows from the basin using 50-years of hydrology in conjunction with 2017 population, water use, and land use information.

Figure 2.3-7 summarizes the average annual current and projected land surface inflows and outflows in the Basin. Figure 2.3-8 shows the annual time series of current and projected land surface inflows and outflows.

Figure 2.3-7: Current and Projected Average Annual Land Surface Water Budget

Figure 2.3-8: Current and Projected Land Surface Water Budget Annual Time Series



Under current and projected conditions, the Basin experiences about 290,000 AF of inflows each year, of which 230,000 AF is from precipitation and the remainder is from applied water. About 238,000 AFY is consumed as evapotranspiration or domestic use, with the remainder either recharging the groundwater aquifer as deep percolation or stream seepage or leaving the Basin as river flow.

The annual time series shows the year-to-year variability in the availability of water, with land surface inflows ranging from a low of about 147,000 AF to a high of 628,000 AF. These year-to-year changes in inflows result in corresponding differences in outflows, with total annual agricultural, native vegetation and domestic evapotranspiration ranging from 127,000 AF to 429,000 AF.

Figure 2.3-9 summarizes the average annual historical groundwater inflows and outflows in the Basin. Figure 2.3-10 shows the annual time series of historical groundwater inflows and outflows. The Basin average annual historical groundwater budget has greater outflows than inflows, leading to an average annual decrease in groundwater storage of 25,000 AF. As with the historical conditions, the groundwater storage decreases consistently over time, despite year-to-year variability in groundwater inflows.

Figure 2.3-9: Current and Projected Average Annual Groundwater Budget

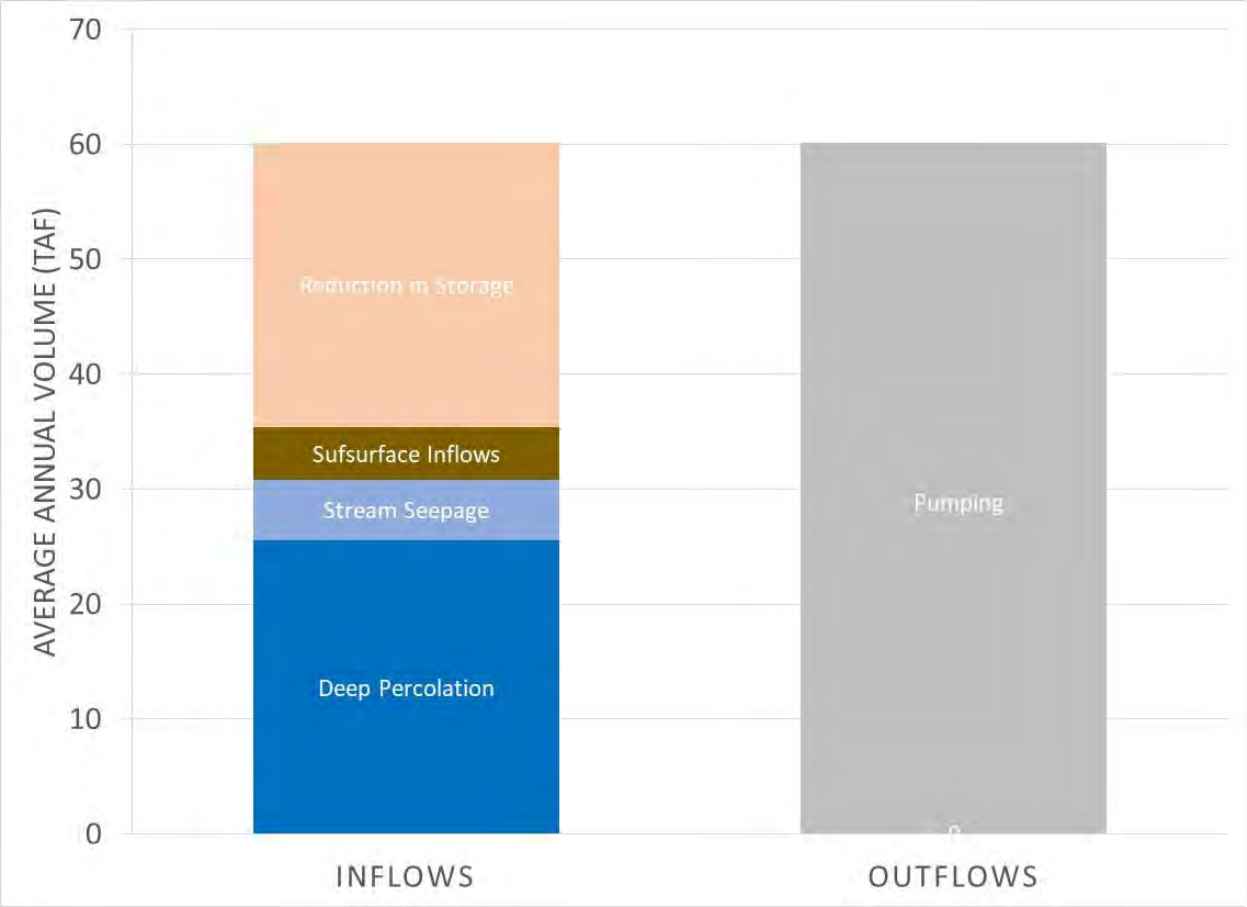
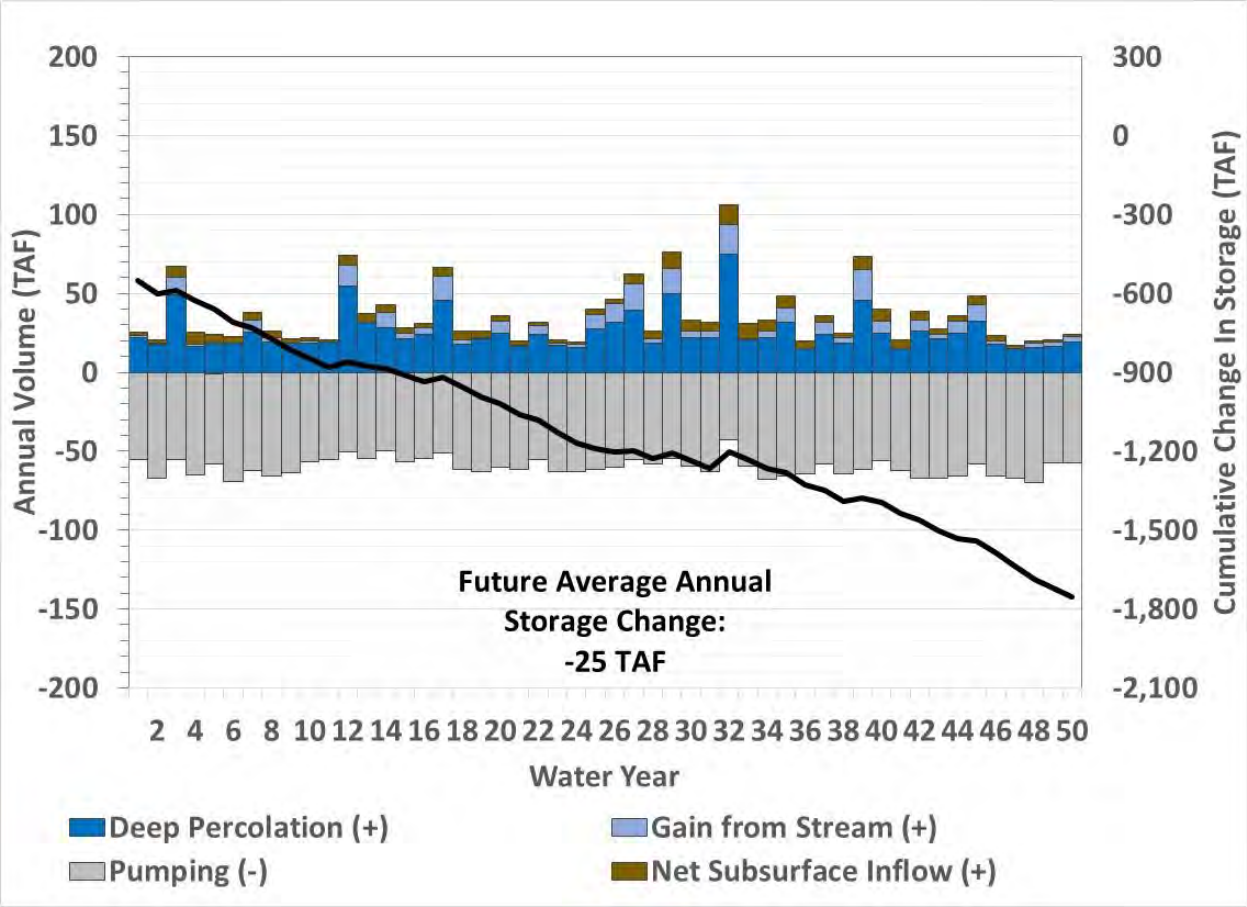


Figure 2.3-10: Current and Projected Groundwater Budget Annual Time Series



The current and projected water demand, water supply, and change in groundwater storage vary by water year type, as shown in Table 2.3-4. In wet years, precipitation meets a relative high proportion of the water demand, which reduces the need for groundwater. By contrast, in drier years more groundwater pumping is required to meet the agricultural demand not met by precipitation. This leads to an increase in groundwater storage in wet years and a decrease in the other year types.

Table 2.3-4: Current and Projected Average Annual Supply, Demand, and Change in Groundwater Storage by Water Year Type

Component	Water Year Type				
	Wet	Above Normal	Below Normal	Dry	Critical
Water Demand					
Agricultural ET	64,000	63,000	64,000	63,000	60,000
Domestic Use	500	400	400	300	200
Total Demand	64,000	63,000	64,000	63,000	60,000
Water Supply					
Groundwater Pumping	54,000	59,000	62,000	61,000	66,000
Total Supply	54,000	59,000	62,000	61,000	66,000
Change in Storage	18,000	(21,000)	(34,000)	(37,000)	(46,000)

2.3.8 Sustainable Yield Estimate

This section will be developed when the projects and management actions modeling analysis is complete.

TO: Board of Directors
Agenda Item No. 7c

FROM: Lyndel Melton, Woodard & Curran (W&C)

DATE: March 6, 2019

SUBJECT: Discussion on Sustainability Thresholds

Issue
Discussion on the Sustainability Thresholds chapter.

Recommended Motion
None – information only.

Discussion
An overview of the Sustainability Thresholds chapter is provided as Attachment 1 and the draft Sustainability Thresholds chapter is provided as Attachment 2.

Cuyama Basin Groundwater Sustainability Agency

Discussion on Sustainability Thresholds

March 6, 2019

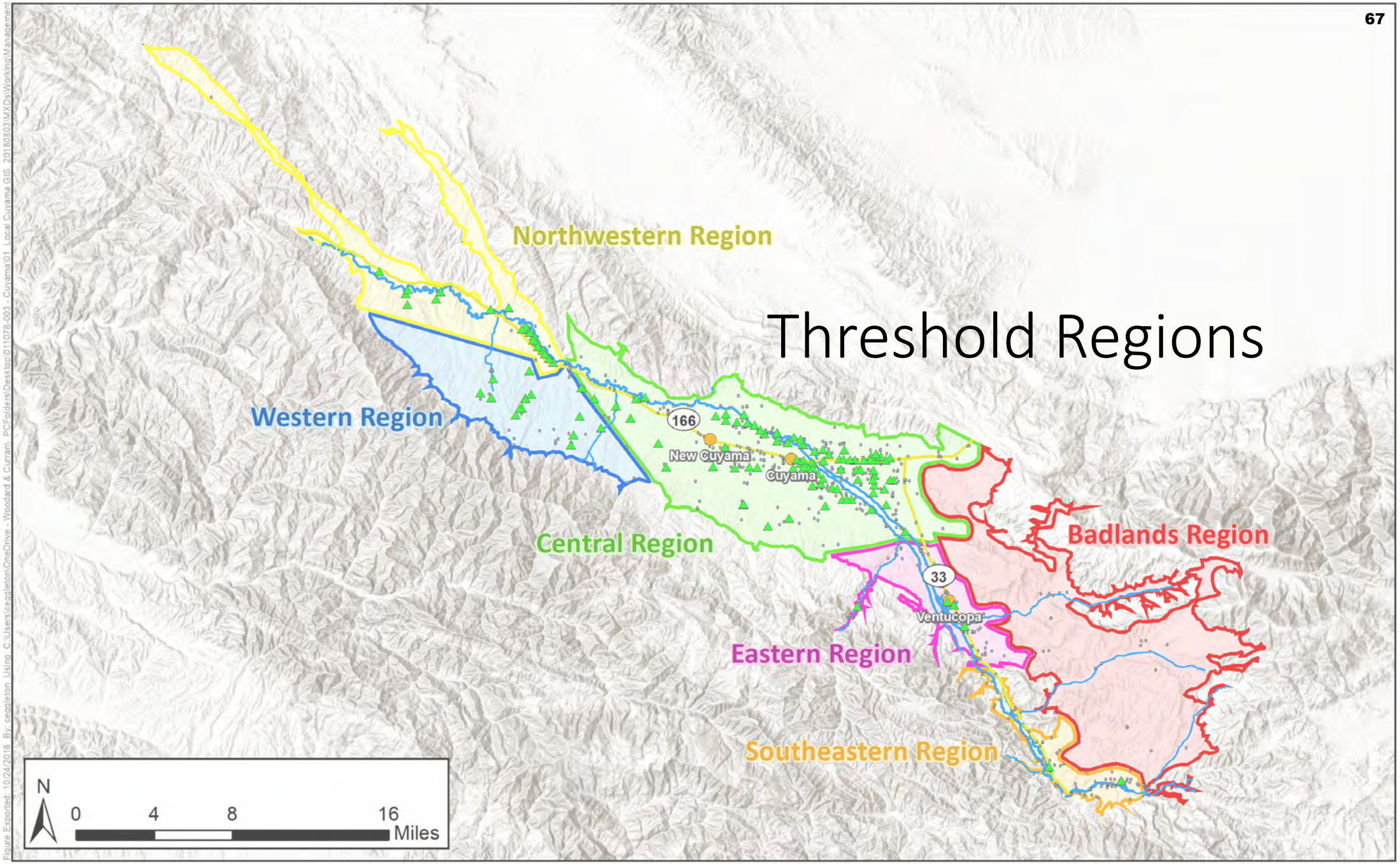
WOODARD &CURRAN

Sustainability GSP Section

- Draft GSP Section provided to SAC and Board for on February 21st
- GSP Section describes Minimum Thresholds, Measurable Objectives, and Interim Milestones for:
  - Chronic lowering of groundwater levels
  - Reduction of groundwater storage
  - Seawater intrusion
  - Degraded water quality
  - Subsidence
  - Depletions of interconnected surface water
- Comments are due on March 15th

WOODARD &CURRAN

Threshold Regions



Board Direction on Threshold Rationales

- Threshold rationales approved by Board at Dec 18 Board Meeting:

Threshold Region	Board-Approved Threshold Rationale
SOUTHEASTERN	MO = 2015 levels.
EASTERN	MT = 20% below 2015 levels, or 10’ above the shallowest nearby well, whichever is more restrictive.
CENTRAL	MT = 20% below 2015 levels.
WESTERN	MT = 15% of saturated portion of each representative well.
NORTHWESTERN	MT = 15% of saturated aquifer thickness.

MO = Measurable Objective
MT = Minimum Threshold
**A supermajority vote of 75% is needed for each rationale to be passed by the Board.*

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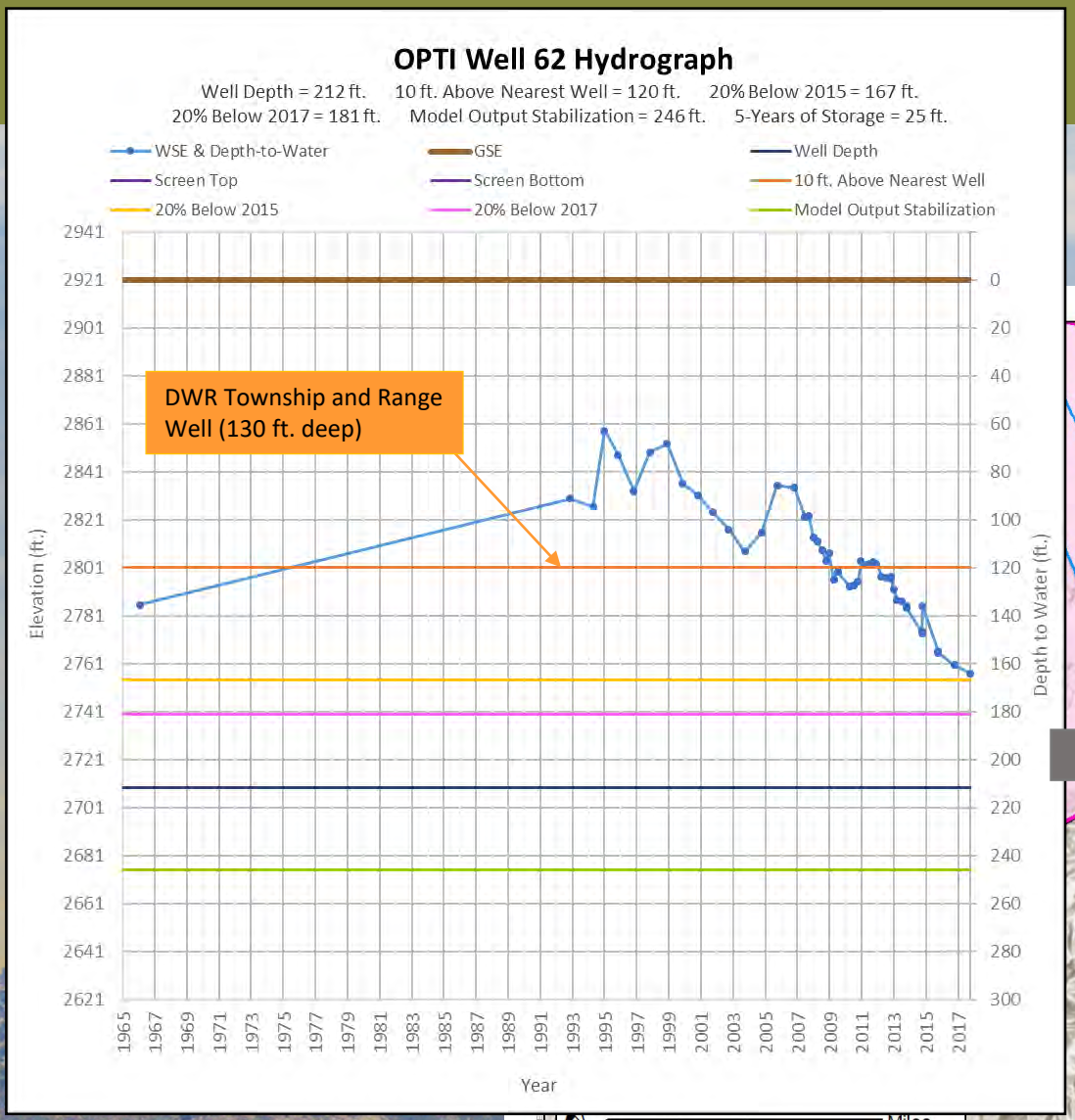
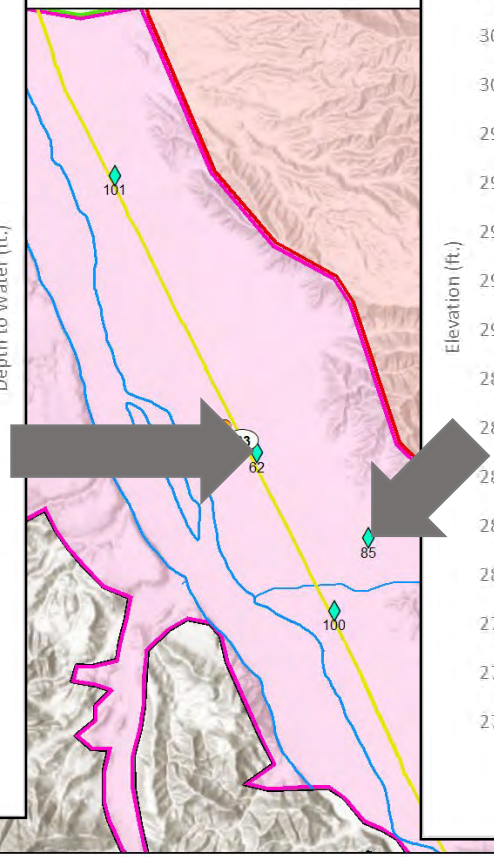
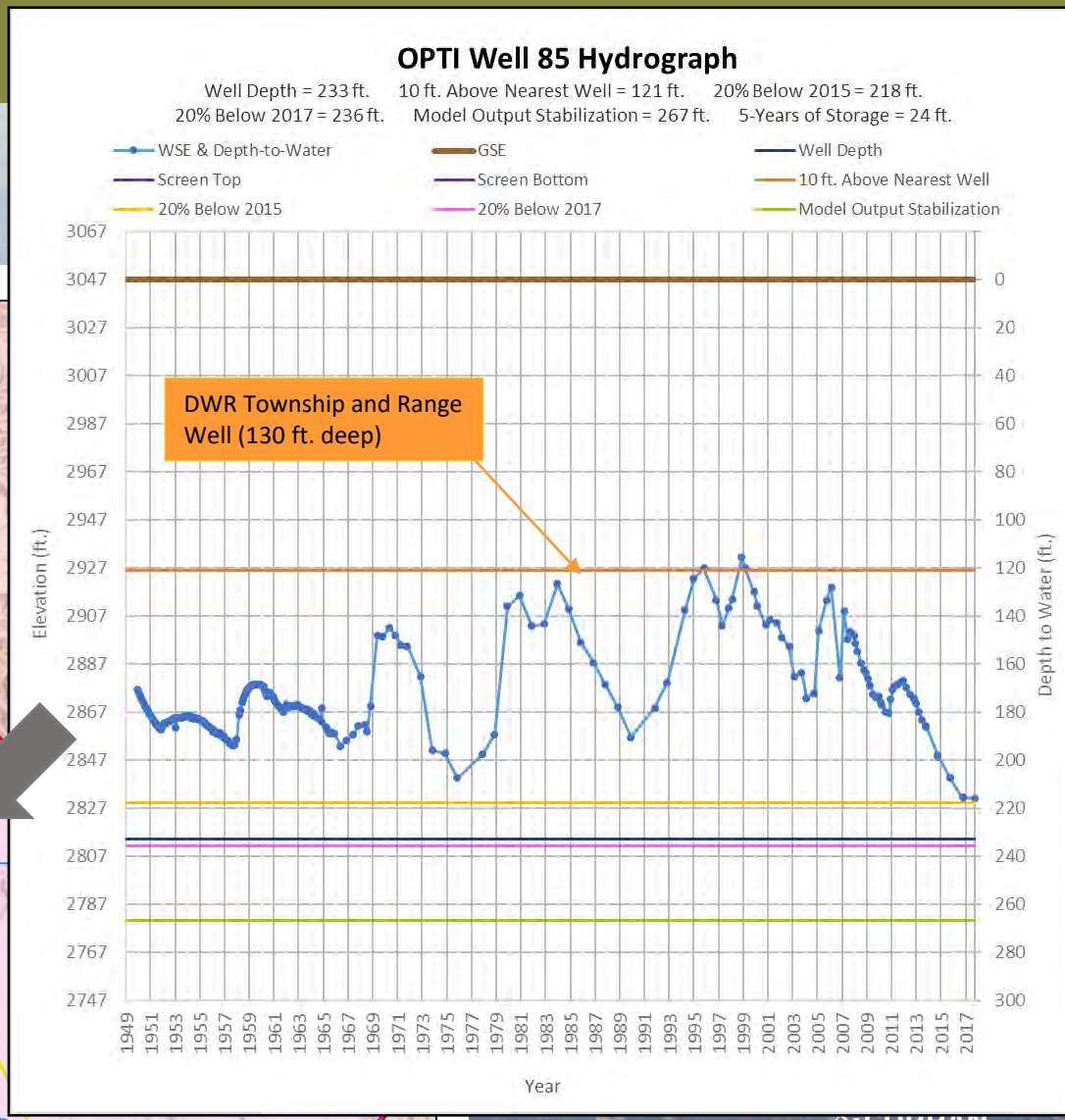
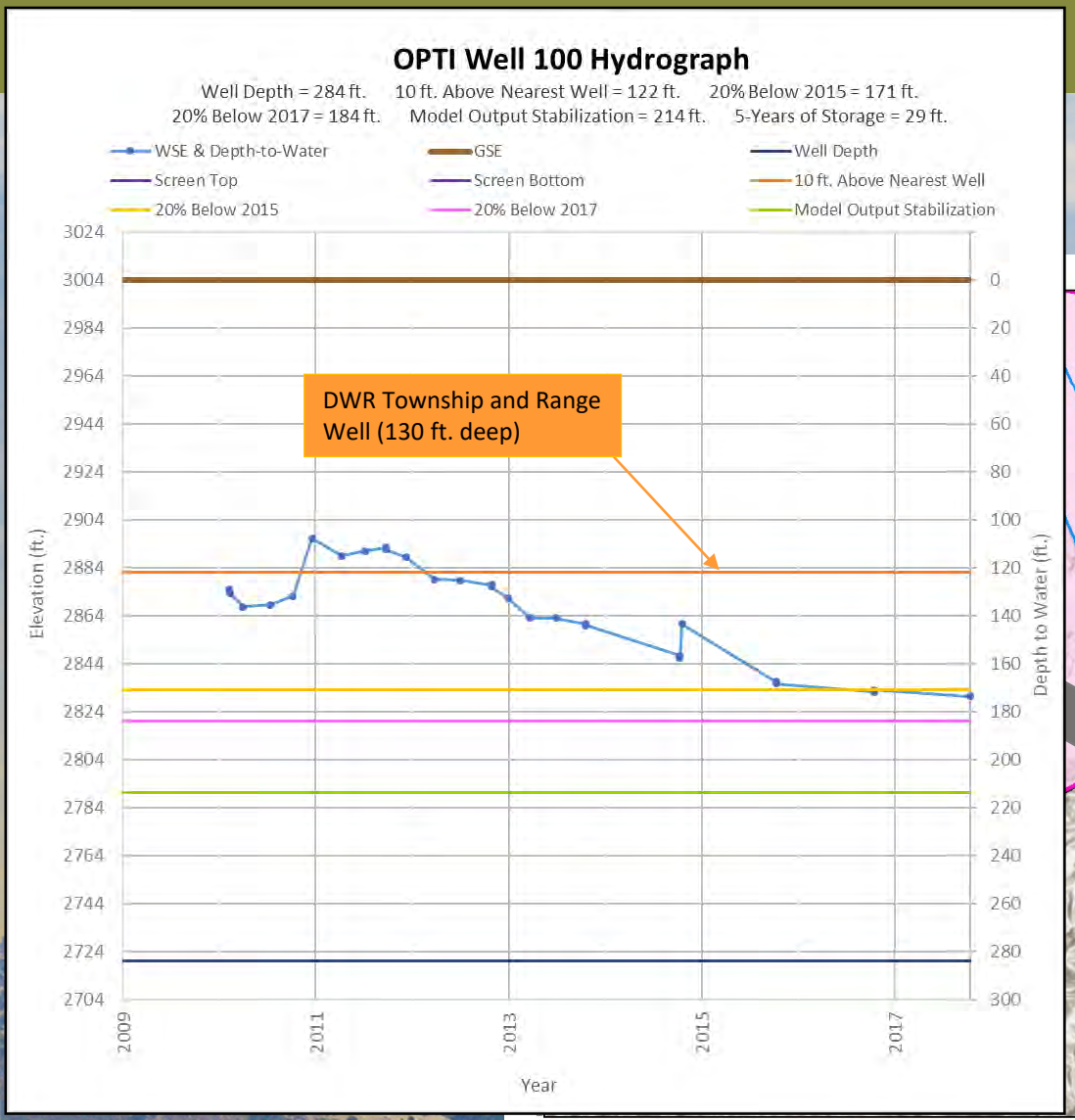
Reconsideration of Eastern Region Thresholds

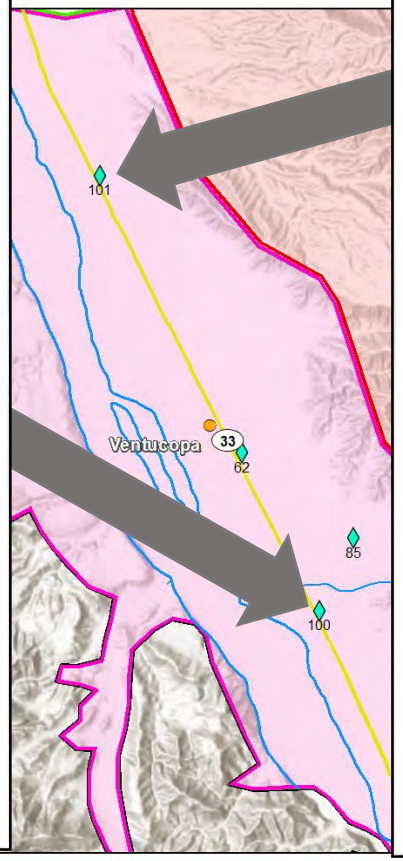


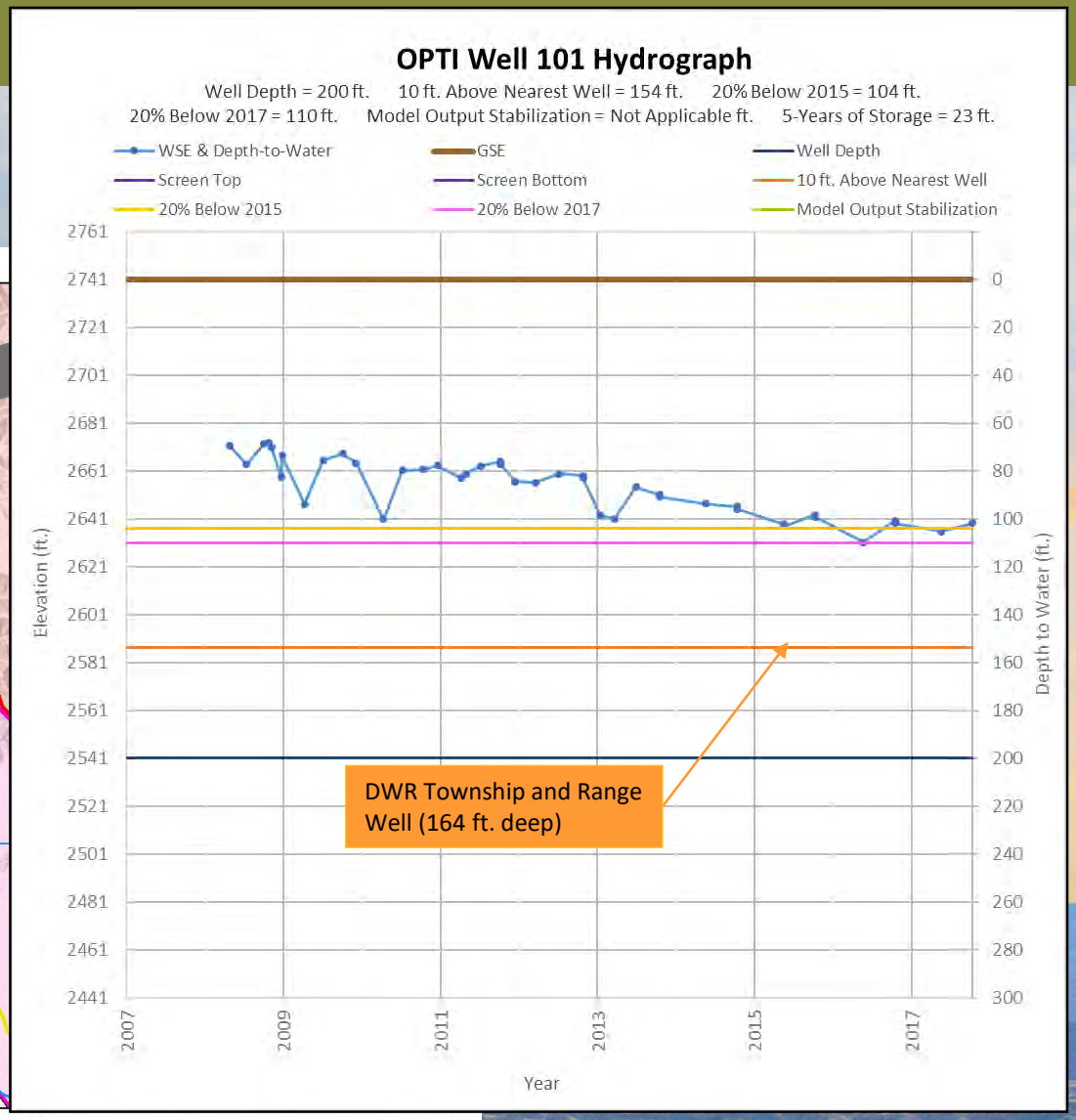




Reconsideration of Eastern Region Thresholds







Staff Recommendation

- Reset Minimum Thresholds at year 2017 levels minus 20%
- Install additional representative well(s) going forward
- Review MTs and MOs as part of 2025 GSP Update

Attachment 2

Cuyama Valley Groundwater Basin Groundwater Sustainability Plan Minimum Thresholds, Measurable Objectives, and Interim Milestones Draft

Prepared by:

February 2019

Chapter 5 Minimum Thresholds, Measurable Objectives, and Interim Milestones

Contents

List of Figures

Acronyms

AFY	Acre feet per year
Basin	Cuyama Groundwater Basin
GSP	Groundwater Sustainability Plan
IM	Interim Milestone
MCL	Maximum Contaminant Levels
MO	Measurable Objective
MT	Minimum Threshold
SGMA	Sustainable Groundwater Management Act
TDS	Total Dissolved Solids

This section of the Cuyama GSP defines the sustainability criteria used to avoid undesirable results during GSP implementation. SGMA requires the application of Minimum Thresholds (MT), Measurable Objectives (MO), and Interim Milestones (IM) on all Representative Monitoring Sites identified in the GSP. These values, or thresholds, guide the GSA and groundwater users within the Basin to identify sustainable values for the Sustainability Indicators as well as progress indicators throughout the 20-year plan implementation period.

5.1 Useful Terms

There are several terms that describe Basin conditions and the values calculated for the Representative Sites:

- **Sustainability Goals** – The culmination of conditions in the absence of undesirable results within 20 years of the applicable statutory deadline.
- **Undesirable Results** – The significant and unreasonable occurrence of conditions that adversely affect groundwater use in the basin, as defined in Section X – Undesirable Results
- **Measurable Objectives** – A specific, quantifiable goals for the maintenance or improvement of specified groundwater conditions that have been included in an adopted Plan to achieve the sustainability goal for the basin.
- **Minimum Thresholds** – A numeric value for each sustainability indicator used to define when undesirable results occur, if minimum thresholds are exceeded in a percentage of sites in the monitoring network.
- **Interim Milestones** – A target value representing measurable conditions, in increments of five years, set by an Agency as part of a Plan that helps the basin reach sustainability by 2040.
- **Sustainability Indicators** – refers to any of the effects caused by groundwater conditions occurring throughout the basin that, when significant and unreasonable, cause undesirable results, as described in Water Code Section 10721(x). These include:
    - Groundwater levels,
    - Groundwater storage,
    - Seawater intrusion,
    - Water quality,
    - Land subsidence, and
    - Interconnected surface water

Thresholds, both MOs and MTs, are applied to all sustainability indicator representative sites. Sites included in monitoring networks but that are not classified as representative sites are not required to have MOs or MTs. All representative sites will also have interim milestones calculated for years 2025, 2030, and 2035 to help guide the GSA to 2040 sustainability goals.

The following subsections describe the process and results for establishing MOs, MTs, and MIs for each of the sustainability indicators described above.

5.2 Chronic Lowering of Groundwater Levels

The Undesirable Result for the chronic lowering of groundwater levels is a result that causes significant and unreasonable reduction in the long-term viability of domestic, agricultural, municipal, or environmental uses over the planning and implementation horizon of this GSP.

Groundwater conditions, as discussed in Section 2.2, vary across the Basin. These conditions are influenced by geographic, geologic, and land uses overlying the Basin. Because of the variety of conditions, threshold regions were used to establish the appropriate sustainability criteria for each region.

5.2.1 Threshold Regions

Six Threshold Regions were defined to allow areas with similar conditions to be grouped together for the MO, MT, and IM values to be calculated. Threshold Regions are shown in Figure 5-1.

The following subsections discuss the strategies used to calculate the MOs, MTs, and Milestones for each Threshold Region.

Southeastern Threshold Region

The Southeaster Threshold Region lies in the southeastern edge of the Basin and is characterized as having moderate agricultural land use with steep geographic features surrounding the valley. Groundwater is generally high in this area, with levels around 50 feet or less below the ground surface, which indicates that this region is likely in a 'full' condition. The northern boundary of this region is the narrows at the Cuyama river, and the eastern boundary is the extent of alluvium.

Eastern Threshold Region

The Eastern Threshold Region lies just east of the central part of the Basin and encompasses Ventucopa and much of the surrounding agricultural property. This part of the Basin has agricultural pumping. Hydrographs in this region indicate that groundwater levels have been, in general, declining for the past 20 years. The northern boundary of this region is the Santa Barbara Canyon Fault, and the southern boundary is where the Cuyama Valley significantly narrows due to geographic changes.

Central Threshold Region

The Central Threshold Region incorporates the majority of agricultural land use within the Basin, as well as the towns of Cuyama and New Cuyama. The greatest depths to groundwater are also found in the Central Threshold Region, and groundwater levels have generally been declining in this region since the 1950's. The south-eastern boundary is defined by the Santa Barbara Canyon fault, and the western boundary by the Russell Fault.

Western Threshold Region

The Western Threshold Region is characterized by shallow depth to water, and hydrographs in this region indicate that it is likely that this portion of the basin is in a 'full' condition. It lies primarily on the north facing slope of the lower Cuyama Valley. The eastern boundary is defined by the Russell Fault, and the northern boundary was drawn to differentiate distinct land uses.

Northwestern Threshold Region

The Northwestern Threshold Region is the bottom of the Cuyama Basin and has new agricultural land use. Hydrographs in this portion of the Basin indicate that this portion is likely in a 'full' condition. The southeastern border was drawn to differentiate between the land uses of the Western and Northwestern Threshold Region.

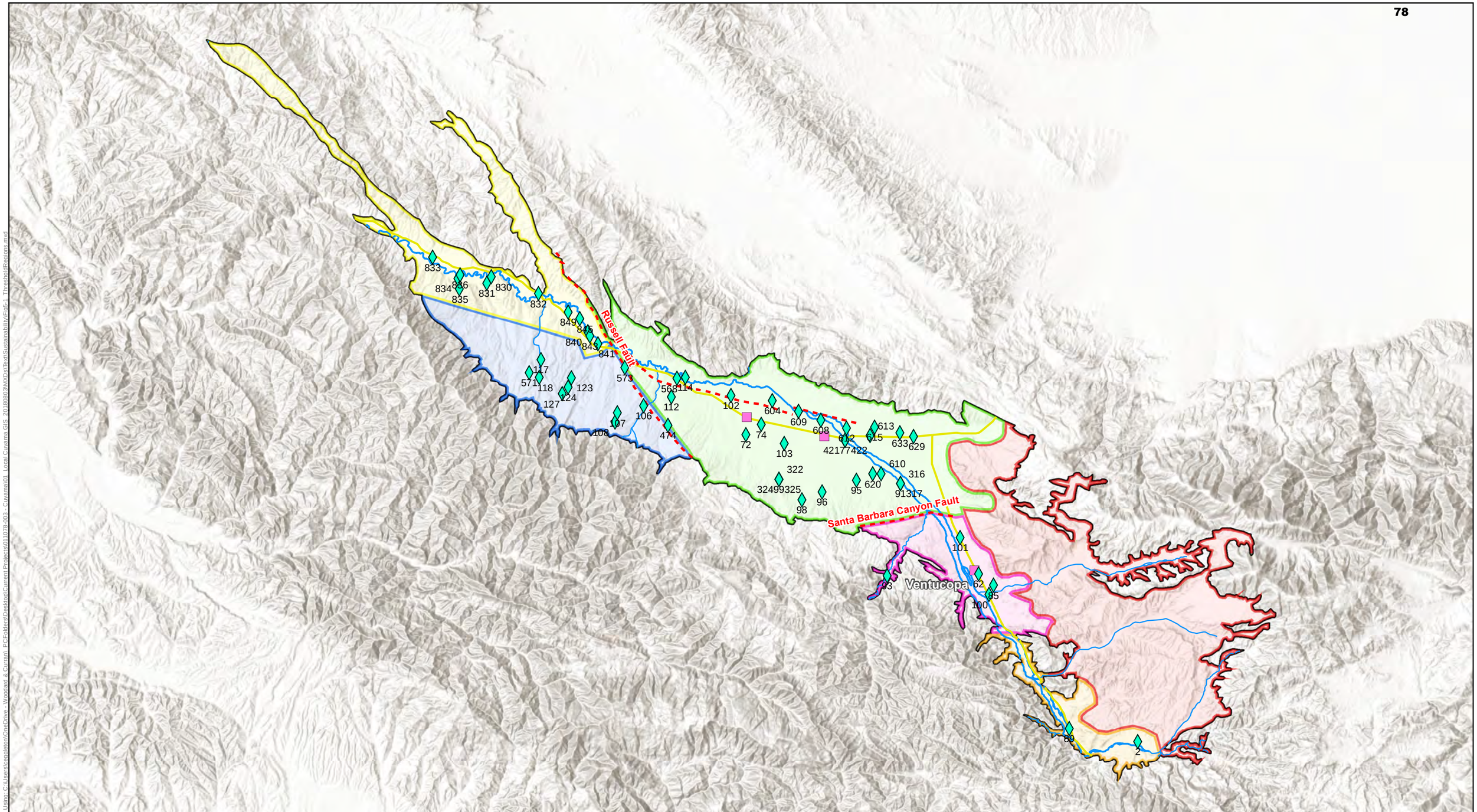


Figure 5-1: Cuyama GW Basin Groundwater Level Representative Wells & Threshold Regions

Cuyama Basin Groundwater Sustainability Agency

Cuyama Valley Groundwater Basin Groundwater Sustainability Plan

January 2019

WOODARD &CURRAN

Legend

- Cuyama Basin
- Towns
- Representative Wells
- Faults
- Highways
- Cuyama River
- Streams

Threshold Regions

- Badlands Region
- Central Region
- Eastern Region
- Northwestern Region
- Southeastern Region
- Western Region

N

0 2.75 5.5 11 Miles

Badlands Threshold Region

The Badlands Threshold Region includes the areas east of the Central, East, and Southeast Threshold Regions on the west facing slope of the Cuyama Valley. There are few active wells and little groundwater use in this area. There is no monitoring in this region, and this region does not have sustainability criteria.

5.2.2 Minimum Thresholds, Measurable Objectives, and Interim Milestones

This section describes the establishment of MTs, MOs, and IMs by threshold region, and explains the rationale behind each selected methodology.

Southeastern Threshold Region

Monitoring in this threshold region indicates levels are static except for the drought conditions period identified as from 2013 to 2018. Static groundwater levels indicate this area of the Basin is generally at capacity and therefore the MT is protective of domestic, private, public, and environmental uses.

The MT for the Southeastern Threshold Region was calculated by finding the measurement taken closest to (but not before) 1/1/2015 and not after 4/30/2015. If no measurement was taken during this 4-month period, then a linear trendline was applied to the data and the value for 1/1/2015 was extrapolated.

To provide an operational flexibility range, the MO was calculated by adding 5-years of groundwater storage to the MT. Five-years of storage was calculated by finding the decline in groundwater levels form 2013-2018, which was considered to be a period of drought conditions. If measurements were insufficient for this time period, a linear trendline was used to extrapolate the value decline value.

Placeholder for IM calculation

Levels will be measured using the frequency of measurement and monitoring protocols documented in Section 4 and Appendix XX.

Eastern Threshold Region

Monitoring in this region indicates a downward trend in groundwater levels. The MT for this region intends to protect domestic, private, public and environmental uses of the groundwater by allowing for managed extraction in areas that have beneficial uses and protecting those with at risk infrastructure.

Stakeholders reported concern about the dewatering of domestic wells in this region, and groundwater levels have been declining in monitoring wells in this region. The MT and MO consider the sustainability of water levels in regards to both domestic and agricultural users. The MT was calculated by comparing two separate mathematical methods and choosing the more restrictive (smaller depth to water value) between the two.

The first method found the total range of recorded groundwater levels and used 20% of the range. This 20% of the range was then added below the value closest to January 1, 2015 (as described in the previous subsection).

The second method was calculated by finding the shallowest nearby well depth and 10 feet were added to this value. A Geographic Information System (GIS) analysis was conducted to find the shallowest wells near each of the representative wells. This incorporated both the OPTI dataset, as well as the Department of Water Resources (DWR)'s Township and Range mapping application that utilizes well drilling reports. OPTI well analysis used a 1.5-mile radius circle to find nearby well depths, and the DWR data uses a 9 square mile grid to find the shallowest well.

The MT values calculated by the two methods were then compared, and the more restrictive value was applied to each representative well.

The MOs were calculated by subtracting 5-yrs of groundwater storage from the MT. 5-yrs of storage was found by calculating the decline in groundwater levels form 2013-2018 (a drought period). If measurements are insufficient for this time period, a linear trendline was used to extrapolate the value.

Placeholder for IM calculation

Levels will be measured using the frequency of measurement and monitoring protocols documented in Section 4 and Appendix XX.

Central Threshold Region

Monitoring in this region indicates a decline in groundwater levels, indicating an extraction rate that exceeds recharge rates. The MT for this region is set to allow current beneficial uses of groundwater while reducing extraction rates over the planning horizon to meet sustainable yield. The MO is intended to allow sufficient operational flexibility for future drought conditions.

The MT for the Central Threshold Region was calculated by taking finding the maximum and minimum groundwater levels for each representative well and calculating 20% of the historical range. This 20% of the historical range was then added to the depth to water measurement closest to, but not before, 1/1/2015 and no later than 4/30/2015. If no measurement was taken during this 4-month period, then a linear trendline was applied to the data and the value for 1/1/2015 was extrapolated.

The MO was calculated by subtracting 5-yrs of groundwater storage from the MT. Five-years of storage was found by calculating the decline in groundwater levels form 2013-2018 (a drought period). If measurements were insufficient for this time period, a linear trendline was used to extrapolate the value.

OPTI Wells 74, 103, 114, 568, 609, and 615 used a modified MO calculation where the MO utilized the linear trendline of the full range of measurements to extrapolate a 1/1/2015 value.

Placeholder for IM calculation

Levels will be measured using the frequency of measurement and monitoring protocols documented in Section 4 and Appendix XX.

Western Threshold Region

Monitoring in this threshold region indicates levels are stable, and varied significantly depending on which portion of the region the monitoring well was located in. The most common use of groundwater in this region is for domestic uses. Due to these hydrologic conditions, the MT was set to protect the water levels from declining significantly, while allowing beneficial land surface uses of the groundwater and protecting current well infrastructure. The MT was calculated by taking the difference between the total well depth and the value closest to mid-February, 2018, and calculating 15% of that depth. That value is then subtracted from the mid-February, 2018measurement to calculate the MT. This would allow users in this Threshold Region to utilize their groundwater supply without increasing the risk of running a dry well beyond acceptable limits, and this methodology is responsive to the variety of conditions and well depths in this region.

The MO was then calculated by finding the measurement closest to mid-February, 2018, which monitoring indicates is likely a "full" condition.

OPTI Well 474 utilizes a modified MO calculation where the historical high elevation measurement was used as the MO.

Placeholder for IM calculation

Levels will be measured using the frequency of measurement and monitoring protocols documented in Section 4 and Appendix XX.

Northwestern Threshold Region

Monitoring in this threshold region indicates levels are stable, with some declines in the area of new agriculture. Due to these hydrologic conditions, the MT was set to protect the water levels from declining significantly, while allowing beneficial land surface uses and utilizing the storage capacity of this region of the Basin. The MT for the Northwestern Threshold Region was found by determining the total average saturated thickness for the primary storage area of the Threshold Region and calculating 15% of that depth. This value was then set as the MT.

The MO was calculated using 5-years of storage. Because historical data reflecting new operations in this Threshold Region is extremely limited, 50 feet was used as 5 years of storage based on local landowner input.

There are several wells in this Threshold Region that were reclassified as "Far-west Northwestern Wells", and include OPTI Wells 830, 831, 832, 833, 834, 835, and 836. These wells have total depths that are shallower and utilize the same strategies as the Western Threshold Region for their MOs and MTs.

Placeholder for IM calculation

Levels will be measured using the frequency of measurement and monitoring protocols documented in Section 4 and Appendix XX.

Badlands Threshold Region

The Badlands Threshold Region has no groundwater use or active wells within this area, thus, no MO, MT, or Interim Milestones were calculated.

5.2.3 Selected minimum thresholds, measurable objectives, and interim milestone graphs, figures, and tables

Figure 5-2 shows an example hydrograph with indicators for the MT, MO, IM (to be calculated) over the hydrograph. The left axis shows elevation above mean sea level, the right axis shows depth to water below ground surface. The brown line shows the ground surface elevation, and time in years is shown on the bottom axis. Each measurement taken at the monitoring well is shown as a blue dot, with blue lines connecting between the blue dots indicating the interpolated groundwater level between measurements. The MT is shown as a red line, and the MO is shown as a green line. IM symbology to be added Appendix XXX includes hydrographs with MT, MO and IM (to be added) for each representative monitoring well.

Table 5-1 shows the representative monitoring network and the numerical values for the MT, MO, and IM (to be added).

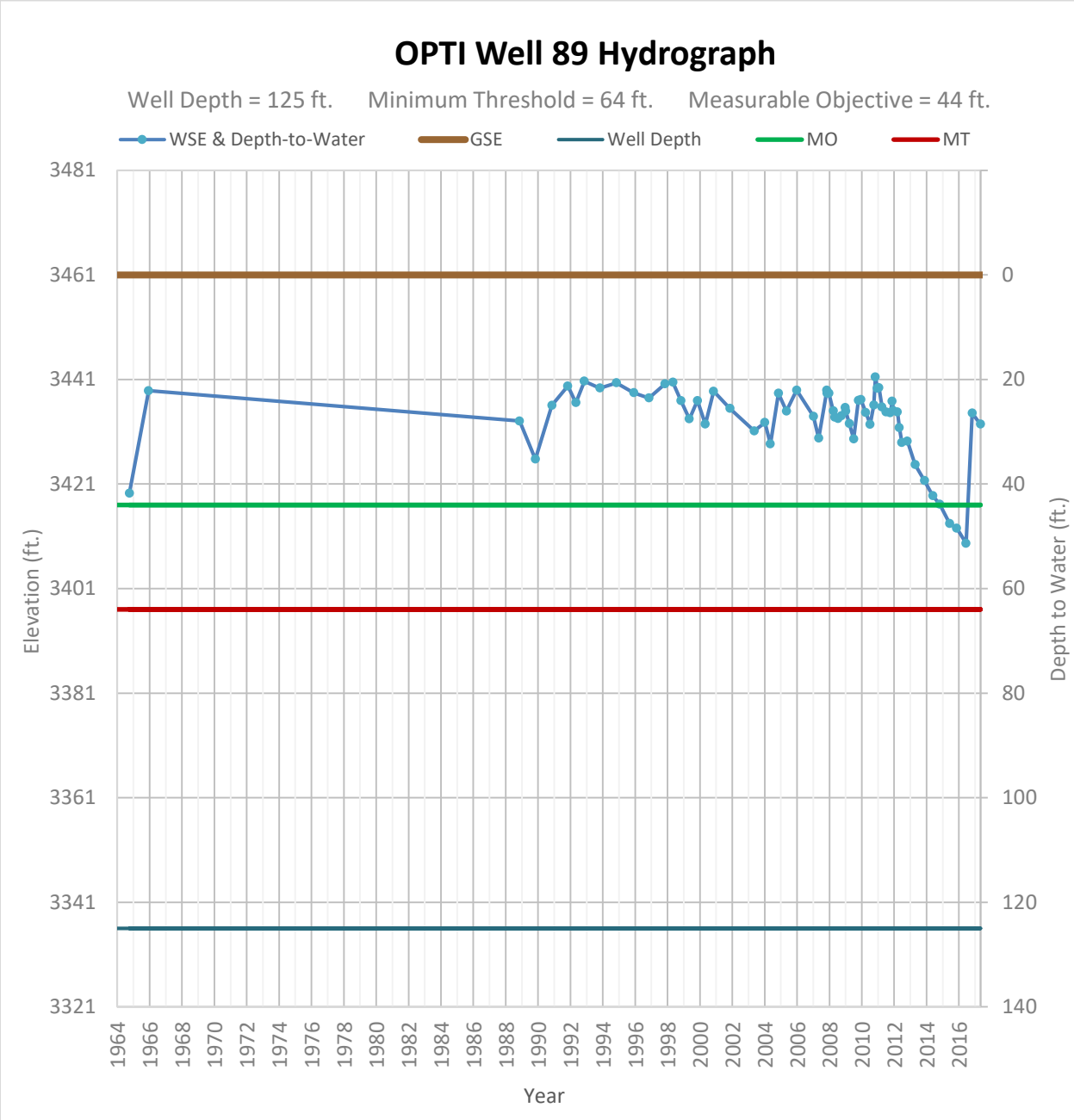


Figure 5-2 Example Hydrograph

Table 5-1 – Representative Monitoring Network and Sustainability Criteria

OPTI Well	Region	Final MT	Final MO	2025 IM	2030 IM	2035 IM	Well Depth	Screen Top	Screen Bottom	GSE
72	Central	169	124				790	340	770	2171
74	Central	256	243							2193
77	Central	450	400				980	960	980	2286
91	Central	625	576				980	960	980	2474
95	Central	573	538				805			2449
96	Central	333	325				500			2606
98	Central	450	439				750			2688
99	Central	311	300				750	730	750	2513
102	Central	235	197							2046
103	Central	290	235				1030			2289
112	Central	87	85				441			2139
114	Central	47	45				58			1925
316	Central	623	574				830			2474
317	Central	623	573				700			2474
322	Central	307	298				850			2513
324	Central	311	299				560			2513
325	Central	300	292				380			2513
420	Central	450	400				780			2286
421	Central	446	398				620			2286
422	Central	444	397				460			2286
474	Central	188	169				213			2369
568	Central	37	36				188			1905
604	Central	526	487				924	454	924	2125
608	Central	436	407				745	440	745	2224
609	Central	458	421				970	476	970	2167
610	Central	621	591				780	428	780	2442
612	Central	463	440				1070	657	1070	2266
613	Central	503	475				830	330	830	2330
615	Central	500	468				865	480	865	2327
620	Central	606	566				1035	550	1035	2432

629	Central	559	527	1000	500	1000	2379
633	Central	547	493	1000	500	1000	2364
62	Eastern	151	126	212			2921
85	Eastern	171	147	233			3047
93	Eastern	105	91	151			2928
100	Eastern	134	105	284			3004
101	Eastern	104	81	200			2741
840	Northwestern	203	153	900	200	880	1713
841	Northwestern	203	153	600	170	580	1761
843	Northwestern	203	153	620	60	600	1761
845	Northwestern	203	153	380	100	360	1712
849	Northwestern	203	153	570	150	550	1713
2	Southeastern	72	55	73			3720
89	Southeastern	64	44	125			3461
106	Western	154	141.4	227.5			2327
107	Western	91	72.23	200			2482
108	Western	165	135.62	328.75			2629
117	Western	160	150.82	212			2098
118	Western	124	57.22	500			2270
123	Western	31	12.59	138			2165
124	Western	73	57.12	160.55			2287
127	Western	42	31.74	100.25			2364
571	Western	144	120.5	280			2307
573	Western	118	67.5	404			2084
830	Far-West Northwestern	59	56	77.2			1571
831	Far-West Northwestern	77	52	213.75			1557
832	Far-West Northwestern	45	30	131.8			1630
833	Far-West Northwestern	96	24	503.55			1457
834	Far-West Northwestern	84	42	320			1508
835	Far-West Northwestern	55	36	162.2			1555
836	Far-West Northwestern	79	36	325			1486

5.3 Reduction of Groundwater Storage

The Undesirable Result for the reduction in groundwater storage is a result that causes significant and unreasonable reduction in the viability of domestic, agricultural, municipal, or environmental uses over the planning and implementation horizon of this GSP.

Reduction of groundwater storage is not a concern for the Basin for two reasons. First, monitoring in several areas of the Basin (western, eastern, and portions of the north facing slope of the Cuyama Valley near the center of the Basin) indicate that those regions are likely near, or at full conditions.

Second, because the primary aquifer in the Basin is not confined, storage closely matches groundwater levels

SGMA regulations define the MT for reduction of groundwater storage as the, "… total volume of groundwater that can be withdrawn from the basin without causing conditions that may lead to undesirable results."

Undesirable results for groundwater storage volumes in this GSP will use groundwater levels as a proxy, as the groundwater level sustainability criteria are protective of groundwater in storage.

5.3.1 Threshold Regions

Groundwater storage is measured by proxy using groundwater level thresholds, and thus uses the same methodology and threshold regions as groundwater levels.

5.3.2 Proxy Monitoring

Reduction of groundwater storage within the Basin uses groundwater levels as a proxy for determining sustainability, as permitted by §354.26 (d) of CA Regulation Title 23, Chapter 1.5.2.5. Additionally, there are currently no state, federal, or local standards that regulate groundwater storage. As described above, any benefits to groundwater storage are expected to coincide with groundwater level management.

5.4 Seawater Intrusion

Due to the geographic location of the Cuyama Basin, seawater intrusion is not a concern, and thus is not required to establish criteria for undesirable results for seawater intrusion, as supported by §354.26 (e) of CA Regulation Title 23, Chapter 1.5.2.5.

5.5 Degraded Water Quality

The Undesirable Result for degraded water quality is a result stemming from a causal nexus between SGMA-related groundwater quantity management activities and groundwater quality that causes significant and unreasonable reduction in the long-term viability of domestic, agricultural, municipal, or environmental uses over the planning and implementation horizon of this GSP.

The SGMA regulations specify that, "minimum thresholds for degraded water quality shall be the degradation of water quality, including the migration of contaminant plumes that impair water supplies or other indicator of water quality as determined by the Agency that may lead to undesirable results."

Because the undesirable result for degraded water quality stems from the causal nexus between SGMA related quantity management and groundwater quality, TDS will be monitored by the GSA as part of this GSP, and other constituents will not. As discussed in Section 2.2 Groundwater Conditions, there are few contamination sites in the Basin. Additionally, these sites are under jurisdiction of the RWQCB. Nitrates are under the jurisdiction of the Irrigated Lands Regulatory Program (ILRP), and the GSA does not possess land use authority to influence fertilizer use. Arsenic occurs at specific depths in the basin, but the

location of sources of arsenic is not well understood and is not manageable by the GSA at a regional scale.

5.5.1 Threshold Regions

Groundwater quality monitoring does not utilize Threshold Regions. Figure 5-3 shows the location of the groundwater quality representative wells in the Basin.

5.5.2 Proxy Monitoring

Proxy monitoring is not used for groundwater quality monitoring within the Cuyama Basin.

5.5.3 Minimum Thresholds, Measurable Objectives, and Interim Milestones

The GSA has decided to address total dissolved solids (TDS) within the Basin by setting MTs, MOs, and IMs. TDS does not have a primary maximum contaminant level (MCL), but does have both a California Division of Drinking Water and U.S. Environmental Protection Agency (USEPA) Secondary standard of 500 mg/L, and a short-term standard of 1,500 mg/L. Current levels in the Basin range from 84 mg/L to 4,400 mg/L. This is due to saline conditions in the portions of the watershed where rainfall percolates through marine sediments which contain large amounts of salt.

Due to this natural condition, additional data will be collected during GSP implementation to increase the GSAs understanding of salt/TDS sources within the Basin,. It should be noted however, that TDS levels in the groundwater do not detrimentally impact the agricultural economy of the Basin. Much of the crops grown in the Basin, including carrots, are not significantly affected by the kinds of salts in the Basin.

Due to these factors the MT for representative well sites are set to be the 20% of the total range of each representative monitoring site above the 90th percentile of measurements for each site.

To provide for an acceptable margin of operational flexibility, the MO for the TDS levels within the Basin have been set to the temporary MCL of 1,500 mg/L for each representative well where the latest measurements as of 2018 are greater than 1,500 mg/L. For wells with recent measurements less than 1,500 mg/L, the MO is set to the most recent measurement as of 2018.

This GSP has calculated two different interim milestones to achieve sustainability by 2040. GSP regulations require GSAs to avoid undesirable results by 2040, which is to say meet or exceed the MT. The GSA also recognizes that reaching the MO is a priority, and thus a range of interim milestones has been set. Interim milestones for TDS have been set as a linear trendline from the latest measurement value in 2018 to the 2040 MO and MT as shown in Table 5-2.

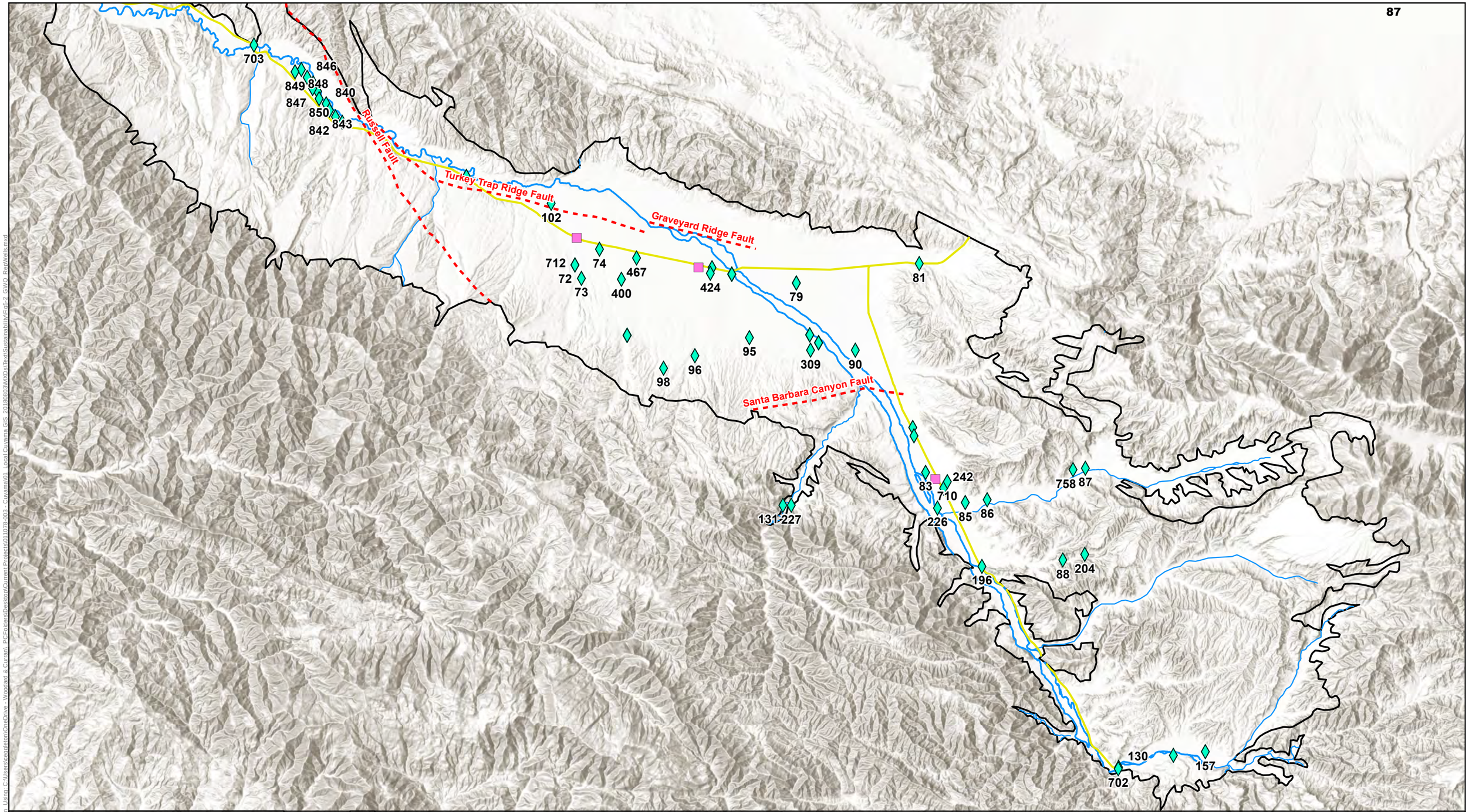


Figure 5-3: Cuyama GW Basin Groundwater Quality Representative Wells

Cuyama Basin Groundwater Sustainability Agency

Cuyama Valley Groundwater Basin Groundwater Sustainability Plan

January 2019

WOODARD &CURRAN

Legend

- Cuyama Basin
- Towns
- Faults
- Highways
- Cuyama River
- Streams
- Representative Groundwater Quality Wells

N

0 1.75 3.5 7 Miles

Table 5-2: MOs, MTs, and Interim Milestones for Groundwater Quality Representative Sites

OPTI ID	Well Depth	Screen Interval	Well Elevation	MO	MT	2025 IM	2030 IM	2035 IM
61	357.	Unknown	3681	585	615.2	585 - 593 mg/L	585 - 600 mg/L	585 - 608 mg/L
72	790	340 to 350 ft.	2171	996	1023	996 - 1003 mg/L	996 - 1010 mg/L	996 - 1016 mg/L
73	880.	Unknown	2252	805	855.9	805 - 818 mg/L	805 - 830 mg/L	805 - 843 mg/L
74		Unknown	2193	1500	1833	1538 - 1621 mg/L	1525 - 1692 mg/L	1513 - 1762 mg/L
76	720	Unknown	2277	1500	2306.9	1650 - 1852 mg/L	1600 - 2003 mg/L	1550 - 2155 mg/L
77	980	960 to 980 ft.	2286	1500	1592	1515 - 1538 mg/L	1510 - 1556 mg/L	1505 - 1574 mg/L
79	600	Unknown	2374	1500	2320	1980 - 2185 mg/L	1820 - 2230 mg/L	1660 - 2275 mg/L
81	155.	Unknown	2698	1500	2788	2340 - 2662 mg/L	2060 - 2704 mg/L	1780 - 2746 mg/L
83	198.	Unknown	2858	1500	1726	1620 - 1677 mg/L	1580 - 1693 mg/L	1540 - 1710 mg/L
85	233	Unknown	3047	618	1391.2	618 - 811 mg/L	618 - 1005 mg/L	618 - 1198 mg/L
86	230.	Unknown	3141	969	974.7	969 - 970 mg/L	969 - 972 mg/L	969 - 973 mg/L
87	232.	Unknown	3546	1090	1164.8	1090 - 1109 mg/L	1090 - 1127 mg/L	1090 - 1146 mg/L
88	400	Unknown	3549	302	302	302 - 302 mg/L	302 - 302 mg/L	302 - 302 mg/L
90	800	Unknown	2552	1500	1593	1523 - 1546 mg/L	1515 - 1562 mg/L	1508 - 1577 mg/L
91	980	960 to 980 ft.	2474	1410	1487	1410 - 1429 mg/L	1410 - 1449 mg/L	1410 - 1468 mg/L
94	550	Unknown	2456	1050	1245	1050 - 1099 mg/L	1050 - 1148 mg/L	1050 - 1196 mg/L
95	805.	Unknown	2449	1500	1866	1658 - 1749 mg/L	1605 - 1788 mg/L	1553 - 1827 mg/L
96	500	Unknown	2606	1500	1632	1500 - 1533 mg/L	1500 - 1566 mg/L	1500 - 1599 mg/L
98	750.	Unknown	2688	1500	2400	2040 - 2265 mg/L	1860 - 2310 mg/L	1680 - 2355 mg/L
99	750	730 to 750 ft.	2513	1490	1562	1490 - 1508 mg/L	1490 - 1526 mg/L	1490 - 1544 mg/L
101	200	Unknown	2741	1500	1693	1538 - 1586 mg/L	1525 - 1622 mg/L	1513 - 1657 mg/L
102		Unknown	2046	1500	2351	1853 - 2065 mg/L	1735 - 2161 mg/L	1618 - 2256 mg/L
130		Unknown	3536	1500	1855	1725 - 1814 mg/L	1650 - 1828 mg/L	1575 - 1841 mg/L
131		Unknown	2990	1500	1982	1763 - 1883 mg/L	1675 - 1916 mg/L	1588 - 1949 mg/L
157	71.0	Unknown	3755	1500	2360	1823 - 2038 mg/L	1715 - 2145 mg/L	1608 - 2253 mg/L
196	741	Unknown	3117	851	903.7	851 - 864 mg/L	851 - 877 mg/L	851 - 891 mg/L
204		Unknown	3693	253	268.6	253 - 257 mg/L	253 - 261 mg/L	253 - 265 mg/L
226		Unknown	2945	1500	1844	1695 - 1781 mg/L	1630 - 1802 mg/L	1565 - 1823 mg/L
227		Unknown	3002	1500	2230	1710 - 1893 mg/L	1640 - 2005 mg/L	1570 - 2118 mg/L
242	155	Unknown	2933	1470	1518	1470 - 1482 mg/L	1470 - 1494 mg/L	1470 - 1506 mg/L
269		Unknown	2756	1500	1702	1553 - 1603 mg/L	1535 - 1636 mg/L	1518 - 1669 mg/L

OPTI ID	Well Depth	Screen Interval	Well Elevation	MO	MT	2025 IM	2030 IM	2035 IM
309	1100	Unknown	2513	1410	1509	1410 - 1435 mg/L	1410 - 1460 mg/L	1410 - 1484 mg/L
316	830	Unknown	2474	1380	1468	1380 - 1402 mg/L	1380 - 1424 mg/L	1380 - 1446 mg/L
317	700	Unknown	2474	1260	1337	1260 - 1279 mg/L	1260 - 1299 mg/L	1260 - 1318 mg/L
318	610	Unknown	2474	1080	1152	1080 - 1098 mg/L	1080 - 1116 mg/L	1080 - 1134 mg/L
322	850	Unknown	2513	1350	1386	1350 - 1359 mg/L	1350 - 1368 mg/L	1350 - 1377 mg/L
324	560	Unknown	2513	746	777.2	746 - 754 mg/L	746 - 762 mg/L	746 - 769 mg/L
325	380	Unknown	2513	1470	1569	1470 - 1495 mg/L	1470 - 1520 mg/L	1470 - 1544 mg/L
400	2120.	Unknown	2298	918	975.6	918 - 932 mg/L	918 - 947 mg/L	918 - 961 mg/L
420	780	Unknown	2286	1430	1490	1430 - 1445 mg/L	1430 - 1460 mg/L	1430 - 1475 mg/L
421	620	Unknown	2286	1500	1616	1515 - 1544 mg/L	1510 - 1568 mg/L	1505 - 1592 mg/L
422	460	Unknown	2286	1500	1942	1733 - 1843 mg/L	1655 - 1876 mg/L	1578 - 1909 mg/L
424	1000.	Unknown	2291	1500	1588	1530 - 1552 mg/L	1520 - 1564 mg/L	1510 - 1576 mg/L
467	1140.	Unknown	2224	1500	1764	1598 - 1664 mg/L	1565 - 1697 mg/L	1533 - 1731 mg/L
568	188	Unknown	1905	871	1191.4	871 - 951 mg/L	871 - 1031 mg/L	871 - 1111 mg/L
702		Unknown	3539	110	2074.4	110 - 601 mg/L	110 - 1092 mg/L	110 - 1583 mg/L
703		Unknown	1613	400	4096.8	400 - 1324 mg/L	400 - 2248 mg/L	400 - 3173 mg/L
710		Unknown	2942	1040	1040	1040 - 1040 mg/L	1040 - 1040 mg/L	1040 - 1040 mg/L
711		Unknown	1905	928	928	928 - 928 mg/L	928 - 928 mg/L	928 - 928 mg/L
712		Unknown	2171	977	977.5	977 - 977 mg/L	977 - 977 mg/L	977 - 977 mg/L
713		Unknown	2456	1200	1200	1200 - 1200 mg/L	1200 - 1200 mg/L	1200 - 1200 mg/L
721		Unknown	2374	1500	2170	2003 - 2170 mg/L	1835 - 2170 mg/L	1668 - 2170 mg/L
758		Unknown	3537	900	954.3	900 - 914 mg/L	900 - 927 mg/L	900 - 941 mg/L
840	900	200 to 880 ft.	1713	559	559	559 - 559 mg/L	559 - 559 mg/L	559 - 559 mg/L
841	600	170 to 580 ft.	1761	561	561	561 - 561 mg/L	561 - 561 mg/L	561 - 561 mg/L
842	450	60 to 430 ft.	1759	547	547	547 - 547 mg/L	547 - 547 mg/L	547 - 547 mg/L
843	620	60 to 600 ft.	1761	569	569	569 - 569 mg/L	569 - 569 mg/L	569 - 569 mg/L
844	730	100 to 720 ft.	1713	481	481	481 - 481 mg/L	481 - 481 mg/L	481 - 481 mg/L
845	380	100 to 360 ft.	1712	1250	1250	1250 - 1250 mg/L	1250 - 1250 mg/L	1250 - 1250 mg/L
846	610	130 to 590 ft.	1715	918	918	918 - 918 mg/L	918 - 918 mg/L	918 - 918 mg/L
847	600	180 to 580 ft.	1733	480	480	480 - 480 mg/L	480 - 480 mg/L	480 - 480 mg/L
848	390	110 to 370 ft.	1694	674	674	674 - 674 mg/L	674 - 674 mg/L	674 - 674 mg/L
849	570	150 to 550 ft.	1713	1500	1780	1710 - 1780 mg/L	1640 - 1780 mg/L	1570 - 1780 mg/L

OPTI ID	Well Depth	Screen Interval	Well Elevation	MO	MT	2025 IM	2030 IM	2035 IM
850	790	180 to 780 ft.	1759	472	472	472 - 472 mg/L	472 - 472 mg/L	472 - 472 mg/L

5.6 Subsidence

The Undesirable Result for land subsidence is a result that causes significant and unreasonable reduction in the viability of the use of infrastructure over the planning and implementation horizon of this GSP.

5.6.1 Threshold Regions

Subsidence monitoring does not use threshold regions. Figure 5-4 shows the location of the subsidence representative locations in the Basin.

5.6.2 Representative Monitoring

As discussed in Section 4.9, all Monitoring Network subsidence monitoring stations within the Basin, and three additional sites outside of the Basin, are designated as the representative monitoring sites. Determinantal impacts of subsidence include groundwater storage reductions and potential damage to infrastructure such as large pipelines and canals. However, the Basin does not currently have infrastructure of this type, and storage losses are so small they may be considered superficial.

Subsidence within the central portion of the Basin is approximately 0.5 inches per year, as shown in Section 2.2, Groundwater Conditions. Currently, there are no state, federal, or local standards that regulate subsidence rates.

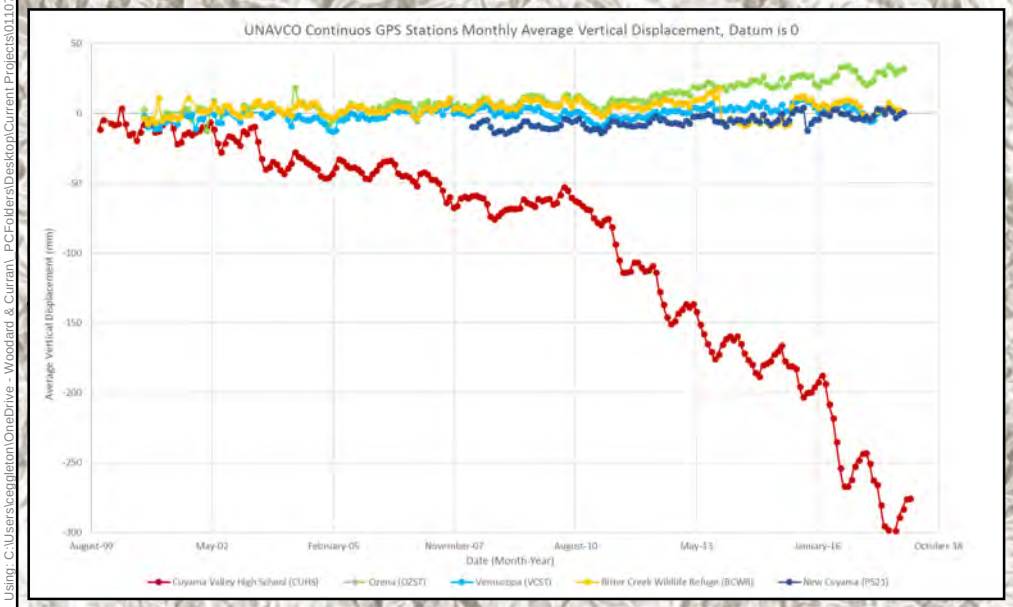
5.6.3 Minimum Thresholds, Measurable Objectives, and Interim Milestones

Although several factors may affect subsidence rates, including natural geologic processes, oil pumping, and groundwater pumping, it is believed that the primary influence within the Basin is due to groundwater pumping. Because current subsidence rates are not believed to be significant and unreasonable, the MT rate for subsidence was set at 2 inches per year to allow for flexibility as the Basin works towards sustainability in 2040. This rate is applied primarily to the two stations in the Basin (CUHS and P521), as the other stations in the Monitoring Network represent ambient changes in vertical displacement, primarily due to geological influences. This level of subsidence is considered unlikely to cause a significant and unreasonable reduction in the viability of the use of infrastructure over the planning and implementation horizon of this GSP.

Subsidence is expected to be influenced through the management of groundwater pumping through the groundwater level MOs, MTs, and interim milestones. Thus, the MO for subsidence is set for zero lowering of ground surface elevations.

Interim milestones are not needed for the subsidence sustainability indicator because the current rate of subsidence is above the MT.

Subsidence rates will be measured in the frequency of measurement and monitoring protocols documented in Section 4.



166
New Cuyama
CUHS
Cuyama
P521
BCWR
33
VCST
Ventucopa
OZST

Figure 5-4: Cuyama GW Basin Subsidence Monitoring Locations

Cuyama Basin Groundwater Sustainability Agency

Cuyama Valley Groundwater Basin Groundwater Sustainability Plan

January 2019

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Legend

- Cuyama Basin
- Towns
- Highways
- Local Roads
- Cuyama River
- Streams

0 2 4 8 Miles

N

5.7 Depletions of Interconnected Surface Water

The Undesirable Result for depletions of interconnected surface water is a result that causes significant and unreasonable reductions in the viability of agriculture or riparian habitat within the basin over the planning and implementation horizon of this GSP.

SGMA regulations define the MT for interconnected surface water as, "… the rate or volume of surface water depletions caused by groundwater use that has adverse impacts on the beneficial uses of the surface water and may lead to undesirable results." In January 1, 2015 surface flows infiltrated into the groundwater system and are used by phreatophytes, except in the most extreme flash flood events, when surface water flows out of the basin. These flash flood events flow for less than one week of the year. Conditions have not changed since January 1, 2015, and surface flows infiltrate into the groundwater system and are used by local phreatophytes.

Due to conditions in the Basin not being different from January 1, 2015, groundwater level thresholds established in Section 5.2 are considered protective of depletions of interconnected surface water to January 1, 2015 conditions, and the groundwater level thresholds are used by proxy to protect the basin from undesirable results related to depletion of interconnected surface water.

References

California Department of Water Resources (DWR), Irrigated Land Regulatory Program (IRLP), Accessed 1/11/2019. https://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/

TO: Board of Directors
Agenda Item No. 7d

FROM: Lyndel Melton, Woodard & Curran (W&C)

DATE: March 6, 2019

SUBJECT: Direction on Management Areas

Issue
Direction on Management Areas.

Recommended Motion
None – information only.

Discussion
An update on Management Areas is provided as Attachment 1.

Cuyama Basin Groundwater Sustainability Agency

Direction on Management Areas

March 6, 2019

WOODARD &CURRAN

DWR Definition of a "Management Area"

- *"… may be defined by natural or jurisdictional boundaries, and may be based on differences in water use sector, water source type, geology, or aquifer characteristics."*
- *"Management Areas may have different minimum thresholds and measurable objectives than the basin at large and may be monitored to a different level."*
- *"Other portions of the GSP (e.g., hydrogeologic conceptual model, water budget, notice and communication) must be consistent of the entire GSP area."*

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Potential Management Area Uses

- Provided by Regulation
  - Differentiate rationale for Minimum Thresholds and Measurable Objectives
  - Establish different concentration or types of monitoring

- At GSA Board's Discretion
  - At GSA's discretion, Management Areas *could* be used to:
    - Delegate authorities to other jurisdictions
    - Perform projects and management actions discretely by Management Area
      - Allocations
      - Costs

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Board Direction on Management Areas

- Should the GSA utilize management areas?
- If the GSA utilizes management areas, which areas of the Basin should be identified as a management area?
- Areas currently with potential groundwater imbalances:
  - Developed Central region
  - Ventucopa region

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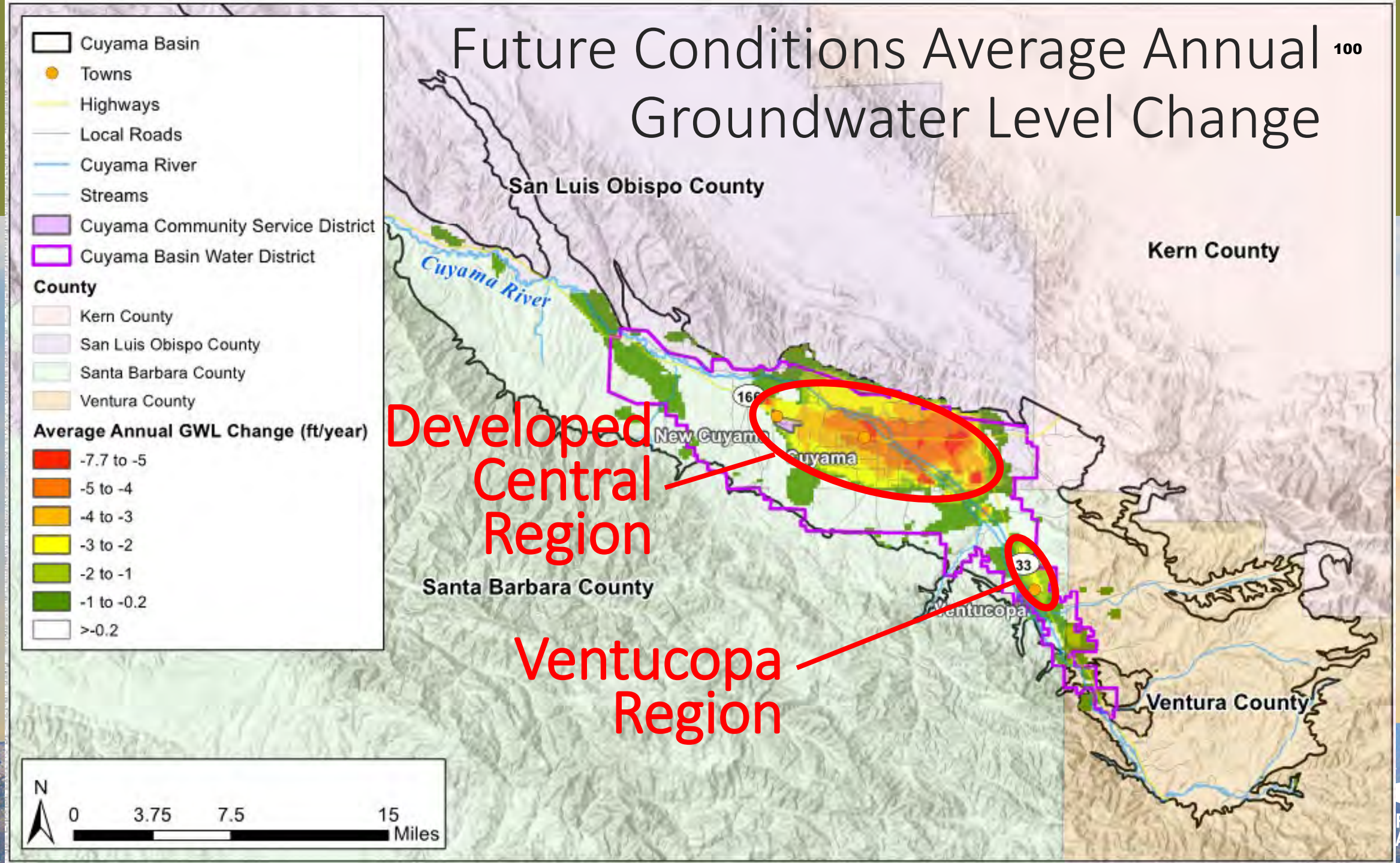
Future Conditions Average Annual Groundwater Level Change



Staff Recommendation

- Management actions and/or pumping reductions need to occur in the areas that most affect the Basin imbalance
- **We recommend that two management areas be included in the current GSP:**
  - **Central Basin area with modeled overdraft conditions (>2 ft/yr)**
  - **Ventucopa area with modeled overdraft conditions (>2 ft/yr)**
- Information will be developed over the next five years to refine proposed management areas

WOODARD &CURRAN

TO: Board of Directors
Agenda Item No. 7e

FROM: Lyndel Melton, Woodard & Curran (W&C)

DATE: March 6, 2019

SUBJECT: Projects and Management Actions

Issue
Update on the Projects and Management Actions.

Recommended Motion
None – information only.

Discussion
An update on Project and Management Actions is provided as Attachment 1.

Cuyama Basin Groundwater Sustainability Agency

Projects and Management Actions

March 6, 2019

WOODARD &CURRAN

Process for Identifying and Analyzing Management Actions and Projects

- Solicit public input on potential actions and projects (Sep)
- Evaluation and characterization of actions and projects (Sep-Jan)
- Discuss potential actions with SAC and Board (Jan-Feb)
- Numerical modeling of management action alternatives (Feb)
- **Present numerical modeling results to SAC and Board (Feb-Mar)**

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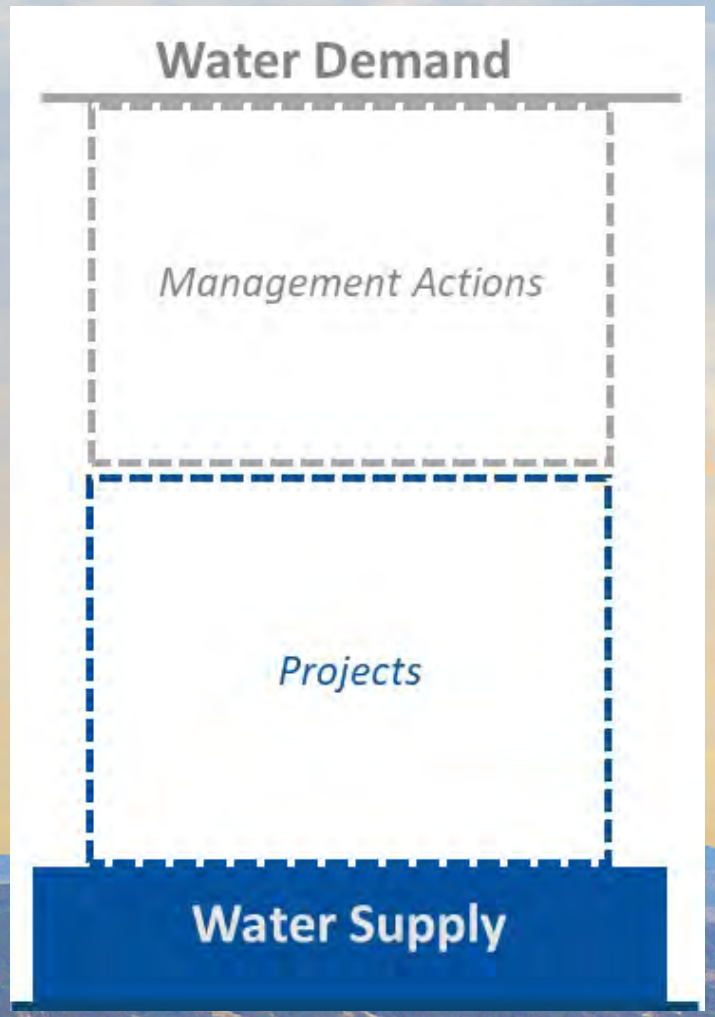
Projects and Management Actions to Close the Gap Between Water Supplies and Demands

- Water supply projects to increase available supplies
- Management actions to reduce groundwater pumping
- Adaptive management to respond to changes in supplies and demands over time



WOODARD &CURRAN

TO: Board of Directors
Agenda Item No. 7ei

FROM: Lyndel Melton, Woodard & Curran (W&C)

DATE: March 6, 2019

SUBJECT: Direction on Projects

Issue
Direction on Projects

Recommended Motion
None – information only.

Discussion
An update on projects is provided as Attachment 1.

Cuyama Basin Groundwater Sustainability Agency

Projects and Management Actions

March 6, 2019

WOODARD &CURRAN

Projects Under Consideration

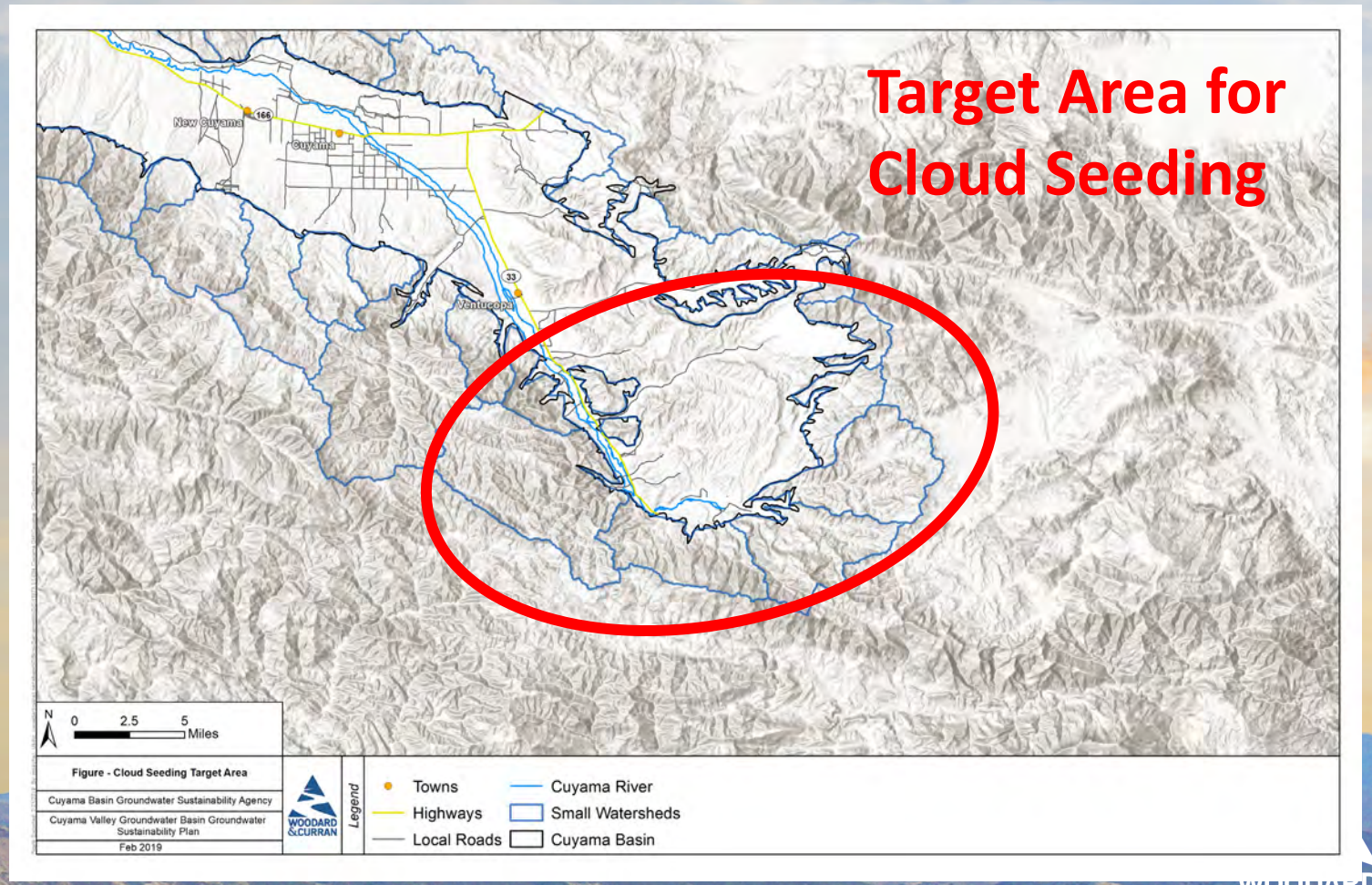
- The list has been updated following direction at last Board meeting
- GSA support for new pumping wells for local communities
  - Cuyama CSD & Ventucopa & town of Cuyama (added)
- GSA implementation of projects to increase net Basin water supply
  - Flood/Stormwater Capture
  - Municipal Area Rainwater Capture (removed)
  - Forest/Rangeland Management
  - Water Supply Imports via Pipeline (removed)
  - Water Supply Imports via Transfer/Exchange
  - Precipitation Enhancement

Precipitation Enhancement Modeling Analysis

Assumptions:

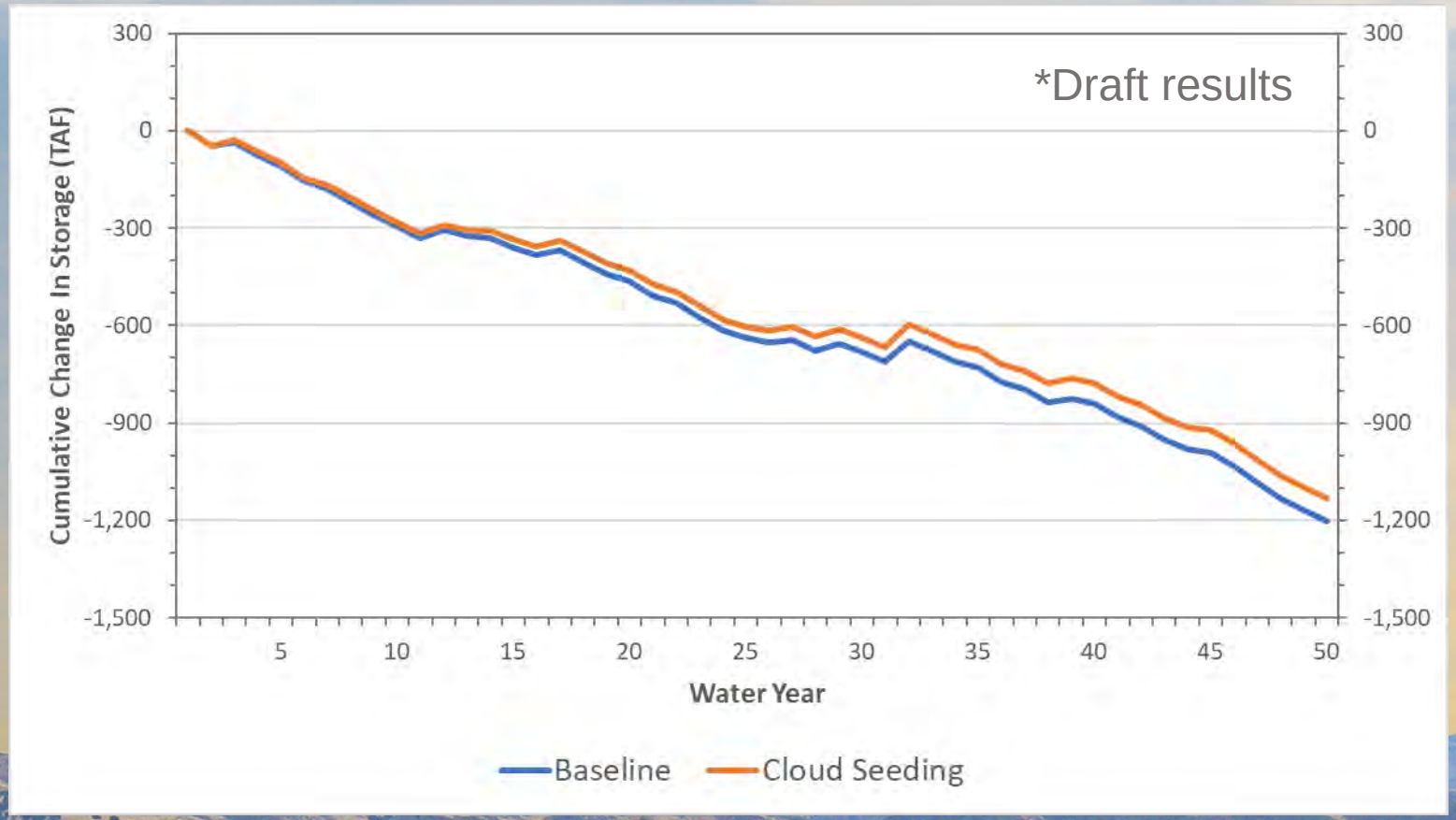
- 10% precipitation increase on the East for the months November through March.

Cost: $20-30/AF



Precipitation Enhancement Modeling Analysis
Basin-Wide Cumulative Storage Change

DRAFT



Average Annual (50 years)

Inflows:

- Deep Percolation +400 AF
- Stream Seepage +400 AF
- Boundary Flow +700 AF
- **Change in Sto. +1,500 AF**

Change in Cuyama River Outflow +2,700 AF

Total Potential Benefit: 4,200 AF

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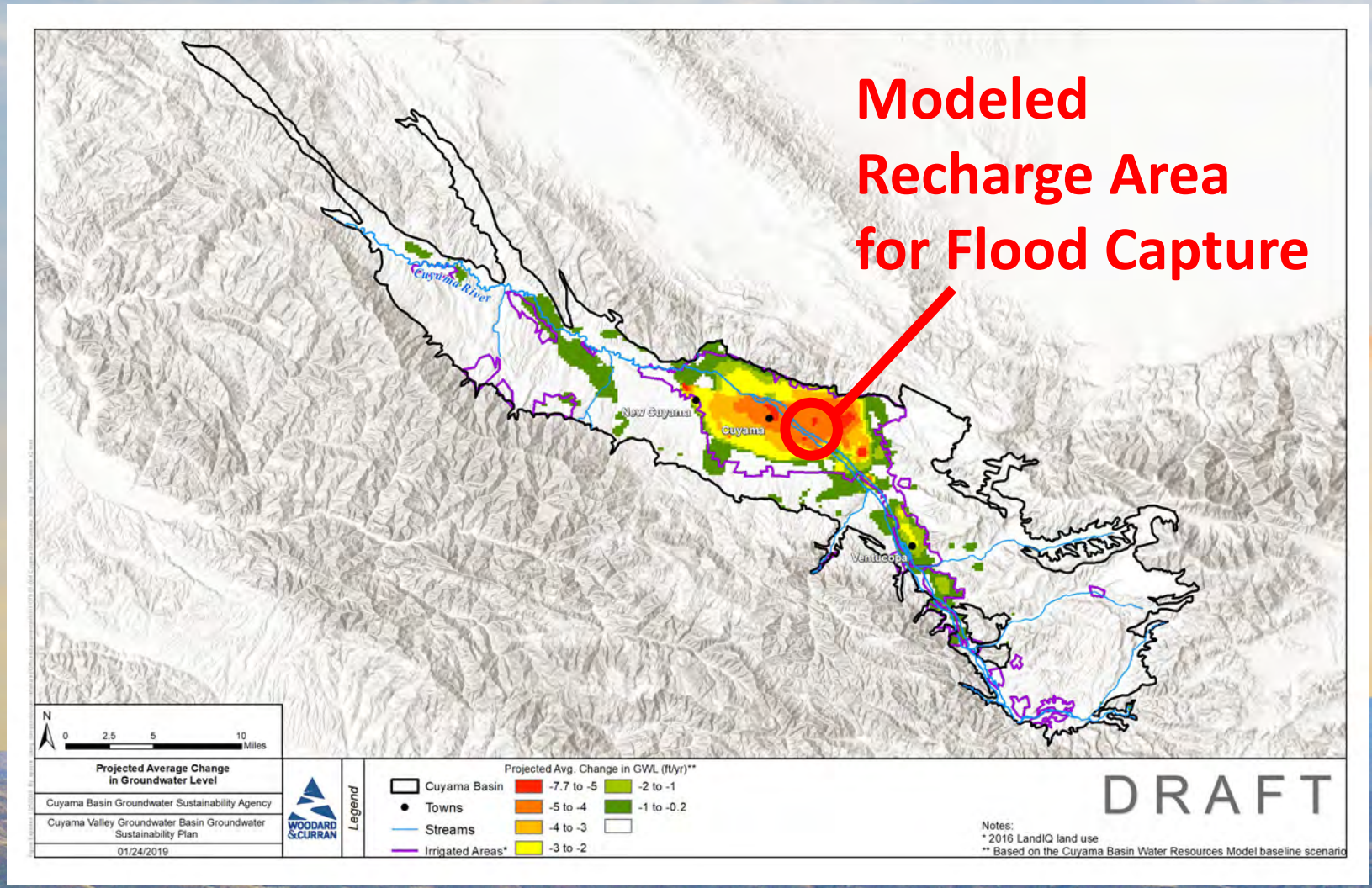
DRAFT

Stormwater Capture Modeling Analysis

Assumptions:

- Capture from 100 - 200 CFS flows in Cuyama River and recharge groundwater over ~200 acres.
- During any period with appropriate flows for diversion.

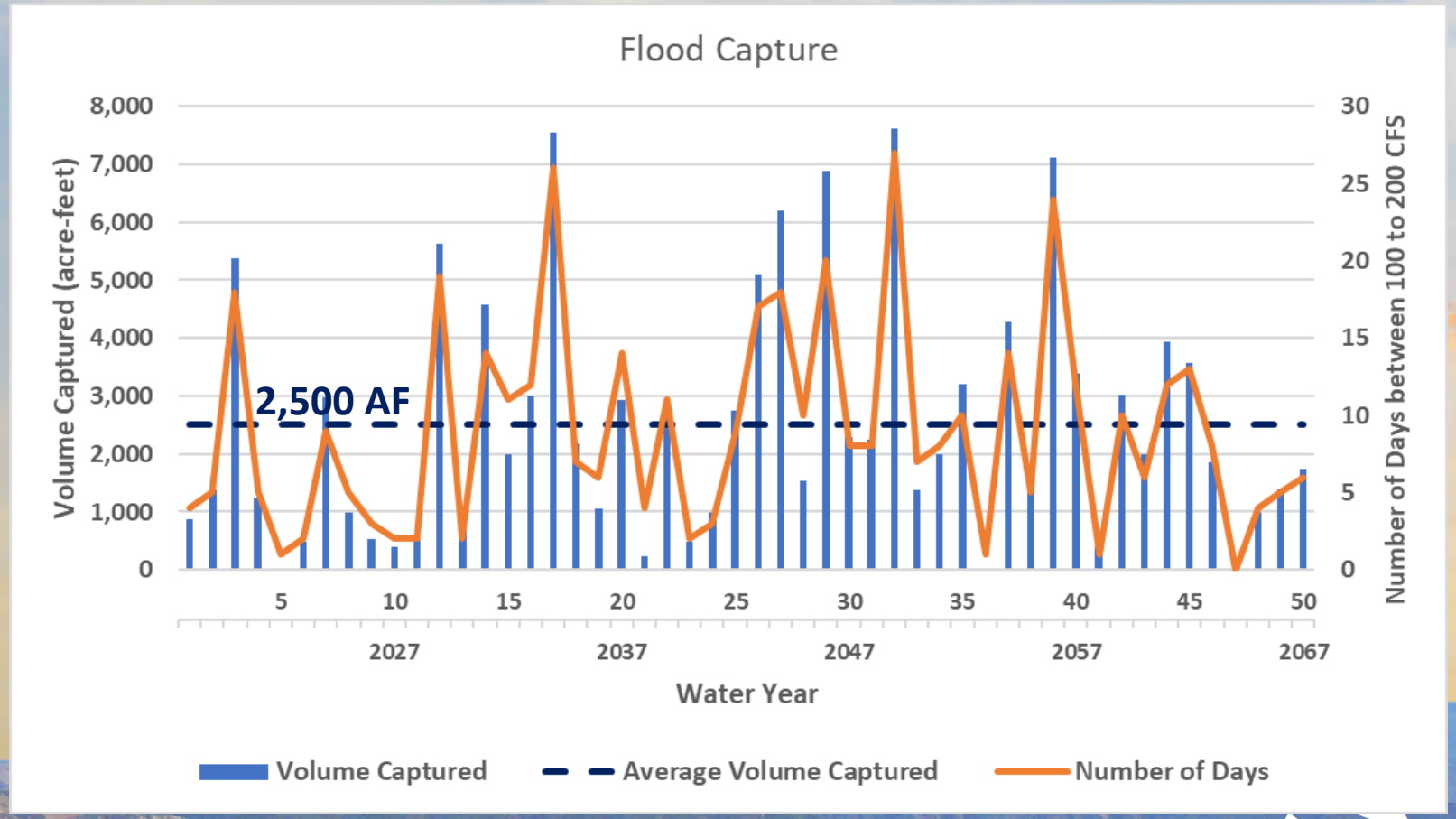
Cost: $600-800/AF



Stormwater Capture Modeling Analysis

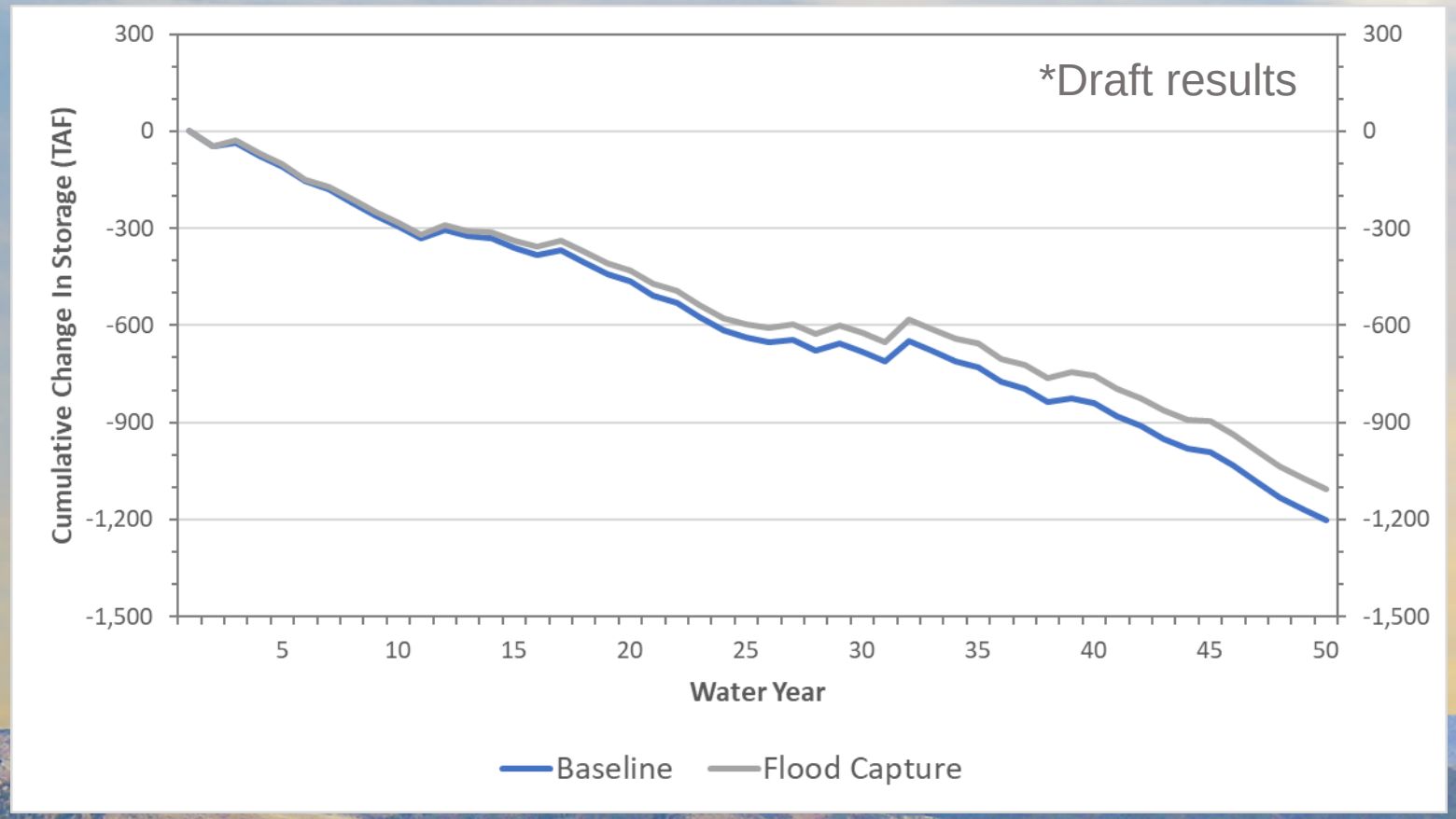
Average Number of Days in WY: 9 days/yr.

Average Volume Captured: 2,500 AF/yr



Stormwater Capture Modeling Analysis
Basin-Wide Cumulative Storage Change

DRAFT



Average Annual (50 years)

Inflows:

- Flood Capture +2,500 AF
- Stream Seepage -600 AF
- **Change in Sto. +1,900 AF**

Change in Cuyama River Outflow

-1,500 AF

(will need to consider effects on downstream users)

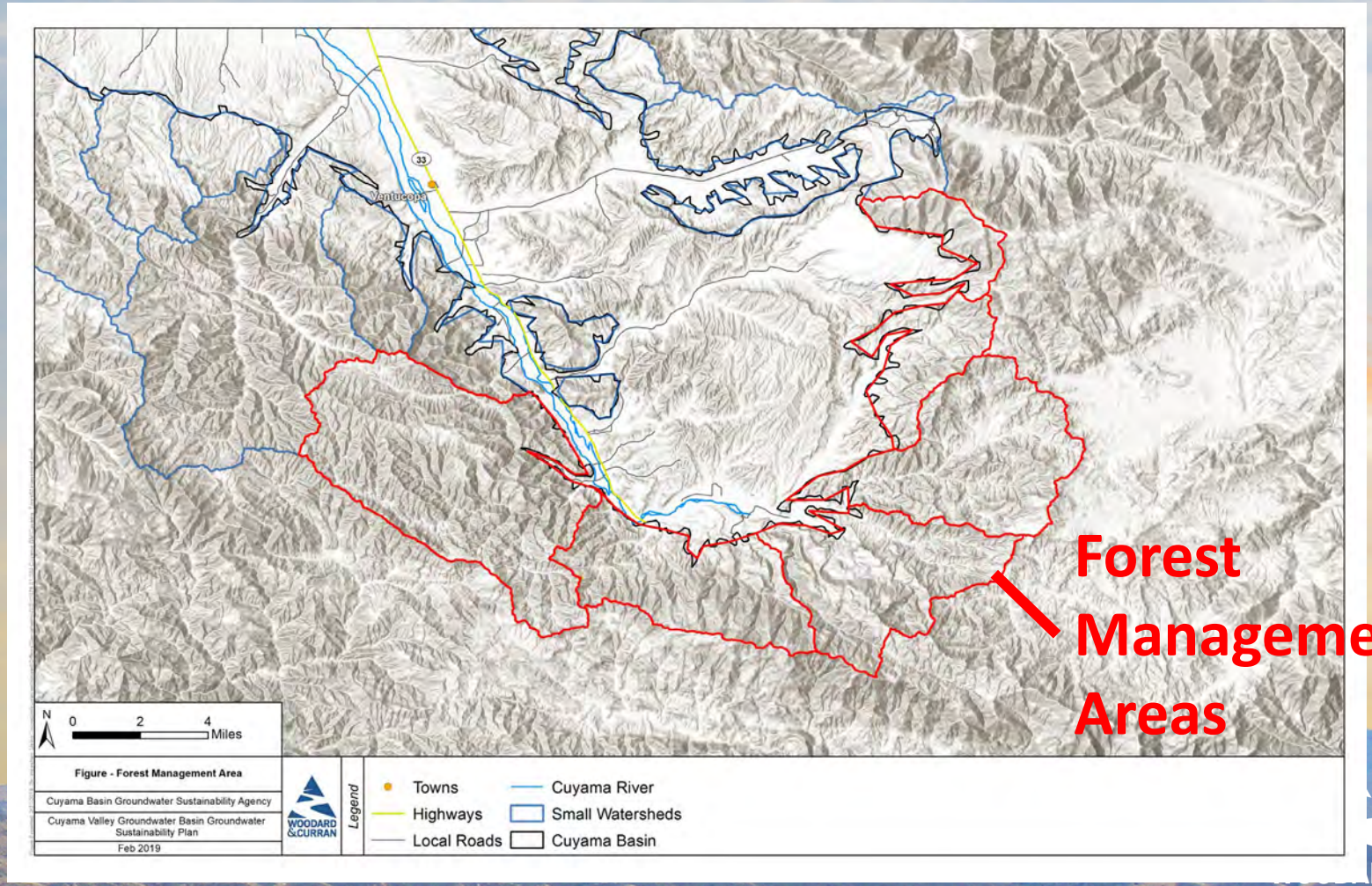
WOODARD &CURRAN

Forest/Rangeland Management Modeling Analysis

Assumptions:

- 4% decrease in native vegetation ET at the eastern small watersheds.

Cost: $500-600/AF

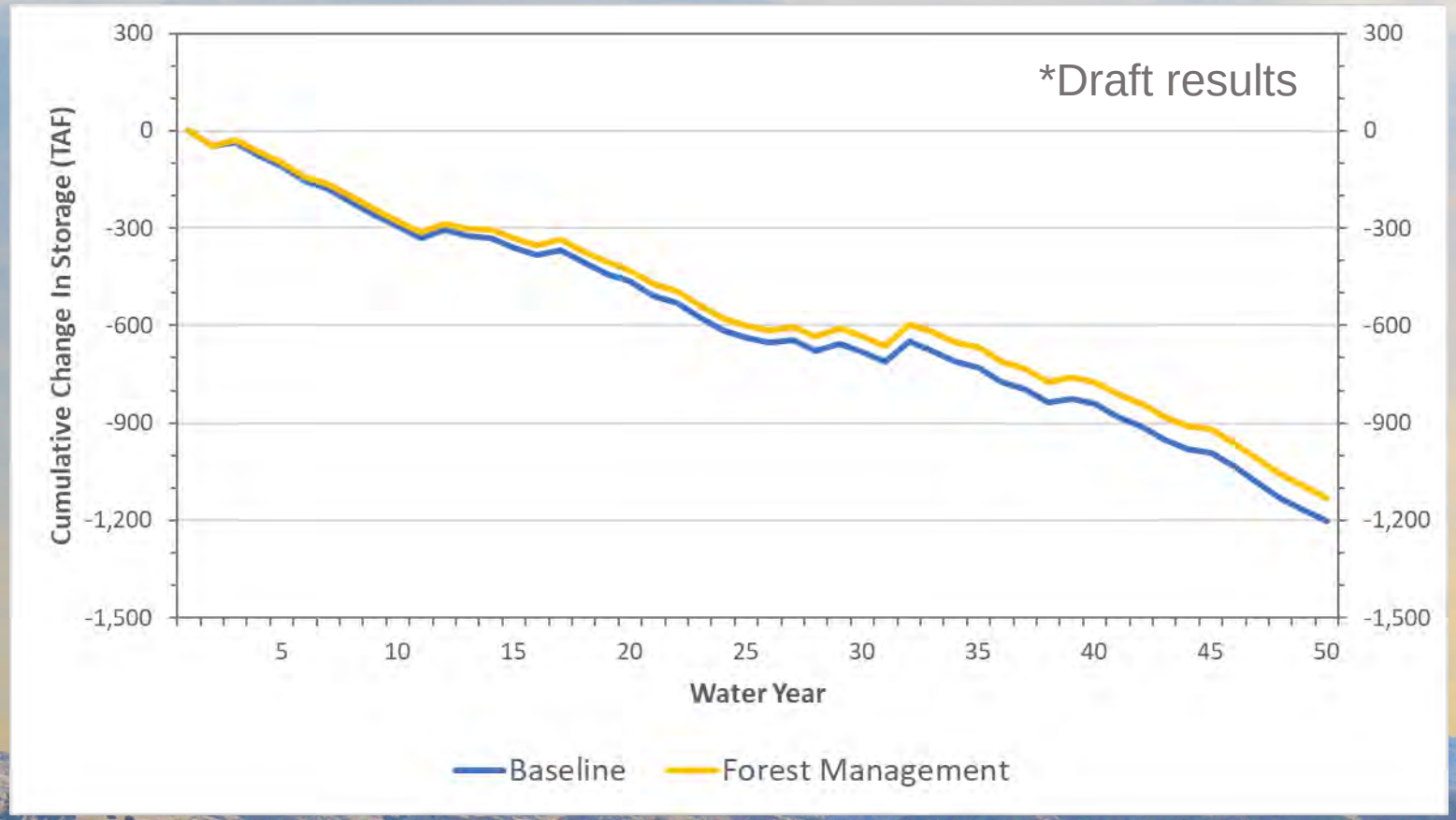


Sources:

- USBR, *Truckee Basin Study*, Dec 2015
- Bales et al., *Forests and Water in the Sierra Nevada*, Nov 2011

Future Conditions – Forest/Rangeland Management
Basin-Wide Cumulative Storage Change

DRAFT



Average Annual (50 years)

Inflows:

- Boundary Flow +2,300 AF
- Stream Seepage -800 AF
- **Change in Sto. +1,500 AF**

Change in Cuyama River Outflow
+1,400 AF

Total Potential Benefit: 2,900 AF

WOODARD &CURRAN

Summary of Water Supply Project Benefits

	Change in Storage	Change in Cuyama River Outflow
Precipitation Enhancement	+1,500 AF	+2,700 AF
Forest/Rangeland Management	+1,500 AF	+1,400 AF
Flood/Stormwater Capture	+1,900 AF	-1,500 AF

Total Potential Benefit: 5,000 to 9,000 AF per year

WOODARD &CURRAN

Board Direction on Projects

- Should the GSP support development of new pumping wells for local communities?:
  - Cuyama CSD, Ventucopa & town of Cuyama
- Which of the following projects should be included in the GSP projected sustainable water budget?
  - Flood/Stormwater Capture
  - Forest/Rangeland Management
  - Precipitation Enhancement
- Should additional analysis of these projects be included in the GSP implementation plan?
- Staff recommendation: include all of the above projects in both the GSP water budget and implementation plan

WOODARD &CURRAN

TO: Board of Directors
Agenda Item No. 7eii

FROM: Lyndel Melton, Woodard & Curran (W&C)

DATE: March 6, 2019

SUBJECT: Direction on Pumping Allocation Approach

Issue
Direction on Pumping Allocation Approach

Recommended Motion
None – information only.

Discussion
An update on the pumping allocation approach is provided as Attachment 1.

Cuyama Basin Groundwater Sustainability Agency

Projects and Management Actions

March 6, 2019

WOODARD &CURRAN

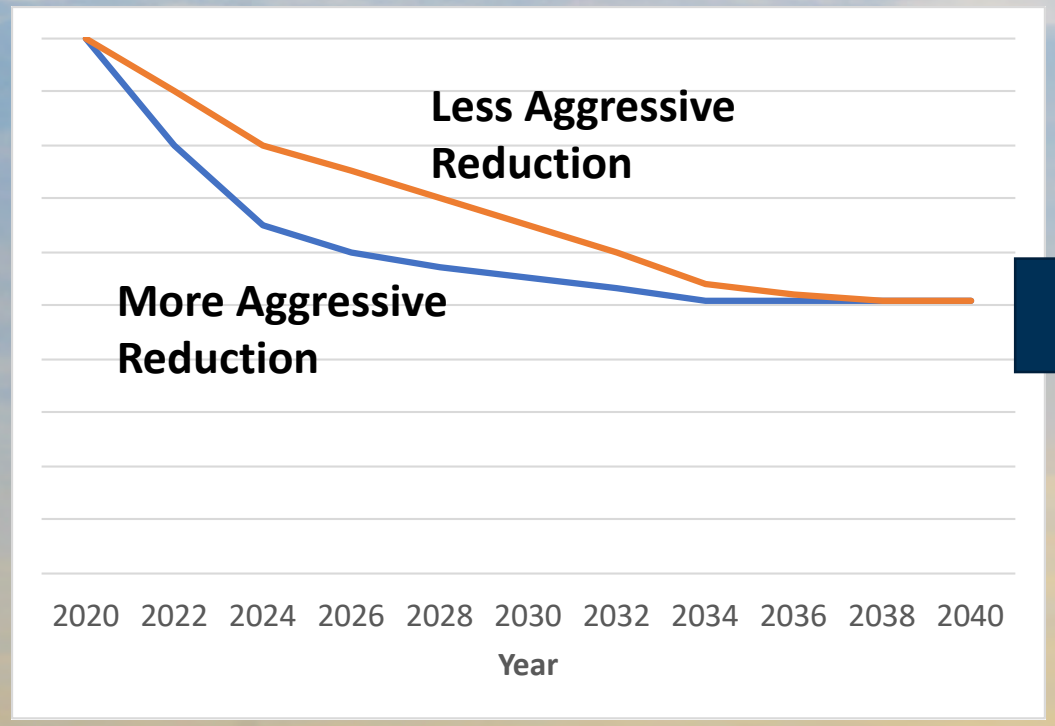
Demand Management/Allocation Approach

- Under SGMA, GSAs have authority to establish groundwater extraction allocations
- SGMA and GSPs adopted under SGMA cannot alter water rights
- Potential components of a demand management approach:
  - Pumping restrictions/allocations
    - Water accounting
    - Water metering
  - Water market
  - Fees
    - By pumping amount or acreage

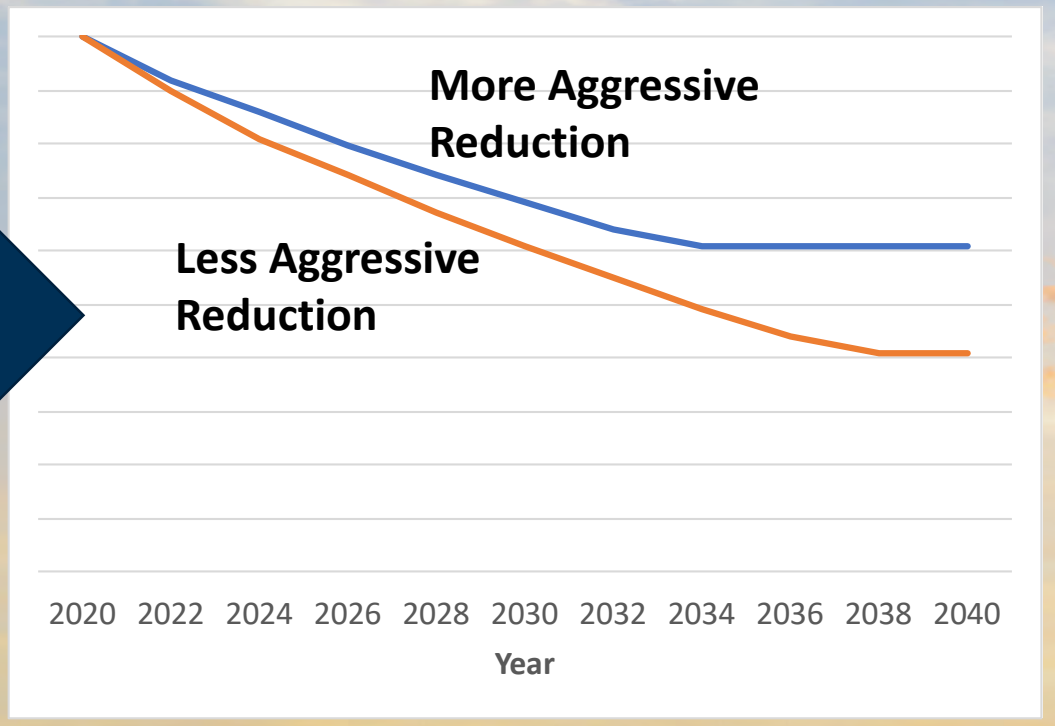
WOODARD &CURRAN

Example Glide Paths

Future Groundwater Pumping Reduction



Future Change in Groundwater Levels



WOODARD &CURRAN

Examples of Allocation Methods

Method	Description	Advantages	Disadvantages
Pro Rata Allocation per Overlying Acre	Divides available groundwater proportional to property size	● Recognizes correlative nature of groundwater rights ● Simple approach in calculation	● Creates inequities for those who have invested in use of groundwater ● Ignores legal limitations on use
Pro Rata Allocation per Irrigated Overlying Acre	Allocates each irrigated acre a specific quantity of groundwater	● Acknowledges existing pumping ● Simple approach in calculation	● Does not consider unexercised groundwater rights ● Does not recognize historic use ● Ignores legal limitations on use
Allocation Based on Fraction of Historic Pumping	Allocates water based on historic groundwater use	● Potential to reduce conflict among existing pumpers	● Requires data re historic use ● Ignores correlative nature of groundwater rights
Hybrid	Applies above methods differently in different parts of the Basin	● Provides greatest flexibility	● Additional complexity due to lack of consistency across Basin

Board Direction on Demand Management/Allocation Approach

- Which allocation approach should be used?
- Staff recommendation:
  - Hybrid approach:
    - Allocation per irrigated acre within the area influencing overdraft in the Central region
    - Historical use allocation for the CCSD
    - Include a mechanism for adding in un-irrigated acres within the area influencing Central region overdraft that may want to use their groundwater rights
    - No restrictions for users outside the management areas

WOODARD &CURRAN

TO: Board of Directors
Agenda Item No. 7f

FROM: Lyndel Melton, Woodard & Curran (W&C)

DATE: March 6, 2019

SUBJECT: Direction on Implementation Plan

Issue
Direction on Implementation Plan.

Recommended Motion
None – information only.

Discussion
An update on Implementation Plan is provided as Attachment 1.

Cuyama Basin Groundwater Sustainability Agency

Board Direction on Implementation Plan

March 6, 2019

WOODARD &CURRAN

Key Implementation Plan Components

- Detailed analysis of potential projects/actions
- Implementation schedule for management actions and projects
- Establishment of Monitoring Program
  - Coordination with monitoring entities
  - Agreements with local landowners
- Data Collection and Analysis
  - Water levels, water quality, subsidence
- Annual reporting
- GSP Five-year Update
  - Re-evaluation of thresholds
  - Review/update of numerical model
- Ongoing GSA Administration
  - Maintenance of DMS, website
  - Board/SAC meetings and other stakeholder outreach
- Financing Plan

WOODARD &CURRAN

Conceptual Project Implementation Timeline

Conceptual GSP Implementation Timeline

Implementation will be phased over 20 years, with 5-year updates.

2020 2025 2030 2035 2040

Monitoring and Reporting	Preparation for Allocations and Low Capital Outlay Projects	Prepare for Sustainability	Implement Sustainable Operations
• Establish monitoring network • Install new wells	• **GSA conducts 5-year evaluation/update** • Monitoring and reporting continues • Evaluate/refine thresholds and monitoring network • Refine water budget	• **GSA conducts 5-year evaluation/update** • Monitoring and reporting continues • Evaluate/refine thresholds and monitoring network • Refine water budget	• **GSA conducts 5-year evaluation/update** • Monitoring and reporting continues • Evaluate/refine thresholds and monitoring network • Refine water budget
• Develop pumping monitoring program* • Set up and initiate pumping allocation program*	• Pumping monitoring program continues* • Continue implementation of pumping allocation program*	• Pumping monitoring program continues* • Continue implementation of pumping allocation program*	• Pumping monitoring program continues* • Pumping allocation program fully implemented*
• Project analysis and feasibility	• Plan/design/construct small to medium sized projects*	• Plan/design/construct larger projects*	• Project implementation completed*
• Extensive public outreach	• Outreach continues	• Outreach continues	• Outreach continues

***Potential management area specific implementation**

WOODARD &CURRAN

Financing Plan Elements

Basin - Wide

- GSA Admin
- Monitoring
- Reporting
- GSP Updates

By Management Area

- Management Actions
- Water Supply Projects

By Beneficiary

- New Wells

Funding Mechanisms

- Pumping Fees
- Assessments
- Grants & Loans

WOODARD &CURRAN

TO: Board of Directors
Agenda Item No. 7g

FROM: Charles Gardiner, Catalyst Group

DATE: March 6, 2019

SUBJECT: Stakeholder Engagement Update

Issue

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.

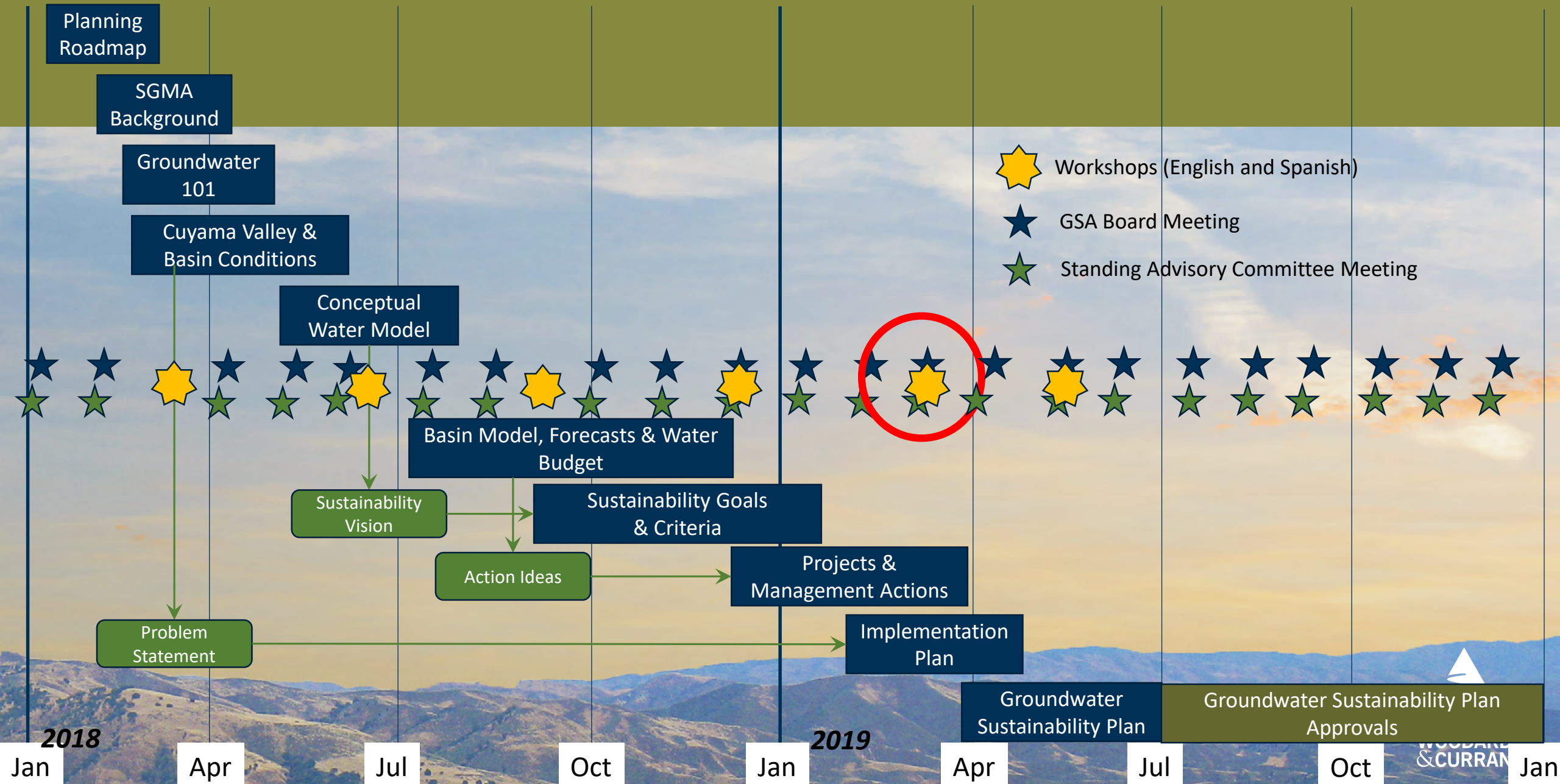
Cuyama Basin Groundwater Sustainability Agency

Groundwater Sustainability Plan Stakeholder Engagement Update

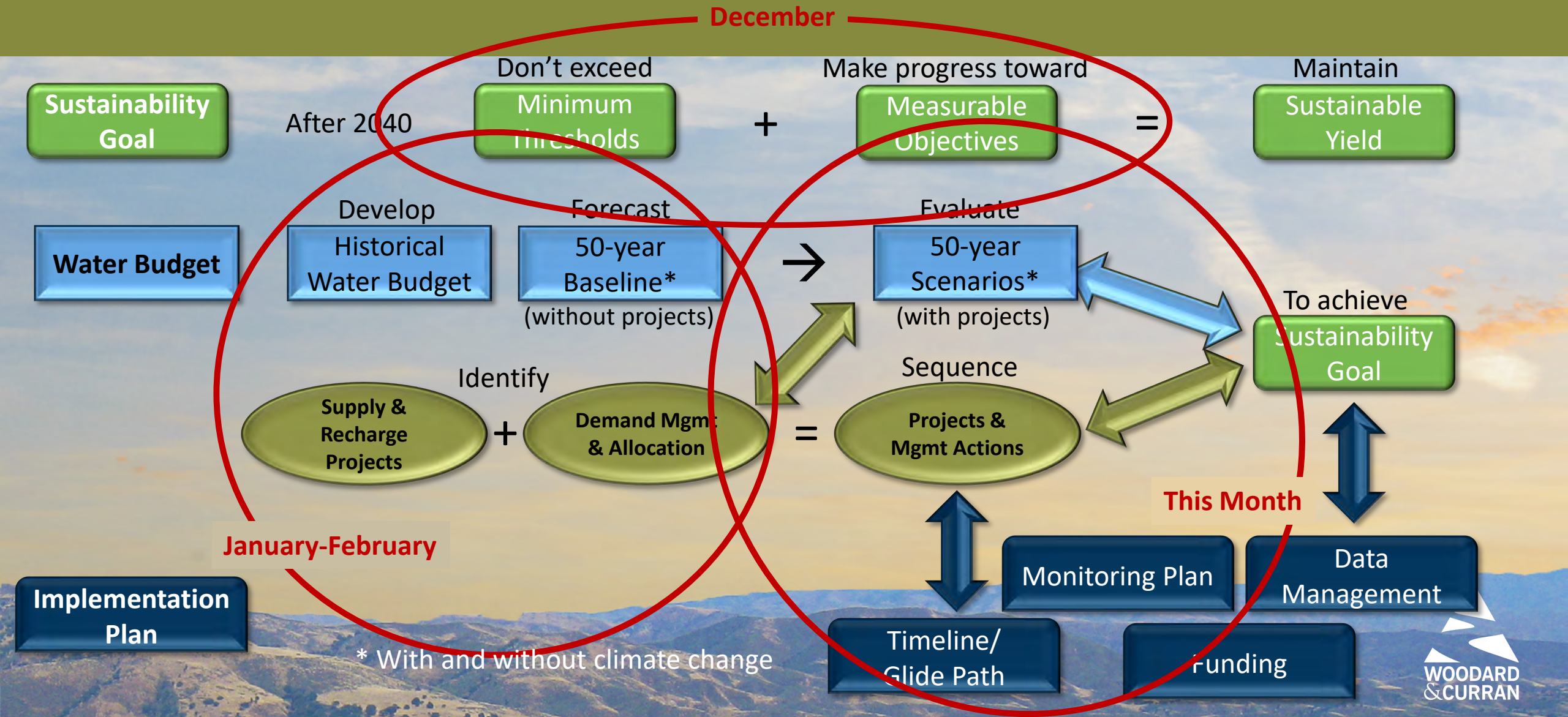
March 6, 2019

WOODARD &CURRAN

Cuyama Basin Groundwater Sustainability Plan – Planning Roadmap



GSP Discussion Approach & Terminology



Update on Outreach Activities

- Community Workshops Wednesday, March 6, 2019
  - Update on Water Budget and Numerical Model
  - Projects and Management Actions
  - Implementation Plan
  - Discussion and input: Understanding and concurrence on projects, management actions, and implementation schedule

- Notification
  - GSA Newsletter – email Jan 22 and Rec Center Newsletter Feb 1
  - CBGSA email notice – Feb 5
  - Postcard – Feb 8
  - Volunteer hand distribution – Feb 6 through Mar 5
  - SLO County email – Feb
  - CBGSA reminder email – Feb 27

WOODARD &CURRAN

TO: Board of Directors
Agenda Item No. 8b

FROM: Jim Beck, Executive Director

DATE: March 6, 2019

SUBJECT: Progress & Next Steps

Issue
Report on the progress and next steps for Cuyama Basin Groundwater Sustainability Agency activities.

Recommended Motion
None – information only.

Discussion
A presentation on the progress and next steps for Cuyama Basin Groundwater Sustainability Agency activities is provided as Attachment 1.

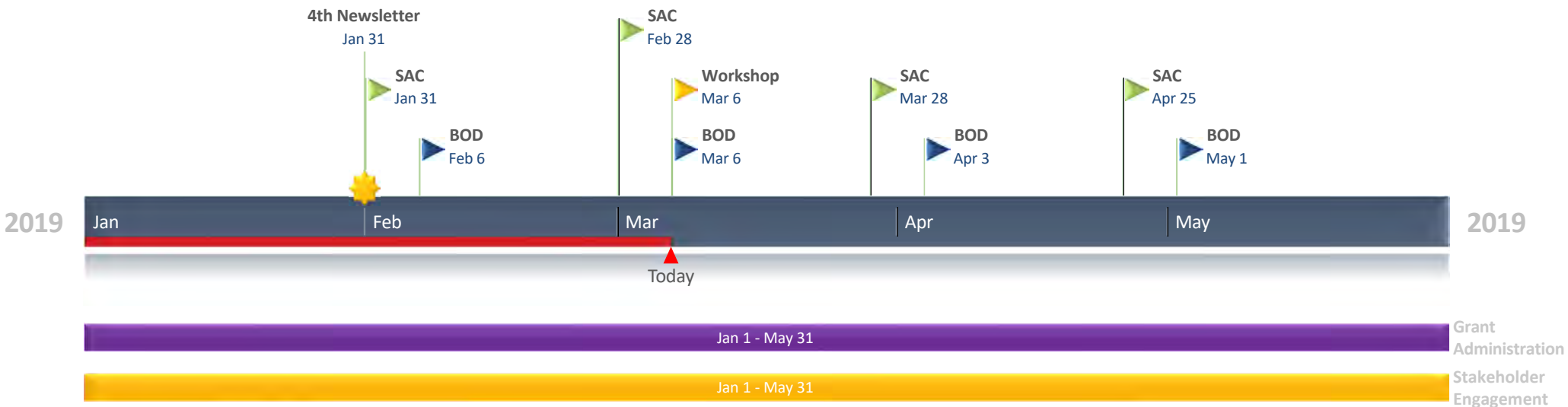
Cuyama Basin Groundwater Sustainability Agency

Progress & Next Steps

March 6, 2019

Cuyama Basin Groundwater Sustainability Agency

Near-Term Schedule



Jan 2019 Accomplishments & Next Steps

Accomplishments

- ✓ Distributed form 700s
- ✓ Processed initial insurance application
- ✓ Updated the cashflow
- ✓ Strategized with the team on upcoming presentation topics

Next Steps

- Participate in grant admin kick-off meeting
- Determine audit frequency
- Draft FY 2019-20 budget

TO: Board of Directors
Agenda Item No. 9a

FROM: Taylor Blakslee, Hallmark Group

DATE: March 6, 2019

SUBJECT: Financial Management Overview

Issue
Overview of the financial management for Cuyama Basin Groundwater Sustainability Agency activities.

Recommended Motion
None – information only.

Discussion
A presentation on the financial management for Cuyama Basin Groundwater Sustainability Agency activities is provided as Attachment 1.

Cuyama Basin Groundwater Sustainability Agency

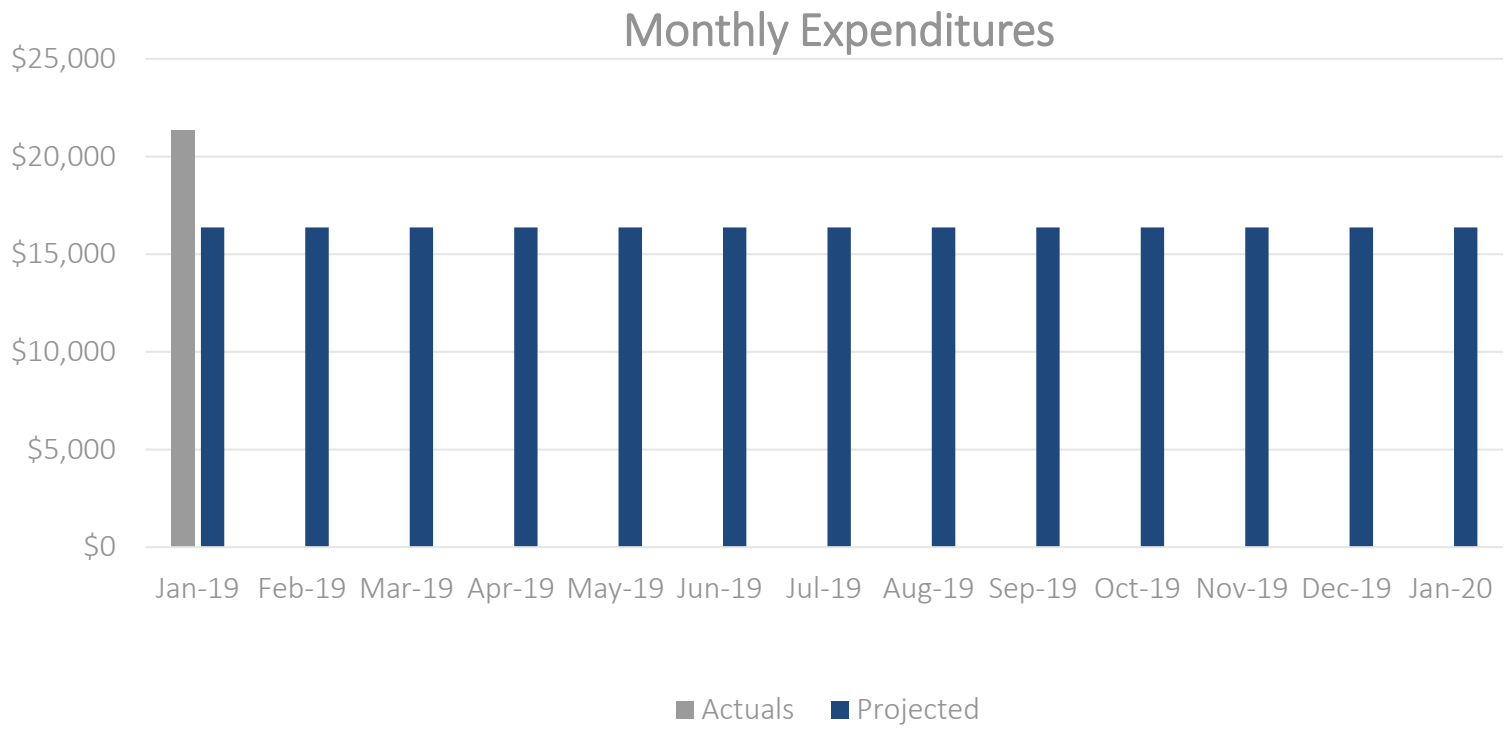
Financial Report

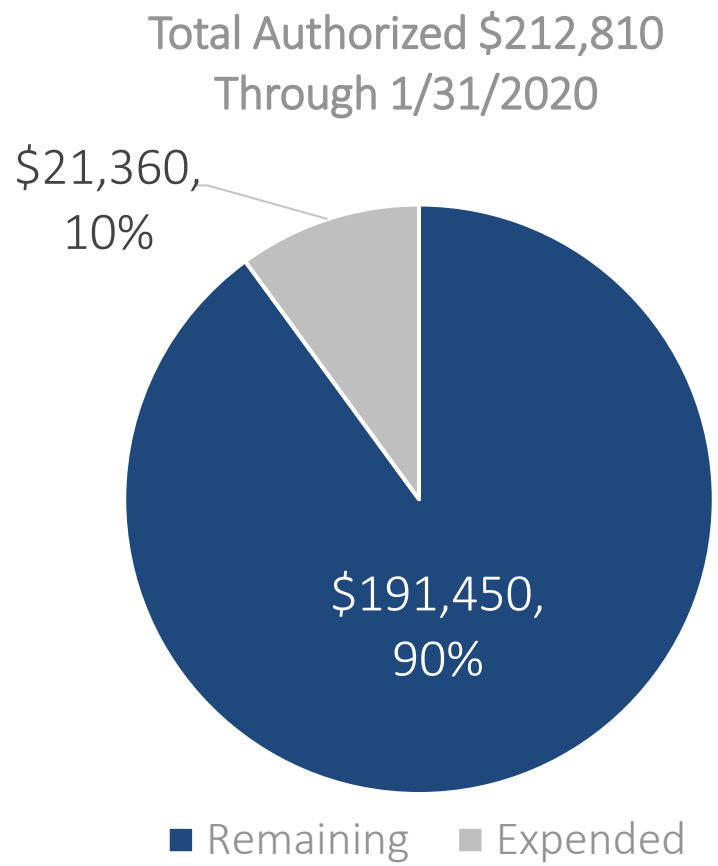
March 6, 2019

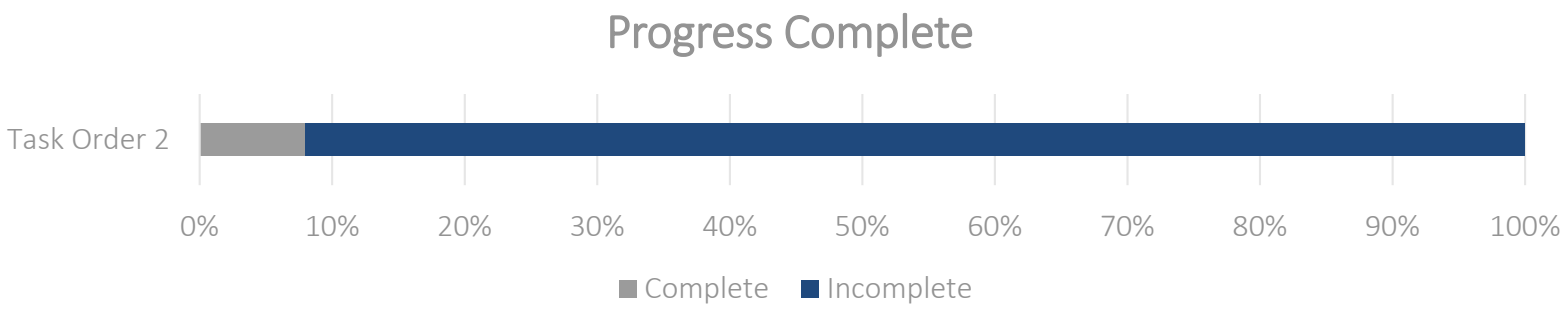
CBGSA OUTSTANDING INVOICES

Task	Invoiced Through	Cumulative Total
Legal Counsel	1/21/2019	$24,560.00
Executive Director	1/31/2019	$132,612.00
GSP Development	1/25/2019	$1,029,692.00
TOTAL		$1,186,864.00

Executive Director Task Order 3

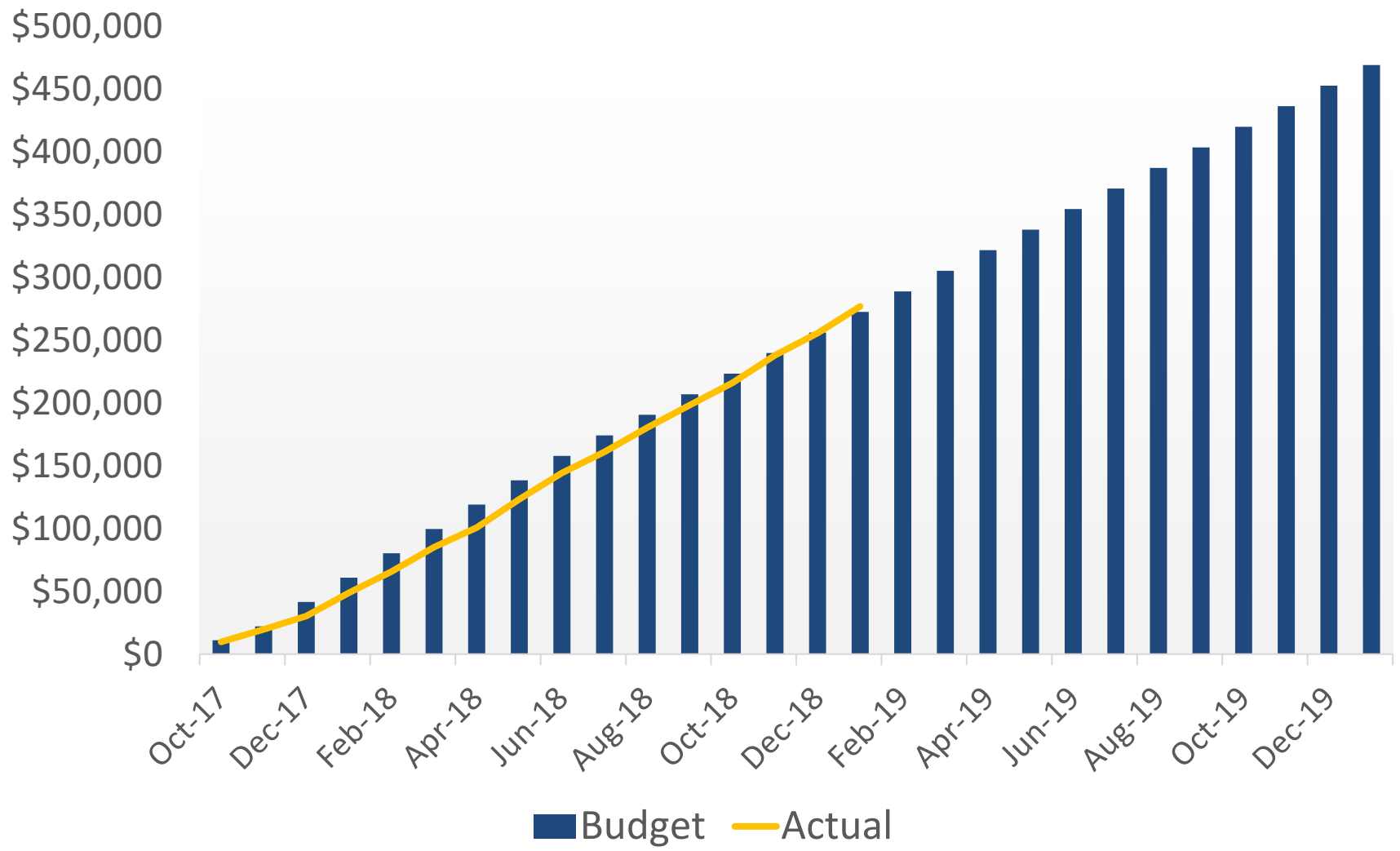




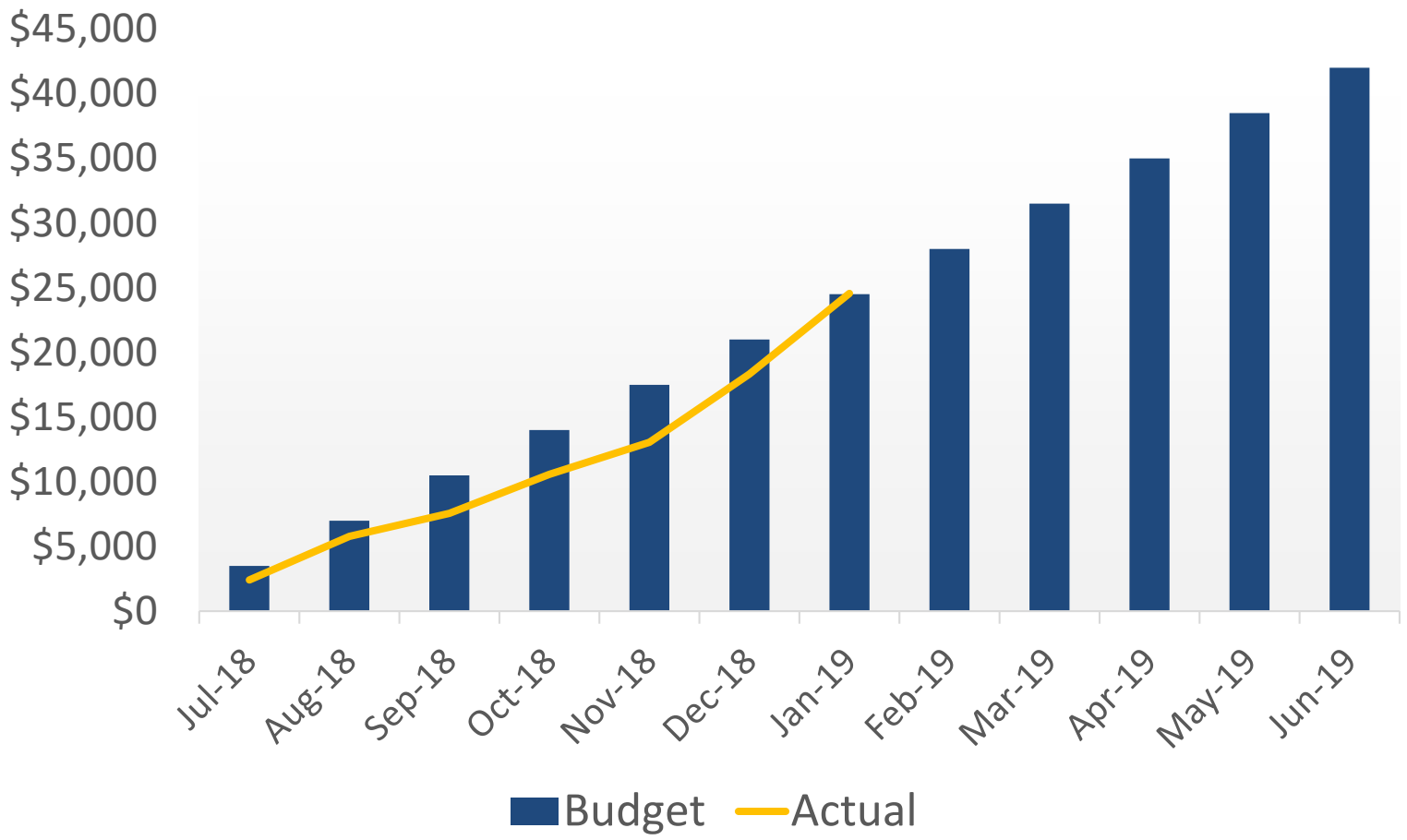


HALLMARK GROUP Capital Program Management

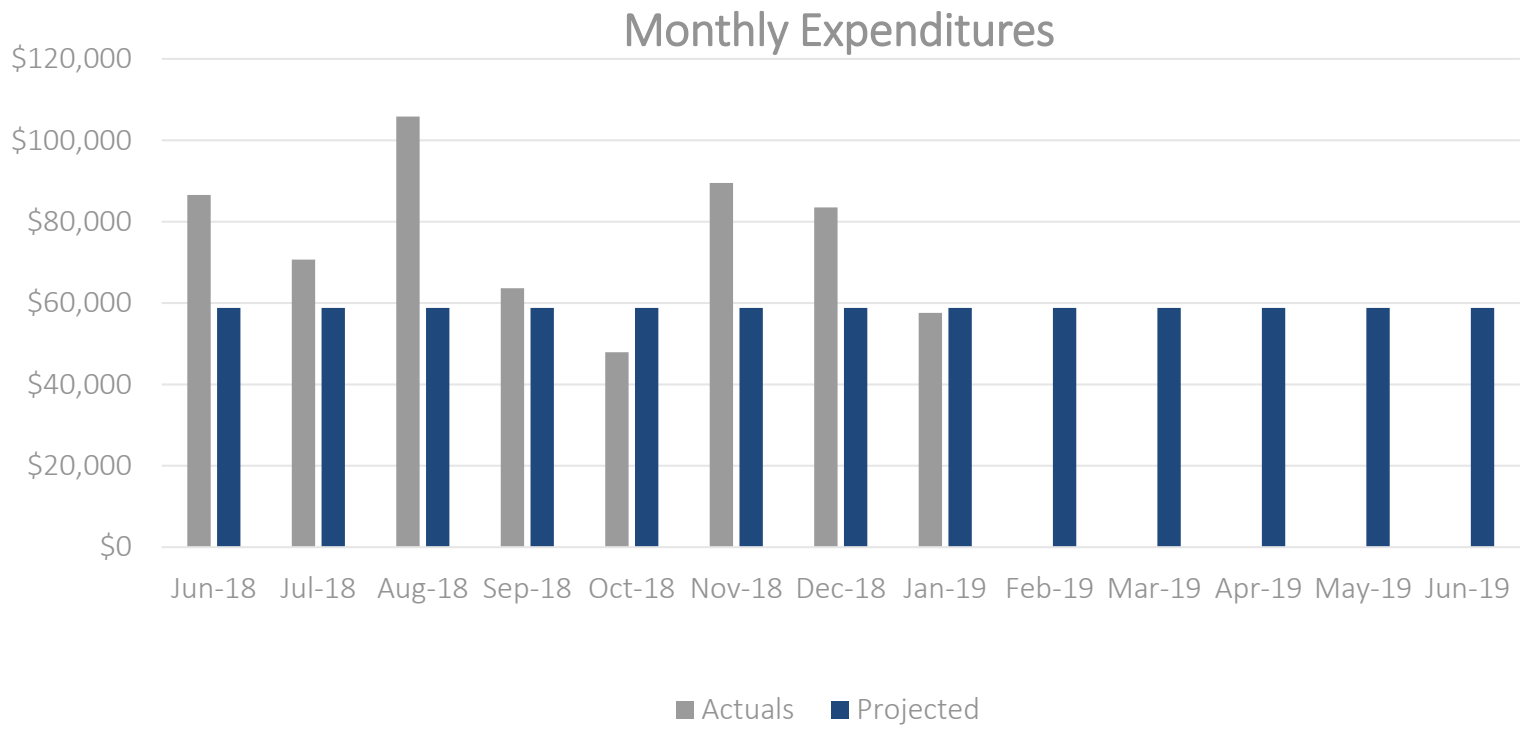
Task Order Nos. 1-3: Budget to Actual

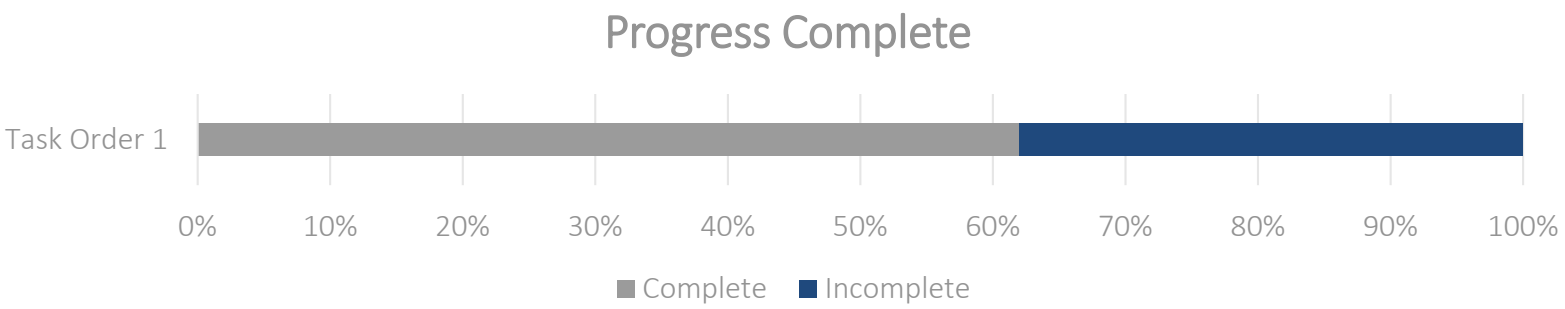


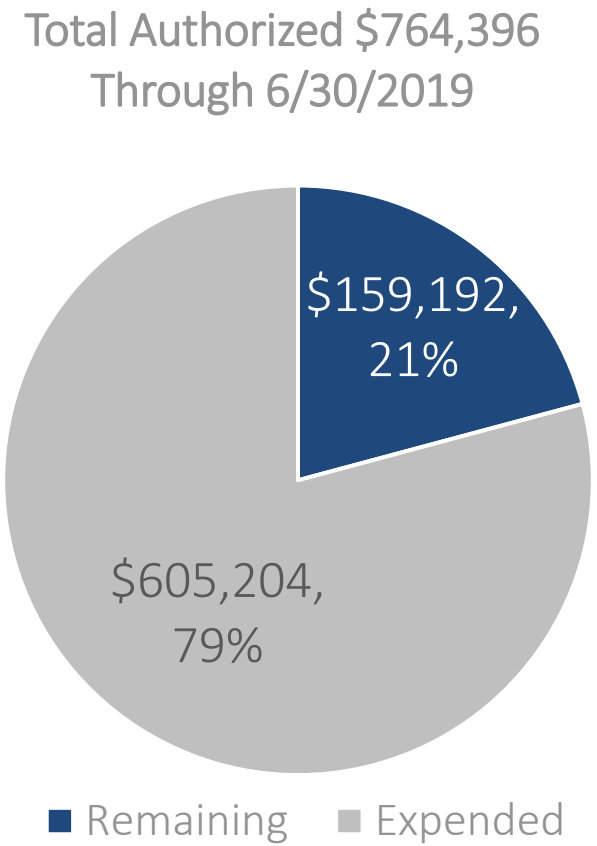
Legal Counsel: Budget to Actual (FY 18-19)



GSP Development Task Order 4

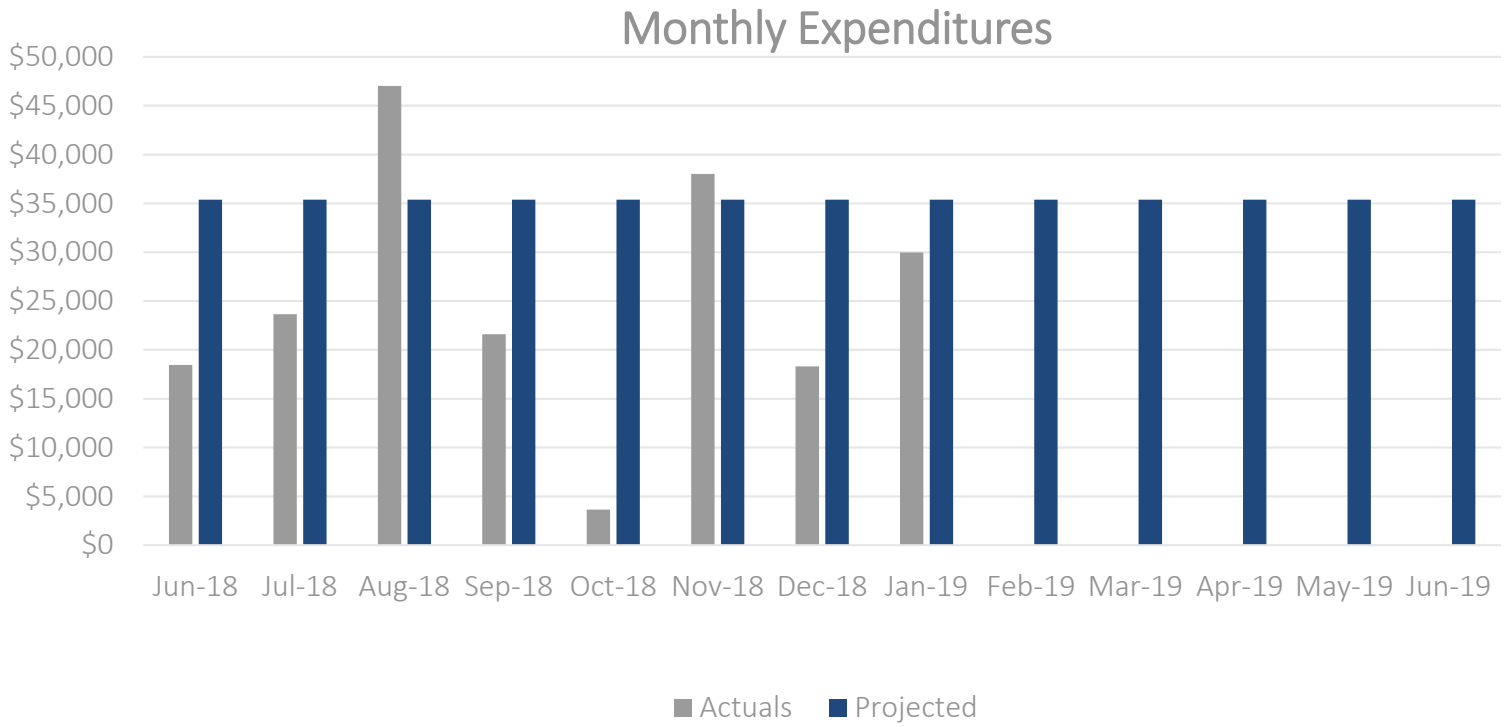


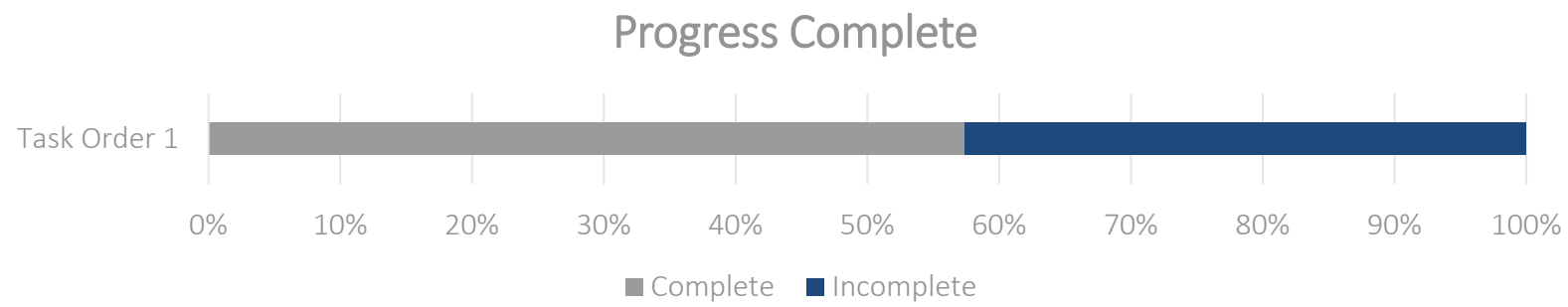


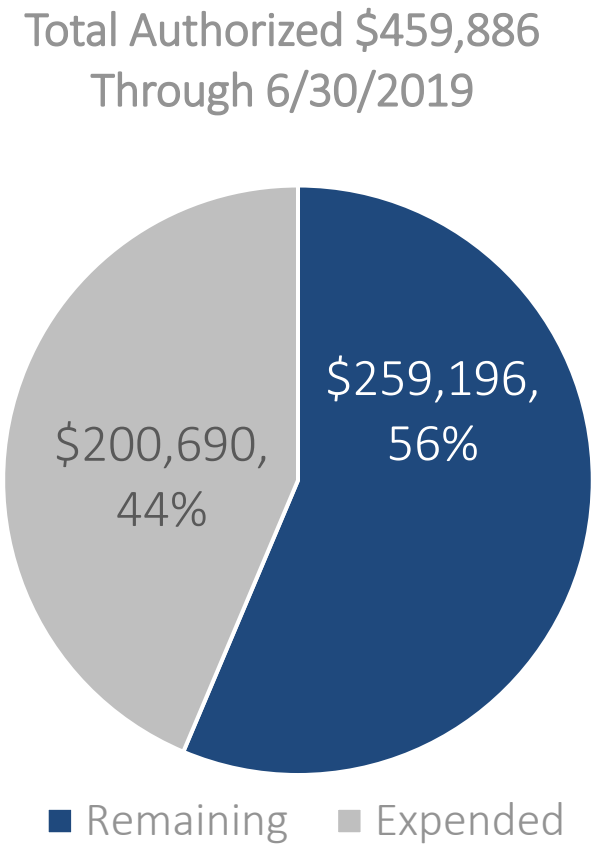


HALLMARK GROUP Capital Program Management

GSP Development Task Order 5

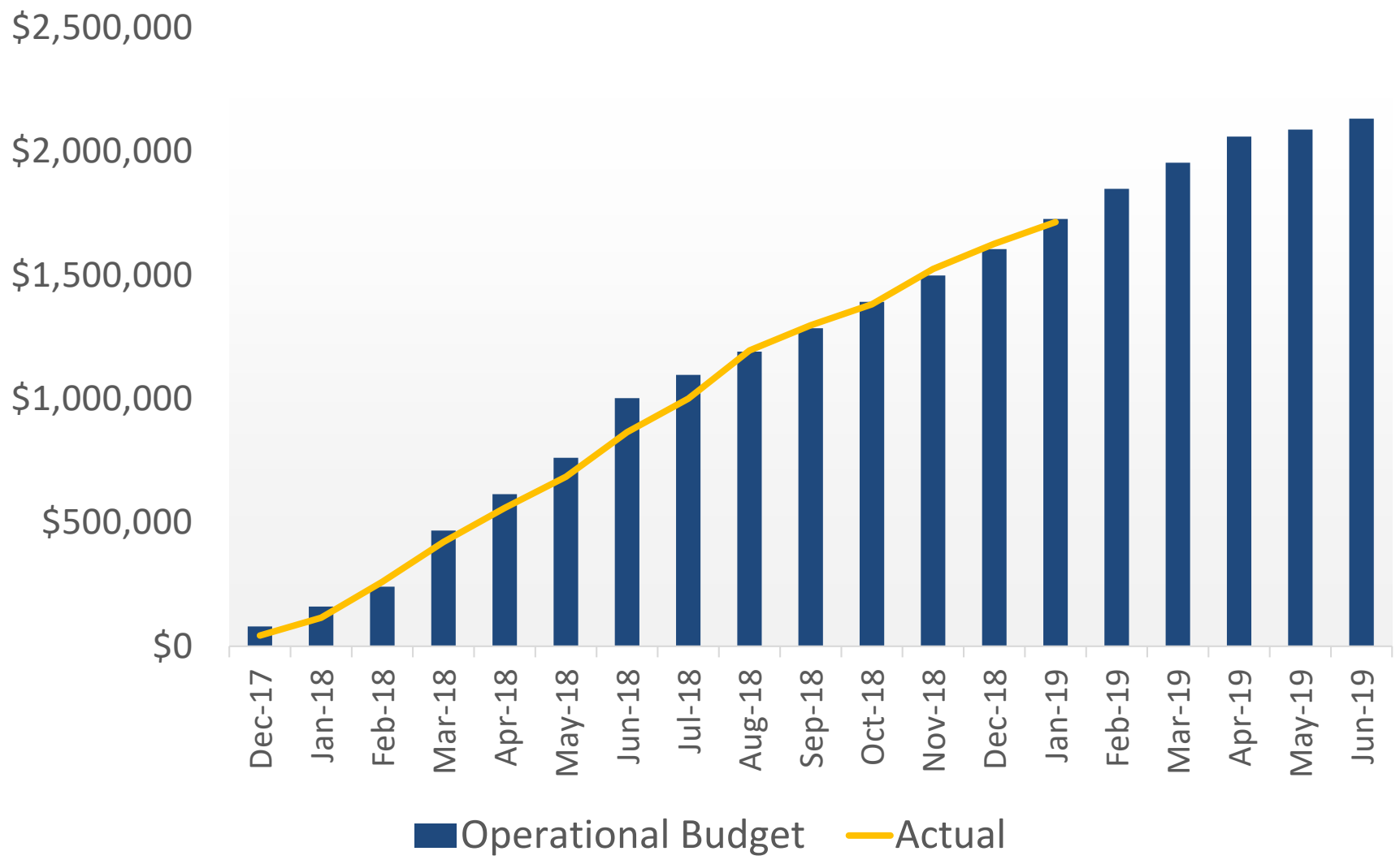






HALLMARK GROUP Capital Program Management

W&C Budget - Operational



TO: Board of Directors
Agenda Item No. 9c

FROM: Taylor Blakslee, Hallmark Group

DATE: March 6, 2019

SUBJECT: Financial Report

Issue
Financial Report

Recommended Motion
None – information only.

Discussion
The Cuyama Basin Groundwater Sustainability Agency's financial report is provided as Attachment 1.

The report includes:

- Statement of Financial Position, *as of January 31, 2019*
- Receipts and Disbursements, *as of January 31, 2019*
- A/R Aging Summary, *as of January 31, 2019*
- A/P Aging Summary, *as of January 31, 2019*
- Statement of Operations with Budget Variance, *July 2018 through January 2019*
- 2018/2019 Operational Budget, *July 2018 through June 2019*

Attachment 1

CUYAMA BASIN GSA

JANUARY 31, 2019

FINANCIAL STATEMENTS

To The Board of Directors
Cuyama Basin GSA

The enclosed financial report for the period ended January 31, 2019 includes an adjustment to previously issued financial reports. An assessment invoice to Santa Barbara County Water Agency (SBCWA) totaling $8,319 dated September 2018 was adjusted to $21,670 and re-dated for November 2018 at the request of SBCWA; pursuant to the agreement between SBCWA and DWR.

CUYAMA BASIN GSA
Statement of Financial Position
As of January 31, 2019

	Jan 31, 19
ASSETS	
Current Assets	
Checking/Savings	
Chase - General Checking	31,353
Total Checking/Savings	31,353
Accounts Receivable	
Accounts Receivable	90,838
Total Accounts Receivable	90,838
Total Current Assets	122,190
TOTAL ASSETS	**122,190**
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Accounts Payable	
Accounts Payable	1,186,864
Total Accounts Payable	1,186,864
Total Current Liabilities	1,186,864
Total Liabilities	1,186,864
Equity	
Unrestricted Net Assets	-110,130
Net Income	-954,543
Total Equity	-1,064,673
TOTAL LIABILITIES & EQUITY	**122,190**

CUYAMA BASIN GSA
Receipts and Disbursements
As of January 31, 2019

Type	Date	Num	Name	Debit	Credit
Chase - General Checking					
Payment	07/02/2018	11366440	County of Kern	38,567.66	
Payment	07/05/2018	1001819148	County of Ventura	18,451.08	
Payment	07/05/2018	1039	Cuyama Basin Water District	387,307.44	
Payment	07/09/2018	9706702	Santa Barbara County Water Agency	56,306.25	
Payment	07/16/2018	10575	Cuyama Community Services District	3,251.50	
Bill Pmt -Check	07/18/2018	1006	HGCPM, Inc.		80,730.24
Bill Pmt -Check	07/18/2018	1007	Klein, DeNatale, Goldner		18,598.06
Bill Pmt -Check	07/18/2018	1008	Woodard & Curran		394,461.11
Payment	08/31/2018	10615	Cuyama Community Services District	2,982.30	
Check	09/30/2018	Fees	Chase Bank		95.00
Check	10/31/2018	Fees	Chase Bank		95.00
Check	11/30/2018	Fees	Chase Bank		95.00
Check	12/13/2018	1009	Santa Barbara County Water Agency		3,718.75
Check	12/31/2018	Fees	Chase Bank		95.00
Check	01/31/2019	Fees	Chase Bank		95.00
Total Chase - General Checking				506,866.23	497,983.16
TOTAL				**506,866.23**	**497,983.16**

CUYAMA BASIN GSA
A/R Aging Summary
As of January 31, 2019

	Current	1 - 30	31 - 60	61 - 90	> 90	TOTAL
County of San Luis Obispo	0	0	0	0	38,568	38,568
Santa Barbara County Water Agency	0	0	0	21,670	30,600	52,270
TOTAL	**0**	**0**	**0**	**21,670**	**69,168**	**90,838**

CUYAMA BASIN GSA
A/P Aging Summary
As of January 31, 2019

	Current	1 - 30	31 - 60	61 - 90	> 90	TOTAL
HGCPM, Inc.	21,360	17,497	22,081	17,662	54,012	132,613
Klein, DeNatale, Goldner	6,224	5,280	2,477	3,017	7,561	24,560
Woodard & Curran	87,544	101,806	227,619	0	612,722	1,029,692
TOTAL	**115,128**	**124,583**	**252,178**	**20,680**	**674,295**	**1,186,864**

CUYAMA BASIN GSA
Statement of Operations with Budget Variance
July 2018 through January 2019

	Jul '18 - Jan 19	Budget	$ Over Budget	% of Budget
Ordinary Income/Expense				
Income				
Direct Public Funds				
Grants	0	1,143,996	-1,143,996	0%
Participant Assessments	52,270	0	52,270	100%
Total Direct Public Funds	52,270	1,143,996	-1,091,726	5%
Total Income	52,270	1,143,996	-1,091,726	5%
Cost of Goods Sold				
Program Expenses				
Category/Component 1				
Monitoring/AMP Implementation	265,068	277,731	-12,663	95%
Grant Administration	0	5,824	-5,824	0%
Total Category/Component 1	265,068	283,555	-18,487	93%
Category/Component 2				
GSP Development	584,098	522,133	61,965	112%
Grant Administration	0	11,304	-11,304	0%
Total Category/Component 2	584,098	533,437	50,661	109%
Total Program Expenses	849,166	816,992	32,174	104%
Total COGS	849,166	816,992	32,174	104%
Gross Profit	-796,896	327,004	-1,123,900	-244%
Expense				
Administration and Operation				
Administrative Overhead				
Bank Service Fees	475	0	475	100%
General Liability Insurance	0	12,108	-12,108	0%
Legal	24,560	24,500	60	100%
Other Admin Expense	0	1,165	-1,165	0%
Postage and Mailing Services	0	11,500	-11,500	0%
Travel, Conferences, Trainings	0	2,915	-2,915	0%
Total Administrative Overhead	25,035	52,188	-27,153	48%
Administration of GSA				
Executive Director				
GSA BOD Meetings	74,700	30,450	44,250	245%
Consult Mgmt and GSP Devel	20,613	25,550	-4,938	81%
Financial Information Coor	10,250	5,950	4,300	172%
CBGSA Outreach	6,538	15,400	-8,863	42%
Budget Devel and Admin	125	0	125	100%
Outreach Facilitation	7,150	9,450	-2,300	76%
Financial Management	9,225	20,040	-10,815	46%
Travel and Direct Costs	4,013	1,645	2,368	244%
Total Executive Director	132,613	108,485	24,128	122%
Total Administration of GSA	132,613	108,485	24,128	122%
Total Administration and Operation	157,647	160,673	-3,026	98%
Total Expense	157,647	160,673	-3,026	98%
Net Ordinary Income	-954,543	166,331	-1,120,874	-574%
Net Income	**-954,543**	**166,331**	**-1,120,874**	**-574%**

CUYAMA BASIN GSA
2018/2019 Operational Budget
July 2018 through June 2019

	Jul '18 - Jun 19
Ordinary Income/Expense	
Income	
Direct Public Funds	
Grants	1,966,858
Total Direct Public Funds	1,966,858
Total Income	1,966,858
Cost of Goods Sold	
Program Expenses	
Category/Component 1	
Monitoring/AMP Implementation	472,989
Grant Administration	13,104
Total Category/Component 1	486,093
Category/Component 2	
GSP Development	889,032
Grant Administration	25,434
Total Category/Component 2	914,466
Total Program Expenses	1,400,559
Total COGS	1,400,559
Gross Profit	566,299
Expense	
Administration and Operation	
Administrative Overhead	
General Liability Insurance	12,108
Legal	42,000
Other Admin Expense	2,000
Postage and Mailing Services	20,000
Travel, Conferences, Trainings	5,000
Total Administrative Overhead	81,108
Administration of GSA	
Executive Director	
GSA BOD Meetings	52,200
Consult Mgmt and GSP Devel	43,800
Financial Information Coor	10,200
CBGSA Outreach	26,400
Budget Devel and Admin	6,700
Outreach Facilitation	16,200
Financial Management	38,120
Travel and Direct Costs	2,820
Total Executive Director	196,440
Total Administration of GSA	196,440
Total Administration and Operation	277,548
Total Expense	277,548
Net Ordinary Income	288,751
Net Income	**288,751**

TO: Board of Directors
Agenda Item No. 9d

FROM: Jim Beck, Executive Director

DATE: March 6, 2019

SUBJECT: Payment of Bills

Issue

Consider approving the payment of bills for January 2019 and renewal of a California Association of Mutual Water Companies membership.

Recommended Motion

Approve payment of the bills through the month of January 2019 in the amount of $124,542.96 and renew membership in the California Association of Mutual Water Companies.

Discussion

Consultant invoices for the month of January 2019 are provided as Attachment 1. Also included is a invoice from Walter Mortensen Insurance / INSURICA in the amount of $9,315.00 for continued insurance coverage starting April 1, 2019. To qualify for this insurance policy a California Association of Mutual Water Companies (CAMWC) membership is required. The annual CAMWC membership fee is $100.00 and the invoice is attached for approval.

Attachment 1

WALTER MORTENSEN INSURANCE

INSURICA INSURANCE MANAGEMENT NETWORK ®

126 N. Main Street
Porterville, CA 93257
Phone: (559) 781-5200 Fax: (559) 781-3229
www.INSURICA.com

155.1

Cuyama Basin Ground Water Sustainability Agency
130 E. Victoria Ste. 200
Santa Barbara, CA 93101

Invoice # 160653	**2/28/2019**
Account Number	Insurance Agent
CUYABAS-01	Lloyd Turner
Balance Due On	Invoiced By
4/1/2019	MHERNANDEZ
Amount Paid	Amount Due
	$9,315.00

Excess Liability **Policy Number: JPAEXS-00223-02** **Effective: 04/01/2019 to 04/01/2020**

Trans Eff Date	Due Date	Trans	Description	Amount
Apr 1, 2019	04/01/2019	RPPR	4/1/2019 - 4/1/2020 Excess Liability Renewal	$1,529.00

General Liability **Policy Number: JPAPKG-00223-02** **Effective: 04/01/2019 to 04/01/2020**

Trans Eff Date	Due Date	Trans	Description	Amount
Apr 1, 2019	04/01/2019	RPPR	4/1/2019 - 4/1/2020 General Liability Renewal	$6,850.00
Apr 1, 2019	04/01/2019	FTOT	JPRIMA ADMINISTRATION FEES	$936.00

Total Invoice Balance: **$9,315.00**

Please make check payable to INSURICA

CALIFORNIA ASSOCIATION OF MUTUAL WATER COMPANIES
JOINT POWERS RISK AND INSURANCE MANAGEMENT AUTHORITY (JPRIMA)

COVERAGE PROPOSAL
Cuyama Basin Groundwater Sustainability Agency

COVERAGE PERIOD
4/1/2019 - 4/1/2020

PRESENTED BY:
Walter Mortensen Insurance

Insurance Administrator
www.alliedpublicrisk.com
Allied Community Insurance Services, LLC
CA License Number: 0L01269
National Producer Number: 17536322

PREMIUM SUMMARY

NOTE: This proposal is prepared from information supplied to us on the application submitted by you or insurance broker. It may or may not contain all terms requested on the application. Coverage is provided by the JPRIMA Memorandum of Coverage (MOC) and subject to its terms, exclusions, conditions and limitations. A specimen MOC is available for your review, as is the JPRIMA Member Agreement. Enrollment in the JPRIMA requires execution of the JPRIMA Member Agreement as well as membership in the California Association of Mutual Water Companies (Cal Mutuals).

PAGE	COVERAGE SECTION		PREMIUM
3-7	**SECTION 1. PROPERTY** (Property, Equipment Breakdown & Mobile Equipment)	$	N/A
8	**SECTION 2. COMMERCIAL CRIME**	$	N/A
9-10	**SECTION 3. COMMERCIAL GENERAL LIABILITY**	$	4,102.00
11	**SECTION 4. PUBLIC OFFICIALS & MANAGEMENT LIABILITY** (Wrongful Acts, Employment Practices & Employee Benefits, Privacy and Network Risk)	$	2,748.00
12	**SECTION 5. BUSINESS AUTO**	$	N/A
13	**SECTION 6. COMMERCIAL EXCESS LIABILITY**	$	1,529.00
	MEMBER CONTRIBUTION	$	8,379.00
	JPRIMA ADMINISTRATION FEES	$	936.00
	TOTAL AMOUNT DUE*	$	9,315.00
	*Payment is due within thirty (30) days of binding.		

NOTES:

The JPRIMA MOC has a common anniversary date of April 1, 2019.

Terrorism coverage is automatically included for Property and General Liability.

SECTION 1. PROPERTY*

***PROPERTY IS INCLUDED IN THE PROPOSAL: No**

ISSUER:

- California Association of Mutual Water Companies
  Joint Powers Risk and Insurance Management Authority (JPRIMA)
- No Joint and Several Liability for Members
- 100% Reinsured

REINSURER:

- Allied World Insurance Company or affiliate
- A XV (Excellent) A.M. Best Rating

FORM:

- Proprietary & Integrated

LIMITS:

Blanket Property: (Real Property & Business Personal Property)	**N/A**
Blanket Coverage Extension: A separate blanket limit that applies to the following coverages: Business Income, Extended Business Income, Commandeered Property, Civil Authority, Extra Expense, Tenant Leasehold Interest, Electronic Data, Preservation of Property.	**N/A**
Equipment Breakdown / Boiler & Machinery:	**Not Included**
Mobile Equipment (scheduled)**:**	**N/A**
Mobile Equipment (unscheduled, maximum $10,000 any one item)**:**	**N/A**
Mobile Equipment (borrowed, rented & leased)**:**	**N/A**
Flood Zone X: (shaded/unshaded)	**N/A**

DEDUCTIBLES:

N/A	Property
N/A	Mobile Equipment
N/**A**	Equipment Breakdown (aboveground & less than 50 feet belowground)
N/A	Equipment Breakdown (greater than 50 feet belowground)
N/A	Flood Zone X (per occurrence)

COVERAGE HIGHLIGHTS:

- Blanket Property Limits & Blanket Coverage Extension Limits
- No Coinsurance Penalty
- Equipment Breakdown
- Foundations as Covered Property

VALUATION:

- Replacement Cost: Real Property & Business Personal Property
- Actual Cash Value: Mobile Equipment
- Actual Loss Sustained: Loss of Income & Expenses
- Market Price: Fine Arts

KEY EXCLUSIONS:

- Earthquake & Earth Movement
- Flood (unless coverage is designated above, such coverage would be limited to locations in Zone X only)

SPECIAL COVERAGES:

- **New Locations or Newly Constructed Property:**
  Pays up to $1,000,000 for your new real property while being built on or off described premises as well as real property you acquire, lease or operate at locations other than the described premises; and business personal property located at new premises.

- **Utility Services – Direct Damage, Business Income & Expense:**
  Pays up to $250,000 for covered property damaged by an interruption in utility service to the described premises. The interruption in utility service must result from direct physical loss or damage by a Covered Cause of Loss and does not apply to loss or damage to electronic data, including destruction or corruption of electronic data. Separate limits apply to Direct Damage and Business Income/Expense.

- **Pollution Remediation Expenses:**
  Pays up to $100,000 or $250,000 for remediation expenses resulting from a Covered Causes of Loss or Specified Cause of Loss occurring during the coverage period and reported within 180 days. Covered Causes of Loss means risks of direct physical loss unless the loss is excluded or limited by the Property Coverage Form. Specified Cause of Loss means the following: fire; lightning; explosion; windstorm or hail; smoke; aircraft or vehicles; riot or civil commotion; vandalism; leakage from fire extinguishing equipment; sinkhole collapse; volcanic action; falling objects; weight of snow; ice or sleet; water damage; and equipment breakdown.

- **SCADA Upgrades:**
  Pays up to $100,000 to upgrade your scheduled SCADA system after direct physical loss from a Covered Cause of Loss. The upgrade is in addition to its replacement cost. SCADA means the Supervisory Control and Data Acquisition system used in water and wastewater treatment and distribution to monitor leaks, waterflow, water analysis, and other measurable items necessary to maintain operations.

- **Contract Penalties:**
  Pays up to $100,000 for contract penalties you are required to pay due to your failure to deliver your product according to contract terms solely as a result of direct physical loss or damage by a Covered Cause of Loss to Covered Property.

- **Contamination:**
  Pays up to $250,000 for loss or damage to covered property because of contamination as a result of a Covered Cause of Loss. Contamination means direct damage to real property and business personal property caused by contact or mixture with ammonia, chlorine, or any chemical used in the water and / or wastewater treatment process.

- **Property In Transit:**
  Pays up to $100,000 for direct physical loss or damage to covered property while in transit more than 1000 feet from the described premises. Shipments by mail must be registered for covered to apply. Electronic data processing property and fine arts are excluded.

- **Unintentional Errors:**
  Pays up to $250,000 for any unintentional error or omission you make in determining or reporting values or in describing the covered property or covered locations.

KEY DEFINITIONS

- **Real Property:**
  The buildings, items or structures described in the Declarations that you own or that you have leased or rented from others in which you have an insurable interest. This includes:
  - Aboveground piping;
  - Aboveground and belowground penstock;
  - Additions under construction;
  - Alterations and repairs to the buildings or structures;
  - Buildings;
  - Business personal property owned by you that is used to maintain or service the real property or structure or its premises, including fire-extinguishing equipment; outdoor furniture, floor coverings and appliances used for refrigerating, ventilating, cooking, dishwashing or laundering;
  - Completed additions;
  - Exterior signs, meaning neon, automatic, mechanical, electric or other signs either attached to the outside of a building or structure, or standing free in the open;
  - Fixtures, including outdoor fixtures;
  - Foundations;
  - Glass which is part of a building or structure;
  - Light standards;
  - Materials, equipment, supplies and temporary structures you own or for which you are responsible, on the premises or in the open (including property inside vehicles) within 1000 feet of the premises, used for making additions, alterations or repairs to buildings or structures at the premises;
  - Paved surfaces such as sidewalks, patios or parking lots;
  - Permanently installed machinery and equipment;
  - Permanent storage tanks;
  - Solar panels;
  - Submersible pumps, pump motors and engines;
  - Underground piping located on or within 100 feet of premises described in the Declarations;
  - Underground vaults and machinery.

- **Business Personal Property:**
  The property you own that is used in your business including:
  - Furniture and fixtures;
  - Machinery and equipment;
  - Computer equipment;
  - Communication equipment;
  - Labor materials or services furnished or arranged by you on personal property of others;
  - Stock;
  - Your use interest as tenant in improvements and betterments.
  - Leased personal property for which you have a contractual responsibility to insure.

- **Pollution Conditions:**
  The discharge, dispersal, release, seepage, migration, or escape of any solid, liquid, gaseous or thermal irritant or contaminant, including smoke, vapor, soot, fumes, acids, alkalis, chemicals, minerals, chemical elements and waste. Waste includes materials to be recycled, reconditioned or reclaimed.

KEY DEFINITIONS *(continued)*

- **Remediation Expenses:**
  Expenses incurred for or in connection with the investigation, monitoring, removal, disposal, treatment, or neutralization of pollution conditions to the extent required by: (1) Federal, state or local laws, regulations or statutes, or any subsequent amendments thereof enacted to address pollution conditions; and (2) a legally executed state voluntary program governing the cleanup of "pollution conditions."

- **Outdoor Property:**
  Fixed or permanent structures that are outside covered real property including but not limited to:
  - Historical markers or flagpoles;
  - Sirens, antennas, towers, satellite dishes, or similar structures and their associated equipment;
  - Exterior signs not located at a premises;
  - Fences or retaining walls;
  - Storage sheds, garages, pavilions or other similar buildings or structures not located at a premises;
  - Dumpsters, concrete trash containers, or permanent recycling bins; or
  - Hydrants.

- **Equipment Breakdown:**
  Direct damage to mechanical, electrical or pressure systems as follows:
  - Mechanical breakdown including rupture or bursting caused by centrifugal force;
  - Artificially generated electrical current, including electrical arcing, that disturbs electrical devices, appliances or wires;
  - Explosion of steam boilers, steam piping, steam engines or steam turbines owned or leased by you, or operated under your control;
  - Loss or damage to steam boilers, steam pipes, steam engines or steam turbines; or
  - Loss or damage to hot water boilers or other water heating equipment;
  - If covered electrical equipment requires drying out as a result of a flood, we will pay for the direct expenses for such drying out.
  - None of the following are covered objects as respects to equipment breakdown:
    a. Insulating or refractory material;
    b. Buried vessel or piping;
    c. Sewer piping, piping forming a part of a fire protection system or water piping other than:
       (1) Feed water piping between any boiler and its feed pump or injector;
       (2) Boiler condensate return piping; or
       (3) Water piping forming a part of refrigerating and air conditioning vessels and piping used for cooling, humidifying or space heating purposes;
    d. Structure, foundation, cabinet or compartment containing the object;
    e. Power shovel, dragline, excavator, vehicle, aircraft, floating vessel or structure, penstock, draft tube or well-casing;
    f. Conveyor, crane, elevator, escalator or hoist, but not excluding any electrical machine or electrical apparatus mounted on or used with this equipment; and
    g. Felt, wire, screen, die, extrusion, late, swing hammer, grinding disc, cutting blade, cable chain, belt, rope, clutch late, brake pad, non-metallic part or any part or tool subject to frequent, periodic replacement.

PROPERTY SUBLIMITS:

Coverage	Limit		
Accounts Receivable	$500,000	$1,000,000	$2,000,000
Valuable Papers and Records	$500,000	$1,000,000	$2,000,000
Contamination	$250,000		
Tools and Equipment Owned by Your Employees	$5,000	$10,000	$25,000
Personal Effects and Property of Others	$5,000	$10,000	$25,000
New Locations or Newly Constructed Property	$1,000,000		
Business Personal Property at New Locations	$1,000,000		
Backup/Overflow of Water from Sewer, Drain, Sump	$250,000		
Utility Services - Direct Damage	$250,000		
Utility Services – Business Income and Extra Expense	$250,000		
Dependent Business Premises	$250,000		
Property at Other Locations	$250,000		
Pollution Remediation Expense (specified cause of loss)	$250,000		
Outdoor Property (unscheduled)	$100,000		
Contract Penalties	$100,000		
Pollution Remediation Expense (covered cause of loss)	$100,000		
Property in Transit	$100,000		
SCADA Upgrades	$100,000		
Indoor and Outdoor Signs (unscheduled)	$50,000		
Limited Coverage for “Fungus”, Wet Rot or Dry Rot	$50,000		
Fine Arts	$25,000		
Fire Department Service Charge	$25,000		
Fire Protection Devices	$25,000		
Key and Lock Replacement Expenses	$25,000		
Trees, Shrubs & Plants (maximum $1,000 any one item)	$25,000		
Arson Reward	$10,000		
Rental Reimbursement – Mobile Equipment	$10,000		
Cost of Inventory or Adjustment	$5,000		
Non-Owned Detached Trailers	$5,000		
Water Contamination Notification Expenses	$5,000		
Patterns, Dies, Molds, Forms	$2,500		
Debris Removal	25% of scheduled limit plus $250,000		
Ordinance or Law Provision	100% of scheduled limit plus 25%		

NOTES:

Contribution is calculated from attached property schedule; review property schedule for coverage and limit adequacy.

This section of the proposal is excluded. There is no Property coverage afforded to this insured.

SECTION 2. COMMERCIAL CRIME*

***COMMERCIAL CRIME IS INCLUDED IN THE PROPOSAL: No**

ISSUER:

- California Association of Mutual Water Companies
  Joint Powers Risk and Insurance Management Authority (JPRIMA)
- No Joint and Several Liability for Members
- 100% Reinsured

REINSURER:

- Allied World Insurance Company or affiliate
- A XV (Excellent) A.M. Best Rating

FORM:

- Proprietary & Integrated

RATING BASIS:

- On file with underwriter
- Non auditable

LIMITS:

COVERAGE GROUP SELECTED	EMPLOYEE THEFT	FORGERY OR ALTERATION	INSIDE THE PREMISES Theft of Money and Securities	INSIDE THE PREMISES Robbery or Safe Burglary or Other Property	OUTSIDE THE PREMISES	COMPUTER FRAUD	FUNDS TRANSFER FRAUD	MONEY ORDERS & COUNTERFEIT PAPER CURRENCY
	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000
	$500,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000
	$1,000,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000
	$2,000,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000

DEDUCTIBLE:

$0 each claim

DESIGNATED EMPLOYEE BENEFIT PLAN(S):

COVERAGE HIGHLIGHTS:

- Separate Limits Apply to Each Coverage
- Coverage Extended to Directors and Authorized Volunteers
- Faithful Performance

NOTES:

This section of the proposal is excluded. There is no Commercial Crime coverage afforded to this insured.

SECTION 3. GENERAL LIABILITY*

***GENERAL LIABILITY IS INCLUDED IN THE PROPOSAL: Yes**

ISSUER:

- California Association of Mutual Water Companies
  Joint Powers Risk and Insurance Management Authority (JPRIMA)
- No Joint and Several Liability for Members
- 100% Reinsured

REINSURER:

- Allied World Insurance Company or affiliate
- A XV (Excellent) A.M. Best Rating

FORM:

- Occurrence
- Defense Costs Outside the Limit
- Proprietary & Integrated

RATING BASIS:

- On file with underwriter
- Non auditable

LIMITS:

Per Occurrence	**$ 1,000,000**
General Aggregate	**$10,000,000**
Products & Completed Operations Aggregate	**$10,000,000**
Personal & Advertising Injury Limit	**$ 1,000,000**
Damage to Premises Rented to You	**$ 1,000,000**
Medical Payments	**$ 10,000**

DEDUCTIBLE:

$5,000 each claim including expenses

COVERAGE HIGHLIGHTS:

- Duty to Defend
- Broad Definition of Enrolled Named Member
- Blanket Additional Enrolled Named Member
- Water & Wastewater Testing Errors & Omissions
- Expanded Pollution Liability
- Failure to Supply (no ISO limitation)
- Lead (potable water)
- Waterborne Asbestos (potable water)
- Product Recall
- Impaired Property
- Fungi & Bacteria

OPTIONAL COVERAGES:

X	Hired & Non Owned Automobile Liability
	Employee Benefits Liability
	Dam, Levee & Dike Structural Failure

SPECIAL COVERAGES:

- **Water & Wastewater Testing Errors & Omissions:**
  Coverage is provided for damages arising out of an act, error or omission which arises from your water or wastewater testing.

- **Failure To Supply:**
  Coverage is provided for bodily injury or property damage arising out of the failure of any Enrolled Named Member to adequately supply water.

- **Waterborne Asbestos:**
  Coverage is provided for bodily injury or property damage from waterborne asbestos arising out of potable water which is provided by you to others.

- **Contractual Liability - Railroads:**
  Coverage is provided for any contract or agreement that indemnifies a railroad for bodily injury or property damage arising out of construction or demolition operations, within 50 feet of any railroad property and affecting any railroad bridge or trestle, tracks, road-beds, tunnel, underpass or crossing.

- **Pollution:**
  Coverage is provided for bodily injury or property damage which occurs or takes place as a result of your operations and arises out of the following:
  - Potable water which you supply to others;
  - Chemicals you use in your water or wastewater treatment process;
  - Natural gas or propane gas you use in your water or wastewater treatment process;
  - Urgent response for the protection of property, human life, health or safety conducted away from premises owned by or rented to or regularly occupied by you;
  - Your application of pesticide or herbicide chemicals if such application meets all standards of any statute, ordinance, regulation or license requirement of any federal, state or local government;
  - Smoke drift from controlled or prescribed burning that has been authorized and permitted by an appropriate regulatory agency.
  - Fuels, lubricants or other operating fluids needed to perform the normal electrical, hydraulic or mechanical functions necessary for the operation of mobile equipment or its parts
  - Escape or back-up of sewage or waste water from any sewage treatment facility or fixed conduit or piping that you own, operate, lease, control or for which you have the right of way, but only if property damage occurs away from land you own or lease.
  - Sudden and accidental events that are neither expected nor intended by an Enrolled Named Member. However, no coverage is provided under this exception for petroleum underground storage tanks.

- **Damage** to **Impaired Property or Property Not Physically Injured**
  Coverage is provided for bodily injury or property damage arising from your potable water, nonpotable water, or wastewater as well as any loss of use of other property arising out of sudden and accidental physical injury to “your product” or “your work” after it has been put to its intended use.

- **Fungi or Bacteria**
  Coverage is provided for bodily injury or property damage arising from any “fungi” or bacteria that are, are on, or are contained in a good or product intended for consumption; or to any injury or damage arising out of or caused by your water, irrigation, or wastewater intake, outtake, reclamation, treatment and distribution processes.

- **Recall of Products, Work or Impaired Property**
  Coverage applies to any injury or damage arising out of or caused by your potable water, nonpotable water, or wastewater for the loss of use, withdrawal, recall, inspection, repair, replacement, adjustment, removal or disposal of: “Your product”; “Your work”; or “Impaired property”; if such product, work, or property is withdrawn or recalled from the market or from use by any person or organization because of a known or suspected defect, deficiency, inadequacy or dangerous condition in it.

NOTES:

SECTION 4. PUBLIC OFFICIALS & MANAGEMENT LIABILITY*

***PUBLIC OFFICIALS & MANAGEMENT LIABILITY IS INCLUDED IN THE PROPOSAL: Yes**

ISSUER:
- California Association of Mutual Water Companies
  Joint Powers Risk and Insurance Management Authority (JPRIMA)
- No Joint and Several Liability for Members
- 100% Reinsured

REINSURER:
- Allied World Insurance Company or affiliate
- A XV (Excellent) A.M. Best Rating

FORM:
- Proprietary & Integrated
- Occurrence
- Defense Costs Outside the Limits

RATING BASIS:
- On file with underwriter
- Non auditable

LIMITS:

Wrongful Acts	**$1,000,000**	per act
Employment Practices (including third party discrimination)	**N/A**	per offense
Employee Benefit Plans	**N/A**	per act
Injunctive Relief	**$5,000**	per act
	$10,000,000	aggregate limit

PRIVACY LIABILITY AND NETWORK RISK[1]:

Privacy & Network Security Wrongful Acts	**N/A**	per act
Breach Consultation Services	**N/A**	per offense
Breach Response Services	**N/A**	per offense
Public Relations & Data Forensics	**N/A**	per act

[1]Coverage provided for Privacy Liability & Network Risk Coverage is issued on a claims made basis with defense inside the limit of liability. Privacy Retroactive Date:N/A. Privacy Deductible: None.
*$1,000,000 maximum annual aggregate applies per Enrolled Named Member, with a $2,000,000 coverage form aggregate applicable to all participating Enrolled Named Members.

SPECIAL COVERAGE:
- Inverse Condemnation **- Excluded**

RETROACTIVE DATE:
N/A

DEDUCTIBLE:
$5,000 each claim including expenses

COVERAGE HIGHLIGHTS:
- Duty To Defend
- Broad Definition of Enrolled Named Member including Past and Future Employees
- Outside Directorship

NOTES:
Inverse Condemnation coverage is excluded.
Note Privacy Liability Coverage is excluded.

SECTION 5. BUSINESS AUTO*

***BUSINESS AUTO IS INCLUDED IN THE PROPOSAL: No**

ISSUER:

- California Association of Mutual Water Companies
  Joint Powers Risk and Insurance Management Authority (JPRIMA)
- No Joint and Several Liability for Members
- 100% Reinsured

REINSURER:

- Allied World Insurance Company or affiliate
- A XV (Excellent) A.M. Best Rating

FORM:

- Proprietary & Integrated
- Occurrence
- Defense Costs Outside the Limits

PORTFOLIO:

Coverage	Symbol	Limit
Combined Single Limit for Bodily Injury & Property Damage (each accident)	No Coverage	**N/A**
Hired Auto Liability	No Coverage	**N/A**
Non-Owned Auto Liability	No Coverage	**N/A**
Medical Payments	No Coverage	**N/A**
Uninsured / Underinsured Motorists	No Coverage	**N/A**
Hired Physical Damage	No Coverage	**N/A**
Owned Physical Damage – Comprehensive	No Coverage	**N/A**
Owned Physical Damage – Collision	No Coverage	**N/A**
Towing & Rental Car Reimbursement (covered accident)		**N/A**
Fleet Automatic		**N/A**

DEDUCTIBLE:

Liability: **None**
Comprehensive: **N/A**
Collision: **N/A**

NOTES:

This section of the proposal is excluded. There is no Business Auto coverage afforded to this insured. Please refer to General Liability section for Hired and Non-Owned Auto Liability coverage.

SECTION 6. EXCESS LIABILITY*

***EXCESS LIABILITY IS INCLUDED IN THE PROPOSAL: Yes**

ISSUER:

- California Association of Mutual Water Companies
  Joint Powers Risk and Insurance Management Authority (JPRIMA)
- No Joint and Several Liability for Members
- 100% Reinsured

REINSURER:

- Allied World Insurance Company or affiliate
- A XV (Excellent) A.M. Best Rating

FORM:

- Following Form
- Occurrence
- Defense Costs Outside the Limits

LIMITS:

$2,000,000/$2,000,000

SCHEDULED UNDERLYING POLICIES:

Commercial General Liability - Yes
Hired and Non-Owned Auto Liability - Yes
Owned Auto Liability - No
Public Officials & Management Liability - Yes Wrongful Acts - Yes Employment Practices - No Employee Benefit Plans - No
Employers' Liability: *(minimum underlying limit requirement of $500,000 / $500,000 / $500,000)* - No
Other:

NOTABLE EXCLUSION:

- Workers' Compensation
- Uninsured Motorists / Underinsured Motorists
- Underlying Limits < $1,000,000 except for Employers' Liability

NOTES:

Employers' Liability subject to JPRIMA security requirements.

Invoice

California Association of Mutual Water Companies
1370 N. Brea Blvd., Ste. 238
Fullerton, CA 92835

INVOICE

Bill To:
Cuyama Basin Groundwater Sustainability Agency
1901 Royal Oaks Drive, Ste. 200
Sacramento, CA 95815

Invoice number: 00812
Issued: 25 Jan 2019

Item	Amount
Membership renewal. Level: AFFILIATE MEMBERS: Non-Portable Districts. Renew to 15 Jan 2020	$100.00

Total: $100.00
Balance Due: $100.00

View invoice online

Please make checks payable to California Association of Mutual Water Companies.

Payments can be made online at https:caomwc.wildapricot.org
or by check, mailed to the address at the top of the invoice.

For billing inquiries, please call (714) 449-8403. Thank you!

CalMutuals
The Voice of Small Water Systems

January 2019

Dear Member:

Happy New Year! Enclosed is an invoice for 2019 renewal of your membership dues.

Also enclosed is a contact form with information we have for your company. Your help in reviewing and updating the information would be greatly appreciated. Membership dues and contact information can be updated through US Mail or online at https://caomwc.wildapricot.org/ Please note that membership with CalMutuals is required to enjoy JPRIMA Property and Liability and Workers' Compensation insurance coverage.

The California Association of Mutual Water Companies (CalMutuals) was founded in 2013 to advocate and develop resources to help mutual water companies statewide. From the initial fourteen (14) Los Angeles County members who formed the organization, CalMutuals membership has grown to over 300 members in 2018 statewide. Much of the growth was made possible with the establishment of the CalMutuals Joint Powers Risk and Insurance Management Authority (CalMutuals-JPRIMA) in 2016. While CalMutuals remains devoted to advocacy for mutual water companies, CalMutuals-JPRIMA has added diversity through the addition of Affiliate members that are community service districts, irrigation districts and special districts.

The CalMutuals Board recently updated its strategic plan for 2019-23 to assure that CalMutuals has the resources to advocate for its mutual water company members while bringing technical, compliance and other resources to all types of members. Please take a moment to review the enclosed *Nine Benefits of Membership* and make it your New Year's resolution to take advantage of the support available to benefit your company.

We value your membership and look forward to continued collaboration in 2019. If you, or another member of your organization, have questions please do not hesitate to contact us.

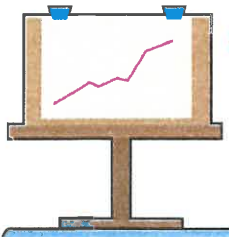
Sincerely,

Adan Ortega Jr.
Executive Director
adan@calmutuals.org
(714) 449-8403

NINE GREAT BENEFITS OF MEMBERSHIP

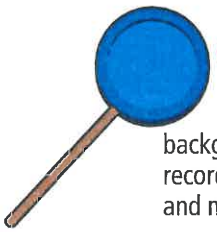
Symbols Legend

- Free to members with <500 connections and members with property and liability **and** worker's compensation insurance through JPRIMA. Discounted for all others.
- Available to all CalMutuals members
- Exclusively for members with worker's compensation insurance through JPRIMA



Continuing Education

Help your team meet continuing education requirements. Enroll in free operator, safety, and management online training modules; including state-mandated board member ethics training.



Employee Background Checks

Streamline your hiring processes by taking advantage of free or discounted background checks by OPENonline for criminal records, identity, driver's records, education and more.

Risk Management and Human Resources Tools

Get answers to your human resources and safety professionals questions using The Zenith's toll-free number. Find thousands of risk management, safety, and HR best practices resources at your fingertips through the Zenith Solution Center.

Peer-to-Peer Support

Connect with CalMutuals members to address shared challenges. As issues emerge, reach out and we will work to identify members who may be able to provide insight, assistance and guidance.

Legal Services and Compliance Check-ups

Get peace of mind with low-cost compliance check-ups by partner Lagerlof, Senecal, Gosney & Kruse. Have attorneys review existing governing documents such as articles of incorporation and bylaws, rules, and regulations, and other documents required to comply with provisions of AB54 and AB240.

Leadership Video Series

Tap into a vast and virtual library of videos on cybersecurity, inverse condemnation, risk management, human resources fundamentals and more, courtesy of our partnership with the American Association of Water Distribution & Management (AAWD&M).

Referrals to Preferred Vendors

Link to CalMutuals' preferred vendors; with expertise ranging from website design to pipe, valve and meter supply, to financial and engineering services. They're experienced in working with small systems and often provide discounts for members.

"Best in Class" Insurance for water systems

Access to exceptional Property & Casualty and Workers' Compensation insurance through CalMutuals Joint Powers Risk and Insurance Management Authority.

Administrative and Operational Reviews

Get administrative and operational support for your small system of 500 or fewer connections through a new pilot program. Contact us to learn more and see if this program is a good fit.

Administrative Reviews may include:

- Management operations
- Staff training and development
- Budgeting, financial planning and rate setting
- Long-term capital planning
- Identifying outside funding sources

Operational Reviews may include:

- Water quality and treatment
- Regulatory compliance
- Water loss analysis and audit validations
- Water production reporting

CalMutuals
The Voice of Small Water Systems

REGISTER OR LEARN MORE

www.calmutuals.org/resources

info@calmutuals.org • 714-449-8403

Back

Financial transactions

Cuyama Basin Groundwater Sustainability Agency (49309916)

Balance due: $100.00

1 open invoice(s)

jbeck@hgcpm.com
Last login Never
Profile last updated 5 Feb 2019

Membership Multiple warnings
Events -
Donations -

Edit membership

* Mandatory fields

Membership level AFFILIATE MEMBERS: Non-Portable Distr

Membership status
- Active
- Lapsed
- Pending - Renewal
- Pending - New
- Pending - Level change

Member since 22 Dec 2017

Renewal due on 27 Jan 2019

Password
Leave blank to keep current password

Confirm password

Profile

Organization	Cuyama Basin Groundwater Sustainability Agen
Email	jbeck@hgcpm.com
Phone	916-6231500
Website	
Manager-First	Jim
Manager-Last	Beck
Title	General Manager
Mailing Address	1901 Royal Oaks Drive, Ste. 200
City	Sacramento
State	CA
Zip	95815
County	Sacramento
Manager Telephone	916-623-1500
Manager Fax	
Manager Cell	
Manager Email	
Staff-First	
Staff-Last	
Staff-Title	
Staff EMail	
Staff Telephone	
Logo	Choose File No file chosen
Revenue (Updated 12.2018)	
Source	
Group participation	Board Members

CalMutuals
Voice of Small Water Systems

2019 DUES SCHEDULE

CAMWC/JPRIMA REGULAR MEMBERS

(any duly created business entity operating in California as a mutual water company, insured through JPRIMA for Property and Liability and/or Workers' Comp)
CalMutuals Dues Waived for first year of membership.

Tier A: $4M+ in annual revenues	$1,000/year
Tier B: $1M+ in annual revenues	$500/year
Tier C: $100k+ in annual revenues	$250/year
Tier D: < $100k in annual revenues	$50/year

CAMWC ONLY REGULAR MEMBERS

(any duly created business entity operating in California as a mutual water company)

Tier A: $4M+ in annual revenues	$5,000/year
Tier B: $1M+ in annual revenues	$2,500/year
Tier C: $500k+ in annual revenues	$1,250/year
Tier D: $250k+ in annual revenues	$600/year
Tier E: $100k+ in annual revenues	$350/year
Tier F: < $100k in annual revenues	$150/year

AFFILIATE MEMBERS

(non-mutual water company water suppliers and non-potable drainage, reclamation, or conservation districts)

Public Water Systems	Per tiered structure above with max dues of $500/year
Non-Potable Districts	$100/year

ASSOCIATE MEMBERS

(any person or business that provides goods or services to Regular Members, or otherside desires to support CAMWC)

Company or Corporation (National or International)	$1,000/year
Company or Corporation (California)	$500/year
Individual Members	$100 minimum

HALLMARK GROUP Capital Program Management

INVOICE

1901 Royal Oaks Drive
Suite 200
Sacramento, CA 95815

916 923.1500
hgcpm.com

To: **Cuyama Basin GSA**
c/o Jim Beck
4900 California Avenue, Ste B
Bakersfield, CA 93309

Please Remit To: **Hallmark Group**
1901 Royal Oaks Drive, Suite 200
Sacramento, CA 95815
P: (916) 923-1500

Invoice No.: 2019-CB-TO3-01
Task Order: CB-HG-003
Agreement No. 201709-CB-001
Date: February 20, 2019

For professional services rendered for the month of January 2019

Task Order	Sub Task	Task Description	Billing Classification	Hours	Rate	Amount
CB-HG-003	1	GSA Board of Directors and Advisory Committee Meetings	Executive Director	25.75	$ 250.00	$ 6,437.50
			Project Coordinator/Admin	73.75	$ 100.00	$ 7,375.00
					Total Sub Task 1 Labor	**$ 13,812.50**
CB-HG-003	2	Consultant Management and GSP Development	Executive Director	3.75	$ 250.00	$ 937.50
			Project Coordinator/Admin	12.75	$ 100.00	$ 1,275.00
					Total Sub Task 2 Labor	**$ 2,212.50**
CB-HG-003	3	Financial Information Coordination	Executive Director	2.75	$ 250.00	$ 687.50
			Project Controls	3.00	$ 200.00	$ 600.00
			Project Coordinator/Admin	22.25	$ 100.00	$ 2,225.00
					Total Sub Task 3 Labor	**$ 3,512.50**
CB-HG-003	4	CBGSA Outreach	Executive Director	2.00	$ 250.00	$ 500.00
			Project Coordinator/Admin	6.00	$ 100.00	$ 600.00
					Total Sub Task 4 Labor	**$ 1,100.00**
					Total Labor	**$ 20,637.50**
		Travel				$ 202.74
		Other Direct Costs:	Conference Calls			$ 340.92
			Fed-Ex Shipping Charges			$ -
			Printing Costs			$ 153.80
					SubTotal Travel and Other Direct Costs	**$ 697.46**
		ODC Mark Up			5%	$ 24.74
					Total Travel and Other Direct Costs	**$ 722.20**
					TOTAL AMOUNT DUE FOR THIS INVOICE	**$ 21,359.70**

Task Order	Original Totals	Amendment(s)	Total Committed	Previously Billed	Current Billing	Remaining Balance
CB-HG-003	$ 212,810.00	$ -	$ 212,810.00	$ -	$ 20,637.50	$ 192,172.50
Travel and ODC	$ -	$ -	$ -	$ -	$ 722.20	$ (722.20)
Total	**$ 212,810.00**	**$ -**	**$ 212,810.00**	**$ -**	**$ 21,359.70**	**$ 191,450.30**

HALLMARK GROUP Capital Program Management

CUYAMA BASIN GROUNDWATER SUSTAINABILITY AGENCY

PROGRESS REPORT FOR TASK ORDER CB-HG-003

Client Name:	Cuyama Basin Groundwater Sustainability Agency	**Agreement Number:**	201709-CB-001
Company Name:	HGCPM, Inc. DBA The Hallmark Group	**Address:**	1901 Royal Oaks Drive, Suite 200 Sacramento, CA 95815
Task Order Number:	CB-HG-003	**Report Period:**	January 1-31, 2019
Progress Report Number:	1	**Project Manager:**	Jim Beck
Invoice Number:	2019-CBWD-TO3-01	**Invoice Date:**	February 20, 2019

SUMMARY OF WORK PERFORMED

Task 1: Board and Standing Advisory Committee Meeting Facilitation

- Prepared for and attended monthly Cuyama Basin Groundwater Sustainability Agency (CBGSA) Standing Advisory Committee (SAC) and Board meetings.
- Drafted, prepared, and distributed documents for the CBGSA SAC and Board of Directors meeting packets.
- Drafted CBGSA SAC and Board minutes.
- Drafted, reviewed, and discussed SAC and Board agendas.
- Coordinated and attended SAC debrief meeting with Woodard & Curran (W&C) staff.
- Distributed and tracked Form 700s.

Task 2: GSP Consultant Management and GSP Development

- Prepared for, met with, and facilitated CBGSA Program Management Team (PMT) on a weekly basis to discuss Groundwater Sustainability Plan (GSP) section progress and outreach.
- Coordinated and attended budget discussion meeting with W&C.
- Reviewed W&C presentation slides with W&C staff and J. Beck.
- Coordinated GSP Undesirable Results Narrative chapter status with W&C.
- Coordinated stream gage CEQA/NEPA timeline with W&C and DWR.

Task 3: Financial Management

- Drafted progress report for Hallmark services.
- Redrafted invoices No. 9 and 10 with revised reimbursable cost allocation for Santa Barbara County Water Agency's grant with the California Department of Water Resources (DWR).
- Researched and edited CBGSA insurance application.

- Coordinated Grant Admin Workshop meeting with DWR and W&C.
- Coordinated with Klein regarding invoice and budget status/forecast.
- Drafted and reviewed Cuyama cashflow and budget with W&C.
- Processed accounts payable and prepared financial statement.

Task 4: Stakeholder Outreach Facilitation

- Coordinated the update of the Cuyama Basin Groundwater Sustainability Agency (CBGSA) website with Board and Standing Advisory Committee minutes, agendas, GSP chapters, and GSP presentations.
- Updated CBGSA public stakeholder contact list.
- Reviewed and distributed Newsletter Edition No. 4.

DELIVERABLES AND COMPLETED TASKS

- Developed CBGSA SAC agenda for January 8, 2019, Board agenda for January 9, 2019, and SAC agenda for January 31, 2019.
- Attended CBGSA SAC meeting on January 8, 2019, Board meeting on January 9, 2019, and SAC meeting on January 31, 2019.
- Drafted meeting minutes for CBGSA SAC meeting on January 8, 2019, Board meeting on January 9, 2019, and SAC meeting on January 31, 2019.
- Prepared for, met with, and facilitate CBGSA PMT on a weekly basis.

PLANNED OBJECTIVES FOR NEXT REPORTING PERIOD

- Prepare for and attend CBGSA Board meeting on February 6, 2019 and SAC meeting on February 28, 2019.
- Drafted progress report for Hallmark services.
- Coordinated the update of the CBGSA website with minutes, agendas, GSP sections, and GSP presentations.

SIGNIFICANT ISSUES OR CHALLENGES (IF ANY) AND POTENTIAL RESOLUTIONS

- There are no outstanding issues or challenges at this time.

CUYAMA PRINTING COSTS

SAC - 1/8/19

Document	B&W, or Color	Pages	Rate	Cost
Agenda (SAC Committee)	B&W	30	$ 0.10	$ 3.00
Agenda (Public)	B&W	40	$ 0.10	$ 4.00
Spanish Presentations	B&W	105	$ 0.10	$ 10.50
Sign-in Sheet	B&W	1	$ 0.10	$ 0.10
SAC Packets	B&W	120	$ 0.10	$ 12.00
			Total Cost	$ 29.60

Board - 1/9/19

Document	B&W, or Color	Pages	Rate	Cost
Agenda (Board Members)	B&W	30	$ 0.10	$ 3.00
Agenda (Public)	B&W	40	$ 0.10	$ 4.00
Spanish Presentations	B&W	105	$ 0.10	$ 10.50
Sign-in Sheet	B&W	1	$ 0.10	$ 0.10
Board Packets	B&W	177	$ 0.10	$ 17.70
			Total Cost	$ 35.30

SAC - 1/31/19

Document	B&W, or Color	Pages	Rate	Cost
Agenda (SAC Committee)	B&W	30	$ 0.10	$ 3.00
Agenda (Public)	B&W	40	$ 0.10	$ 4.00
Spanish Presentations	B&W	295	$ 0.10	$ 29.50
Sign-in Sheet	B&W	1	$ 0.10	$ 0.10
SAC Packets	B&W	260	$ 0.10	$ 26.00
			Total Cost	$ 62.60

January

Document	B&W, or Color	Pages	Rate	Cost
Newsletter No. 4	B&W	4	$ 0.10	$ 0.40
1/31/2019 SAC Packet	B&W	259	$ 0.10	$ 25.90
			Total Cost	$ 26.30

Total Cost	$ 153.80

GAN CONFERENCING
Bringing the world together

Invoice Date: 2/1/2019
Total: $794.58
Statement# 38217 Customer# 3122729

HGCPM, Inc. - Formerly Advance Education
1901 Royal oaks DR
Sacramento, CA 95815 -0000

Remit to:
Great America Networks Conferencing
15700 W. 103rd St
Suite 110
Lemont, IL 60439 6608

CALL US
1-877-438-4261

Summary

Balance Information	
Previous Balance	513.18
Payments Received - Thank you!	(513.18)
Balance Forward	
New Charges	
New Usage Charges	662.15
Recurring Charges	0.00
Taxes and Surcharges	132.43
Total New Charges	794.58
Total Amount Due	794.58

Payments

Description	Date	Amount
Payment Received, Thank you!	01/22/19	(513.18)
Subtotal		($513.18)

Taxes and Surcharges

Federal Universal Service Fund	132.43
Subtotal	$132.43

Management Reports

Usage by Category

Description	Calls	Minutes	Charge
Usage - Conference Calling	243	13,243.00	662.15
	243.00	13,243.00	662.15

Long Distance By Line

TN	Calls	Mins	Charge
	243	13,243.00	662.15
	243	13,243.00	662.15

Cuyama BDSAC Conference ID: 4673651

#	Date	Time	Other	Location	Mins	Amt
1	01/08/19	04:29P	6613337091	Host	6.00	.30
Subtotal			6.00			.30

Cuyama BDSAC Conference ID: 4673719

#	Date	Time	Other	Location	Mins	Amt
1	01/08/19	05:49P	9162338352	Host	172.00	8.60
2	01/08/19	05:57P	6613302610	Host	163.00	8.15
3	01/08/19	05:57P	8188826514	Participant	141.00	7.05
4	01/08/19	06:03P	6617662369	Host	158.00	7.90
5	01/08/19	06:04P	2133092347	Participant	99.00	4.95
6	01/08/19	06:09P	9258581340	Host	42.00	2.10
7	01/08/19	06:40P	6617635221	Host	120.00	6.00
8	01/08/19	06:50P	9256274112	Host	28.00	1.40
9	01/08/19	07:15P	9258581340	Host	61.00	3.05
Subtotal			984.00			49.20

Cuyama BDSAC Conference ID: 4675746

#	Date	Time	Other	Location	Mins	Amt
1	01/09/19	05:57P	9162338352	Host	122.00	6.10
2	01/09/19	05:58P	8057815275	Host	121.00	6.05
3	01/09/19	05:59P	4155242290	Host	120.00	6.00
4	01/09/19	05:59P	6617662369	Host	121.00	6.05
5	01/09/19	06:00P	6507590535	Participant	120.00	6.00
6	01/09/19	06:12P	9258581340	Host	76.00	3.80
Subtotal			680.00			34.00

Cuyama BDSAC Conference ID: 4693184

#	Date	Time	Other	Location	Mins	Amt
1	01/23/19	03:57P	6613337091	Host	34.00	1.70
2	01/23/19	03:58P	6614773385	Host	33.00	1.65
3	01/23/19	04:01P	8057815457	Host	1.00	.05
4	01/23/19	04:02P	8057815457	Host	29.00	1.45
Subtotal			97.00			4.85

Cuyama BDSAC Conference ID: 4694167

#	Date	Time	Other	Location	Mins	Amt
1	01/24/19	10:57A	6613337091	Host	49.00	2.45

2	01/24/19	10:59A	6613302610	Host	49.00	2.45
3	01/24/19	11:00A	6614773385	Host	46.00	2.30
Subtotal			144.00			7.20

Cuyama BDSAC Conference ID: 4695998

#	Date	Time	Other	Location	Mins	Amt
1	01/25/19	10:28A	8318182451	Host	32.00	1.60
2	01/25/19	10:29A	6614773385	Host	31.00	1.55
Subtotal			63.00			3.15

Cuyama BDSAC Conference ID: 4703942

#	Date	Time	Other	Location	Mins	Amt
1	01/31/19	05:58P	6613951000	Host	64.00	3.20
2	01/31/19	05:58P	6617662369	Host	209.00	10.45
3	01/31/19	05:58P	8188826514	Participant	159.00	7.95
4	01/31/19	06:00P	9162338352	Host	200.00	10.00
5	01/31/19	06:01P	4155242290	Host	195.00	9.75
6	01/31/19	06:03P	9256274112	Host	119.00	5.95
7	01/31/19	06:14P	6612457232	Participant	193.00	9.65
8	01/31/19	06:42P	2133092347	Participant	127.00	6.35
Subtotal			1,266.00			63.30

Cuyama GSA Conference ID: 4669647

#	Date	Time	Other	Location	Mins	Amt
1	01/04/19	11:58A	6613337091	Host	69.00	3.45
2	01/04/19	11:59A	4157938420	Host	68.00	3.40
3	01/04/19	11:59A	6614773385	Host	68.00	3.40
4	01/04/19	12:01P	9169998777	Host	66.00	3.30
5	01/04/19	12:01P	9169998780	Host	1.00	.05
6	01/04/19	12:02P	9169998780	Host	59.00	2.95
7	01/04/19	12:19P	6613951000	Host	48.00	2.40
Subtotal			379.00			18.95

Cuyama GSA Conference ID: 4674752

#	Date	Time	Other	Location	Mins	Amt
1	01/09/19	11:29A	9256274112	Host	21.00	1.05
2	01/09/19	11:30A	4159990316	Host	20.00	1.00
3	01/09/19	11:30A	6614773385	Host	20.00	1.00
4	01/09/19	11:30A	9169998777	Host	20.00	1.00
5	01/09/19	11:31A	4157938420	Host	19.00	.95
6	01/09/19	11:41A	6613951000	Host	9.00	.45
Subtotal			109.00			5.45

Cuyama GSA Conference ID: 4678731

#	Date	Time	Other	Location	Mins	Amt
1	01/11/19	11:59A	9169998777	Host	45.00	2.25
2	01/11/19	11:59A	9256274112	Host	45.00	2.25
3	01/11/19	12:00P	4157938420	Host	44.00	2.20
4	01/11/19	12:00P	6614773385	Host	45.00	2.25
5	01/11/19	12:01P	6613337091	Host	44.00	2.20
6	01/11/19	12:08P	4155242290	Host	38.00	1.90
7	01/11/19	12:39P	9258581340	Host	3.00	.15
Subtotal			264.00			13.20

Cuyama GSA Conference ID: 4688124

#	Date	Time	Other	Location	Mins	Amt
1	01/18/19	11:57A	6614773385	Host	99.00	4.95
2	01/18/19	11:59A	4155242290	Host	92.00	4.60
3	01/18/19	11:59A	6613337091	Host	98.00	4.90
4	01/18/19	11:59A	6613951000	Host	98.00	4.90
5	01/18/19	12:00P	9258581340	Host	73.00	3.65
6	01/18/19	12:01P	4157938420	Host	83.00	4.15
7	01/18/19	12:01P	9169998777	Host	96.00	4.80
Subtotal			639.00			31.95

Cuyama GSA Conference ID: 4692477

#	Date	Time	Other	Location	Mins	Amt
1	01/23/19	11:59A	6613337091	Host	65.00	3.25
2	01/23/19	11:59A	9258581340	Host	66.00	3.30
3	01/23/19	12:00P	6614773385	Host	64.00	3.20
4	01/23/19	12:00P	9169998777	Host	64.00	3.20
Subtotal			259.00			12.95

Cuyama GSA Conference ID: 4694350

#	Date	Time	Other	Location	Mins	Amt
1	01/24/19	11:58A	4157938420	Host	82.00	4.10
2	01/24/19	11:58A	6614773385	Host	82.00	4.10
3	01/24/19	12:00P	6613337091	Host	80.00	4.00
4	01/24/19	12:01P	9256274112	Host	79.00	3.95
5	01/24/19	12:08P	4155242290	Host	72.00	3.60
Subtotal			395.00			19.75

Cuyama GSA Conference ID: 4696236

#	Date	Time	Other	Location	Mins	Amt
1	01/25/19	11:57A	6614773385	Host	63.00	3.15
2	01/25/19	11:58A	4157938420	Host	58.00	2.90
3	01/25/19	11:58A	6613337091	Host	58.00	2.90
4	01/25/19	11:58A	9256274112	Host	58.00	2.90
5	01/25/19	12:00P	4155242290	Host	56.00	2.80
6	01/25/19	12:01P	9169998777	Host	60.00	3.00
7	01/25/19	12:05P	6613951000	Host	27.00	1.35
8	01/25/19	12:39P	6613196477	Host	17.00	.85
Subtotal			397.00			19.85

	Cuyama Charges:	
	4-Jan	18.95
	8-Jan	$0.30
	8-Jan	$49.20
	9-Jan	$34.00
	9-Jan	$5.45
	11-Jan	$13.20
	18-Jan	$31.95
	23-Jan	$4.85
	23-Jan	$12.95
	24-Jan	$7.20
	24-Jan	$19.75
	25-Jan	$3.15
	25-Jan	$19.85
	31-Jan	$63.30
A	Cuyama Subtotal	$284.10
B	Conf Line Charges	$662.15
C	Fees	$132.43
D	Fee Rate (C/B)	20%
E	Total Cuyama Charge (A*(1+D))	**$340.92**

KLEIN, DENATALE, GOLDNER
COOPER, ROSENLIEB & KIMBALL, LLP

4550 CALIFORNIA AVENUE
SECOND FLOOR
BAKERSFIELD, CA 93309

MAILING ADDRESS:
P.O. BOX 11172
BAKERSFIELD, CA 93389-1172
(661) 395-1000
FAX (661) 326-0418
E-MAIL accounting@kleinlaw.com

CUYAMA BASIN GROUNDWATER SUSTAINABILITY AGENCY
C/O HALLMARK GROUP
1901 ROYAL OAKS DRIVE, SUITE 200
SACRAMENTO, CA 95815

January 31, 2019
Bill No. 22930-001-140657
JDH

Statement for Period through January 21, 2019

Re: 22930 - CUYAMA BASIN GROUNDWATER SUSTAINABILITY AGENCY
001 GENERAL BUSINESS

Date		Services	Hours	Amount
12/20/18	DKK	E-MAILED FPPC RESPONSE TO S. HAYES.	0.10	19.00
12/21/18	JDH	REVISED MEMORANDUM REGARDING BROWN ACT ISSUES; TELEPHONE CONFERENCE WITH E. CONANT AND A. DOUD REGARDING SAME; E-MAILED J. BECK AND T. BLAKSLEE REGARDING SAME.	2.00	540.00
12/26/18	DKK	RESEARCHED SGMA STANDING ADVISORY COMMITTEE MEETING REQUIREMENTS; OFFICE CONFERENCE WITH J. HUGHES.	2.00	380.00
12/27/18	DKK	DRAFTED MEMORANDUM ON SGMA AND COMMUNITY OUTREACH.	4.10	779.00
12/28/18	DKK	DRAFTED MEMORANDUM ON SGMA AND BROWN ACT.	2.80	532.00
01/01/19	JDH	PREPARED MEMORANDUM REGARDING BROWN ACT AND SGMA CONCERNS.	2.50	675.00
01/02/19	JDH	TELEPHONE CONFERENCE WITH E. CONANT REGARDING MEETING ATTENDANCE ISSUES; REVISED PRESENTATION REGARDING SAME.	1.30	351.00
01/04/19	JDH	WEEKLY PMT CONFERENCE CALL.	0.90	243.00
01/08/19	JDH	PREPARED PRESENTATION REGARDING BROWN ACT AND SGMA; ATTENDED SAC MEETING TELEPHONICALLY.	3.40	918.00
01/09/19	JDH	ATTENDED JANUARY REGULAR BOARD MEETING.	4.00	1,080.00
01/16/19	DKK	DRAFTED MEMORANDUM ON CONSULTANTS AND FORM 700s.	0.50	95.00
01/16/19	JDH	E-MAILED M. BALLARD REGARDING DRAFT MINUTES.	0.20	54.00
01/18/19	JDH	WEEKLY PMT CONFERENCE CALL.	1.50	405.00

KLEIN, DENATALE, GOLDNER, COOPER, ROSENLIEB & KIMBALL, LLP

Bill No. 22930-001-140657 **January 31, 2019** **Page 2**
Client Ref: 22930 - 001

		Rate	Hours	Amount
JDH	HUGHES, JOSEPH	270.00	15.80	4,266.00
DKK	KEY, DARIEN	190.00	9.50	1,805.00
Total Fees				**$6,071.00**

Costs and Expenses

Date	Expenses	Amount
12/21/18	TRAVEL EXPENSES 12/18 ROUND TRIP TRAVEL TO CUYAMA FOR BOARD MEETING - JACOB L. EATON	74.45
01/10/19	TRAVEL EXPENSES 1/09 - ROUND TRIP TRAVEL TO CUYAMA BASIN GSA - JOSEPH D. HUGHES	78.88
Total Costs and Expenses		**$153.33**

Current Charges	**$6,224.33**
Prior Statement Balance	18,335.29
Payments/Adjustments Since Last Bill	-0.00
Pay This Amount	**$24,559.62**

Any Payments Received After January 31, 2019 Will Appear on Your Next Statement

WOODARD &CURRAN
COMMITMENT & INTEGRITY
DRIVE RESULTS

Remit to:
PO Box 55008
Boston, MA 02205-5008

T 800.426.4262
T 207.774.2112
F 207.774.6635

TD BANK
Electronic Transfer:
⑆211274450⑆ 2427662596⑈

INVOICE

Jim Beck
Executive Director
Cuyama Basin Groundwater Sustainability Agency
c/o Hallmark Group
1901 Royal Oaks Drive, Suite 200
Sacramento, CA 95815

February 22, 2019
Project No: 0011078.01
Invoice No: 160067

Project 0011078.01 CUYAMA GSP

Professional Services for the period ending January 25, 2019

Phase 004 Basin Model and Water Budget

Professional Personnel

	Hours	Rate	Amount	
Engineer 1				
Poore, Sebastien	23.00	162.00	3,726.00	
Engineer 2				
Ceyhan, Mahmut	9.00	187.00	1,683.00	
Planner 1				
Honn, Emily	3.00	162.00	486.00	
Project Engineer 1				
Amador, Dominick	1.00	221.00	221.00	
Senior Technical Practice Leader				
Taghavi, Ali	3.00	310.00	930.00	
Totals	39.00		7,046.00	
Labor Total				**7,046.00**
		Total this Phase		**$7,046.00**

Phase 005 Establish Basin Sustainability Criteria

Professional Personnel

	Hours	Rate	Amount	
Project Manager 2				
Ayres, John	5.00	266.00	1,330.00	
Totals	5.00		1,330.00	
Labor Total				**1,330.00**
		Total this Phase		**$1,330.00**

Phase 007 Projects and Actions for Sustainability Goals

Professional Personnel

	Hours	Rate	Amount
National Practice Leader			
Melton, Lyndel	3.00	320.00	960.00

Please include our invoice number in your remittance. Thank you.

Project 0011078.01 CUYAMA GSP Invoice 160067

Project Manager 2				
Van Lienden, Brian	28.00	266.00	7,448.00	
Totals	31.00		8,408.00	
Labor Total				**8,408.00**
			Total this Phase	**$8,408.00**

Phase 008 Groundwater Sustainability Plan Implementation

Professional Personnel

	Hours	Rate	Amount	
Engineer 1				
Nguyen, John	5.50	162.00	891.00	
Engineer 2				
Ceyhan, Mahmut	40.00	187.00	7,480.00	
National Practice Leader				
Melton, Lyndel	7.50	320.00	2,400.00	
Planner 2				
Eggleton, Charles	45.25	187.00	8,461.75	
Software Engineer 1				
Sabu, Sandeep	1.00	140.00	140.00	
Project Manager 2				
Ayres, John	17.00	266.00	4,522.00	
Van Lienden, Brian	13.00	266.00	3,458.00	
Senior Technical Manager				
Long, Jeanna	6.75	282.00	1,903.50	
Senior Technical Practice Leader				
Taghavi, Ali	20.00	310.00	6,200.00	
Totals	156.00		35,456.25	
Labor Total				**35,456.25**
			Total this Phase	**$35,456.25**

Phase 010 Outreach, Education and Communication

Professional Personnel

	Hours	Rate	Amount	
Graphic Artist				
Fox, Adam	1.25	118.00	147.50	
Planner 1				
De Anda, Vanessa	3.00	162.00	486.00	
Totals	4.25		633.50	
Labor Total				**633.50**

Reimbursable

Vehicle Expenses				
11/7/2018	Ayres, John	Yes	11.99	
11/8/2018	Ayres, John	Yes	11.99	
11/28/2018	Ayres, John	Yes	24.53	

Project	0011078.01	CUYAMA GSP		Invoice	160067
Travel & Lodging					
11/1/2018	Ayres, John	Yes		119.00	
11/7/2018	Ayres, John	Yes		12.50	
11/7/2018	Ayres, John	Yes		124.99	
12/2/2018	Ayres, John	Meetings		11.50	
12/2/2018	Ayres, John	Meetings		114.99	
Meals					
11/1/2018	Ayres, John	Yes		37.80	
11/5/2018	Ayres, John	Yes		27.13	
11/8/2018	Ayres, John	Yes		41.95	
11/8/2018	Ayres, John	Yes		49.99	
12/3/2018	Ayres, John	Meetings		27.62	
12/3/2018	Ayres, John	Meetings		20.24	
Field Supplies					
11/7/2018	Ayres, John	Yes		25.80	
	Reimbursable Total		**1.1 times**	**662.02**	**728.22**
			Total this Phase		**$1,361.72**

Phase 011 Project Management

Professional Personnel

	Hours	**Rate**	**Amount**	
National Practice Leader				
Melton, Lyndel	9.00	320.00	2,880.00	
Project Assistant				
Hughart, Desiree	1.25	110.00	137.50	
Project Manager 2				
Van Lienden, Brian	3.00	266.00	798.00	
Senior Technical Practice Leader				
Lopezcalva, Enrique	.50	310.00	155.00	
Totals	13.75		3,970.50	
Labor Total				**3,970.50**
		Total this Phase		**$3,970.50**

Phase 012 GW Monitoring Well Network Expansion (Cat 1 – Task 1)

Professional Personnel

	Hours	**Rate**	**Amount**	
Planner 2				
Eggleton, Charles	1.00	187.00	187.00	
Project Manager 2				
Ayres, John	19.00	266.00	5,054.00	
Van Lienden, Brian	12.00	266.00	3,192.00	
Totals	32.00		8,433.00	
Labor Total				**8,433.00**
		Total this Phase		**$8,433.00**

Project	0011078.01	CUYAMA GSP	Invoice	160067

Phase 013 Evapotranspiration Evaluation for Cuyama (Cat 1 – Task 2)

Professional Personnel

	Hours	Rate	Amount	
Project Manager 2				
Van Lienden, Brian	2.00	266.00	532.00	
Totals	2.00		532.00	
Labor Total				**532.00**
			Total this Phase	**$532.00**

Phase 014 Surface Water Monitoring Program (Cat 1 – Task 3)

Professional Personnel

	Hours	Rate	Amount	
National Practice Leader				
Melton, Lyndel	1.00	320.00	320.00	
Project Manager 2				
Van Lienden, Brian	16.00	266.00	4,256.00	
Totals	17.00		4,576.00	
Labor Total				**4,576.00**

Reimbursable

Vehicle Expenses				
1/8/2019	Van Lienden, Brian	Cuyama GSP SAC/Board meetings	56.13	
1/9/2019	Van Lienden, Brian	Cuyama GSP SAC/Board meetings	58.76	
1/10/2019	Van Lienden, Brian	Cuyama GSP SAC/Board meetings	157.26	
Travel & Lodging				
1/8/2019	Van Lienden, Brian	Cuyama GSP SAC/Board meetings	10.62	
1/8/2019	Van Lienden, Brian	Cuyama GSP SAC/Board meetings	106.19	
1/9/2019	Van Lienden, Brian	Cuyama GSP SAC/Board	10.62	
1/9/2019	Van Lienden, Brian	Cuyama GSP SAC/Board meetings	106.19	
Meals				
1/8/2019	Van Lienden, Brian	Cuyama GSP SAC/Board meetings	11.16	
1/9/2019	Van Lienden, Brian	Cuyama GSP SAC/Board meetings	11.74	
1/10/2019	Van Lienden, Brian	Cuyama GSP SAC/Board meetings	14.43	
Reimbursable Total		**1.1 times**	**543.10**	**597.41**

meetings

Project	0011078.01	CUYAMA GSP			Invoice	160067

Consultant

Subcontractor Expense					
1/25/2019	The Catalyst Group, Inc.	Inv#380		12,063.68	
	Consultant Total		**1.1 times**	**12,063.68**	**13,270.05**
			Total this Phase		**$18,443.46**

Phase 015 Project Management (Cat 1 – Task 4)

Professional Personnel

	Hours	**Rate**	**Amount**	
National Practice Leader				
Melton, Lyndel	3.50	320.00	1,120.00	
Planner 2				
Eggleton, Charles	2.00	187.00	374.00	
Project Manager 2				
Van Lienden, Brian	4.00	266.00	1,064.00	
Totals	9.50		2,558.00	
Labor Total				**2,558.00**

Reimbursable

Vehicle Expenses			5.00	
Reimbursable Total			**5.00**	**5.00**
		Total this Phase		**$2,563.00**
		Total this Invoice		**$87,543.93**

Outstanding Invoices

Number	**Date**	**Balance**
152397	7/19/2018	180,525.65
153619	8/23/2018	135,300.00
154409	9/19/2018	195,124.42
155666	10/23/2018	101,772.20
156545	11/14/2018	84,659.70
157849	12/19/2018	142,959.49
159014	1/24/2019	101,806.18
Total		**942,147.64**

	Current Fee	**Previous Fee**	**Total**
Project Summary	**87,543.93**	**1,627,191.95**	**1,714,735.88**

Approved by:

Brian Van Lienden
Project Manager
Woodard & Curran

Progress Report

Cuyama Basin Groundwater Sustainability Plan Development

Subject:	**January 2019 Progress Report**
Prepared for:	Jim Beck, Executive Director, Cuyama Basin Groundwater Sustainability Agency (CBGSA)
Prepared by:	Brian Van Lienden, Woodard & Curran
Reviewed by:	Lyndel Melton, Woodard & Curran
Date:	February 22, 2019
Project No.:	0011078.01

This progress report summarizes the work performed and project status for the period of December 29, 2018 through January 25, 2019 on the Cuyama Basin Groundwater Sustainability Plan Development project. The work associated with this invoice was performed in accordance with our Consulting Services Agreement dated December 6, 2017, and with Task Orders 2 and 3, issued by CBGSA on March 7, 2018 and Task Orders 4 and 5, issued by the CBGSA on June 6, 2018. Note that Task Order 1, issued by CBGSA on December 6, 2017, was 100% spent as of the March 2018 invoice.

The progress report contains the following sections:

1. Work Performed
2. Budget Status
3. Schedule Status
4. Outstanding Issues to be Coordinated

1 Work Performed

A summary of work performed on the project during the current reporting period is provided in Tables 1 and 2 below. Table 1 shows work performed under Task Orders 2 and 4, which include tasks identified in the forthcoming Category 2 grant from the California Department of Water Resources (DWR). Table 2 shows work performed under Task Orders 3 and 5, which includes tasks identified in the forthcoming Category 1 grant from DWR.

Table 1: Summary of Task/Deliverables Status for Category 2 Tasks (Task Orders 2 and 4)

Task	Work Completed During the Reporting Period	Work Scheduled for Next Period
Task 1: Initiate Work Plan for GSP and Stakeholder Engagement Strategy Development	• Task 1 is completed; no work was undertaken on this task during this reporting period	• Task 1 is completed; no further work is anticipated
Task 2: Data Management System, Data Collection and Analysis, and Plan Review	• Updated Data Management System (DMS) and DMS GSP section in response to comments and submitted revised draft to GSA Board	• Further update DMS data in response to comments
Task 3: Description of the Plan Area, Hydrogeologic Conceptual Model, and Groundwater Conditions	• Task 3 is completed; no work was undertaken on this task during this reporting period	• Task 3 is completed; no further work is anticipated
Task 4: Basin Model and Water Budget	• Continued calibration on Integrated Water Flow Model (IWFM) • Presented updated calibration and future conditions modeling results to Technical Forum	• Perform analysis of sustainability scenarios and potential water supply scenarios and present to Tech Forum, SAC and Board
Task 5: Establish Basin Sustainability Criteria	• Facilitated discussions on sustainability thresholds with SAC and Board • Developed draft sustainability numbers for consideration by GSA Board at January 9 meeting	• Develop draft GSP section on Sustainability
Task 6. Monitoring Networks	• Submitted revised Monitoring Networks GSP section to GSA Board for approval	• Task 6 is completed; no further work is anticipated
Task 7: Projects and Actions for Sustainability Goals	Develop presentation materials on projects and actions for consideration by Technical Forum, SAC and Board	• Revise projects and actions representation based on feedback from Technical Forum, SAC and Board

Task	Work Completed During the Reporting Period	Work Scheduled for Next Period
Task 8. GSP Implementation	• Developed presentation materials on the implementation plan for consideration by Technical Forum, SAC and Board	• Revise implementation plan components based on feedback from Technical Forum, SAC and Board
Task 9. GSP Development	• No work was completed on this task during this reporting period	• No work is anticipated during the next reporting period
Task 10: Education, Outreach and Communication	• Participated in meetings with CBGSA Board and SAC	• Continued participation in meetings with CBGSA Board, SAC and local stakeholders
Task 11: Project Management	• Ongoing project management activities	• Ongoing project management activities

Table 2: Summary of Task/Deliverables Status for Category 1 Tasks (Task Orders 3 and 5)

Task	Work Completed During the Reporting Period	Work Scheduled for Next Period
Task 12: Groundwater Monitoring Well Network Expansion	• Participated in meetings with Technical Forum, SAC and Board to discuss issues related to monitoring programs • Continued to work with GSA Ad-hoc committee to refine potential monitoring well locations for DWR technical support services	• Refinement of proposed monitoring well locations
Task 13: Evapotranspiration Evaluation for Cuyama Basin Region	• Refinement of land use and METRIC ET estimates in Cuyama Basin model	• Continued refinement of land use and METRIC ET estimates in Cuyama Basin model
Task 14: Surface Water Monitoring Program	• Participated in meetings with Technical Forum, SAC and Board to discuss issues related to monitoring programs	• Identification of surface water monitoring locations and gaps
Task 15: Category 1 Project Management	• Ongoing project management activities	• Ongoing project management activities

2 Budget Status

Table 3 shows the percent spent for each task under Task Order 1. 100% of the available Task Order 1 budget has been expended ($321,135.00 out of $321,135).

Table 3: Budget Status for Task Order 1

Task	Total Budget	Spent Previously	Spent this Period	Total Spent to Date	Budget Remaining	% Spent to Date
1	$ 35,768.00	$ 35,755.53	$ -	$ 35,755.53	$ 12.47	100%
2	$ 61,413.00	$ 61,413.00	$ -	$ 61,413.00	$ -	100%
3	$ 45,766.00	$ 45,766.00	$ -	$ 45,766.00	$ -	100%
4	$ 110,724.00	$ 110,724.00	$ -	$ 110,724.00	$ -	100%
5	$ -	$ -	$ -	$ -	$ -	n/a
6	$ -	$ -	$ -	$ -	$ -	n/a
7	$ 12,120.00	$ 12,120.00	$ -	$ 12,120.00	$ -	100%
8	$ -	$ -	$ -	$ -	$ -	n/a
9	$ -	$ -	$ -	$ -	$ -	n/a
10	$ 45,420.00	$ 45,432.47	$ -	$ 45,432.47	$ (12.47)	100%
11	$ 9,924.00	$ 9,924.00	$ -	$ 9,924.00	$ -	100%
Total	**$ 321,135.00**	**$ 321,135.00**	$ -	**$ 321,135.00**	$ -	**100%**

Table 4 shows the percent spent for each task under Task Order 2. 100% of the available Task Order 2 budget has been expended ($399,469.00 out of $399,469).

Table 4: Budget Status for Task Order 2

Task	Total Budget	Spent Previously	Spent this Period	Total Spent to Date	Budget Remaining	% Spent to Date
1	$ -	$ -	$ -	$ -	$ -	n/a
2	$ 48,457.00	$ 48,458.00	$ -	$ 48,458.00	$ (1.00)	100%
3	$ 24,182.00	$ 24,182.00	$ -	$ 24,182.00	$ -	100%
4	$ 103,880.00	$ 103,880.00	$ -	$ 103,880.00	$ -	100%
5	$ 60,676.00	$ 60,676.00	$ -	$ 60,676.00	$ -	100%
6	$ 65,256.00	$ 65,255.00	$ -	$ 65,255.00	$ 1.00	100%
7	$ 36,402.00	$ 36,402.00	$ -	$ 36,402.00	$ -	100%
8	$ -	$ -	$ -	$ -	$ -	n/a
9	$ -	$ -	$ -	$ -	$ -	n/a
10	$ 45,420.00	$ 45,420.00	$ -	$ 45,420.00	$ -	100%
11	$ 15,196.00	$ 15,196.00	$ -	$ 15,196.00	$ -	100%
Total	**$ 399,469.00**	**$ 399,469.00**	**$ -**	**$ 399,469.00**	**$ -**	**100%**

Table 5 shows the percent spent for each task under Task Order 3. 100% of the available Task Order 3 budget has been expended ($188,238.00 out of $188,238).

Table 5: Budget Status for Task Order 3

Task	Total Budget	Spent Previously	Spent this Period	Total Spent to Date	Budget Remaining	% Spent to Date
12	$ 53,244.00	$ 53,244.00	$ -	$ 53,244.00	$ -	100%
13	$ 69,706.00	$ 69,706.00	$ -	$ 69,706.00	$ -	100%
14	$ 53,342.00	$ 53,342.00	$ -	$ 53,342.00	$ -	100%
15	$ 11,946.00	$ 11,946.00	$ -	$ 11,946.00	$ -	100%
Total	**$ 188,238.00**	**$ 188,238.00**	$ -	**$ 188,238.00**	**$ -**	**100%**

Table 6 shows the percent spent for each task under Task Order 4 as of December 28, 2018. 79% of the available Task Order 4 budget has been expended ($605,204.15 out of $764,396).

Table 6: Budget Status for Task Order 4

Task	Total Budget	Spent Previously	Spent this Period	Total Spent to Date	Budget Remaining	% Spent to Date
1	$ -	$ -	$ -	$ -	$ -	n/a
2	$ 24,780.00	$ 24,445.50	$ -	$ 24,445.50	$ 334.50	99%
3	$ 26,912.00	$ 26,894.00	$ -	$ 26,894.00	$ 18.00	100%
4	$ 280,196.00	$ 269,965.26	$ 7,046.00	$ 277,011.26	$ 3,184.74	99%
5	$ 47,698.00	$ 46,311.88	$ 1,330.00	$ 47,641.88	$ 56.12	100%
6	$ -	$ -	$ -	$ -	$ -	n/a
7	$ 117,010.00	$ 96,853.70	$ 8,408.00	$ 105,261.70	$ 11,748.30	90%
8	$ 69,780.00	$ -	$ 35,456.25	$ 35,456.25	$ 34,323.75	51%
9	$ 91,132.00	$ -	$ -	$ -	$ 91,132.00	n/a
10	$ 70,236.00	$ 64,603.88	$ 1,361.72	$ 65,965.60	$ 4,270.40	94%
11	$ 36,652.00	$ 18,557.46	$ 3,970.50	$ 22,527.96	$ 14,124.04	61%
Total	**$ 764,396.00**	**$ 547,631.68**	**$ 57,572.47**	**$ 605,204.15**	**$ 159,191.85**	**79%**

Table 7 shows the percent spent for each task under Task Order 5 as of December 28, 2018. 44% of the available Task Order 5 budget has been expended ($200,689.74 out of $459,886).

Table 7: Budget Status for Task Order 5

Task	Total Budget	Spent Previously	Spent this Period	Total Spent to Date	Budget Remaining	% Spent to Date
12	$ 196,208.00	$ 96,461.62	$ 8,433.00	$ 104,894.62	$ 91,313.38	53%
13	$ 24,950.00	$ 21,913.51	$ 532.00	$ 22,445.51	$ 2,504.49	90%
14	$ 204,906.00	$ 39,144.60	$ 18,443.46	$ 57,588.06	$ 147,317.94	28%
15	$ 33,822.00	$ 13,198.55	$ 2,563.00	$ 15,761.55	$ 18,060.45	47%
Total	**$ 459,886.00**	**$ 170,718.28**	**$ 29,971.46**	**$ 200,689.74**	**$ 259,196.26**	**44%**

3 Schedule Status

The project is on schedule. Work authorized under Task Orders 1, 2 and 3 are complete.

4 Outstanding Issues to be Coordinated

There are no outstanding issues at this time.