



UKIAH VALLEY BASIN GROUNDWATER SUSTAINABILITY AGENCY
501 Low Gap Rd., Rm. 1010 ♦ Ukiah ♦ California 95482 ♦ (707)463-4441 ♦ fax (707)463-7237

NOTICE OF MEETING

NOTICE IS HEREBY GIVEN that the Ukiah Valley Basin Groundwater Sustainability Agency (“Agency”) Board of Directors (“Board”) will hold its regular Board Meeting at:

1:30 P.M. - Thursday, November 12th, 2020
Mendocino County Board of Supervisors Chambers,
501 Low Gap Road, Room 1070, CA 95482

Due to COVID-19 the UVBGSA meetings will be conducted virtually and not available for in person public participation (pursuant to State Executive Order N 29 20).

The public may participate digitally in meetings by sending comments to uvbgsa@mendocinocounty.org or by clicking the link below to join the Zoom meeting, in lieu of personal attendance.

Zoom Meeting: <https://mendocinocounty.zoom.us/j/81710645976>

Phone: +1 669 900 9128

Meeting ID: 817 1064 5976

All email comment must be received by 8:00 A.M. the morning of the meeting in order to be published online prior to the meeting.

AGENDA

1. CALL TO ORDER AND ROLL CALL

2. PLEDGE OF ALLEGIANCE

3. CONSENT ITEMS

a. Approval of Minutes from the September 10th, 2020 Meeting

4. STAFF UPDATES

a. Appointment Period of UVBGSA Members for 2021/22

b. Data Sharing Reminder

5. PUBLIC COMMENTS ON ITEMS NOT ON THE AGENDA

The Board will receive public comments on items not appearing on the agenda and within the subject matter jurisdiction of the Agency. The Board will not enter into a detailed discussion or take any action on any items presented during public comments. Such items may only be referred to staff for administrative action or scheduled on a subsequent agenda for discussion. Persons wishing to speak on specific agenda items should do so at the time specified for those items. The presiding Chair shall limit public comments to three minutes.

6. ACTION ITEMS

a. Discussion and Possible Action Including Adoption of the 2021 Board of Directors Master Meeting Calendar



UKIAH VALLEY BASIN GROUNDWATER SUSTAINABILITY AGENCY

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The Board will receive an update and recommendations on the 2021 calendar.

b. Update on Outreach and Working Group Meetings

The Board will receive an update regarding the public, tribal, and working group meetings that were held in the last three months.

c. Discussion and Possible Action Regarding Updates to the Monitoring Network

The Board will receive an update on the progress on instrumentation of existing wells, installation timeline for new stream gages, and Technical Support Services as well as requirements of the GSP Monitoring Networks.

d. Discussion Regarding the Development of Groundwater Sustainability Plan (GSP) Chapters and Upcoming Opportunities for Review

The Board will receive an update on the progress on GSP Chapter 2 edits, development of additional chapters, and upcoming opportunities for review by the Board, Technical Advisory Committee and the public.

e. Presentation and Discussion Regarding the Future Scenarios and Collaboration with Sonoma Water

The Board will receive an update and recommendations from Larry Walker and Associates on the future scenarios to consider in the GSP development.

7. DIRECTOR REPORTS

8. ADJOURNMENT

The Ukiah Valley Basin Groundwater Sustainability Agency complies with ADA requirements and upon request, will attempt to reasonably accommodate individuals with disabilities by making meeting material available in appropriate alternative formats (pursuant to Government Code Section 54953.2). Anyone requiring reasonable accommodation to participate in the meeting should contact the Mendocino County Executive Office by calling (707) 463-4441 at least five days prior to the meeting.

Please reference the Mendocino County website to obtain additional information for the Ukiah Valley Basin Groundwater Sustainability Agency: <http://www.mendocinocounty.org/uvbgsa>.

To participate virtually please join us on Zoom at

Zoom Meeting: <https://mendocinocounty.zoom.us/j/81710645976>

Phone: +1 669 900 9128

Meeting ID: 817 1064 5976



Ukiah Valley Basin Groundwater Sustainability Agency

Agenda Summary

Item No.:	3.a
Date:	11/12/20
To:	Board of Directors
Subject:	Discussion and Possible Approval of Minutes from the September 10th, 2020 Regular Meeting
Consent Agenda ☒ Regular Agenda ☐ Noticed Public Hearing ☐	

Summary:

Approval of Minutes from September 10th, 2020 Regular Meeting.

Recommended Action:

Approve the September 10th, 2020, regular meeting minutes.

Background:

The Agency convened on September 10th, 2020.

Fiscal Summary:

N/A

Action: _____

Motion: _____ **2nd:** _____



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NOTICE OF MEETING

NOTICE IS HEREBY GIVEN that the Ukiah Valley Basin Groundwater Sustainability Agency (“Agency”) Board of Directors (“Board”) will hold its regular Board Meeting at:

1:30 P.M. - Thursday, September 10, 2020
Mendocino County Board of Supervisors Chambers,
501 Low Gap Road, Room 1070, CA 95482

MINUTES

1. CALL TO ORDER AND ROLL CALL

Present: Director Carre Brown, Director Douglas Crane, Director Alfred White, Director Brandi Brown, Director Zachary Robinson

Absent: Director Richard Mack

2. PLEDGE OF ALLEGIANCE

3. CONSENT ITEMS

a. Approval of Minutes from the June 11, 2020 Meeting

Presenter/s: Chair Carre Brown

Public Comment: None

Board Action: Upon motion by Director White, seconded by Director Robinson, and carried (9/10/2020); IT IS ORDERED that the minutes with corrections from the June 11, 2020, Ukiah Valley Groundwater Sustainability Agency are hereby approved.

Abstain: Director Brandi Brown

4. STAFF UPDATES

Presenter/s: Ms. Sarah Dukett, Deputy Chief Executive Officer, Mendocino County

Public Comment: Laurel Marcus, California Land Stewardship Institute

Board Action: Board Direction to staff to draft a California Land Stewardship Institute (CLSI) grant application support letter for a Ukiah Valley Basin groundwater coordinator. Upon motion by Director White, seconded by Director Robinson, and carried with Director Brandi Brown abstaining (9/10/20); IT IS ORDERED that a support Letter for CLSI Grant application is hereby approved.



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5. PUBLIC COMMENTS ON ITEMS NOT ON THE AGENDA

Presenter/s: Chair Carre Brown

Public Comment: None.

6. ACTION ITEMS

a. Discussion and Possible Action Regarding Updates to the Monitoring Network

Presenter/s: Ms. Laura Foglia, Senior Engineer, Larry Walker Associates; Mr. Amir Mani, Larry Walker Associates; and Ms. Sarah Dukett, Deputy Chief Executive Officer, Mendocino County

Public Comment: Devon Jones, Mendocino County Farm Bureau

The Board received a presentation regarding the monitoring network and technical support services update including instrumentation of existing wells, new stream gage installation and new wells.

Board Action: None.

b. Discussion Regarding the Development of Groundwater Sustainability Plan (GSP) Chapters and Upcoming Opportunities for Review

Presenter/s: Ms. Laura Foglia, Senior Engineer, Larry Walker Associates; Mr. Amir Mani, Larry Walker Associates; and Ms. Sarah Dukett, Deputy Chief Executive Officer, Mendocino County

Public Comment: None.

The Board received a presentation regarding the writing and public comment process for GSP chapters. Chapter 2 was provided to the TAC in September 2020 for comments. As the technical team progresses in investigating each sustainable management criteria the respective subchapters will be rolled out for review by the TAC, Board and public.

Board Action: None.

c. Presentation and Discussion Regarding the Development of Future Scenarios and the Scenario Development Survey

Presenter/s: Ms. Laura Foglia, Senior Engineer, Larry Walker Associates; Mr. Amir Mani, Larry Walker Associates; and Ms. Sarah Dukett, Deputy Chief Executive Officer, Mendocino County



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Public Comment: Devon Jones, Mendocino County Farm Bureau and Elizabeth Salomone, Russian River Flood Control and Water Conservation District

The Board received a presentation regarding potential future scenarios to run and key considerations for determining which areas to focus on. Larry Walk and Associates updated the board on the Scenario Development Survey results highlighting options including: future baseline scenarios, changes to the Potter Valley Project, resiliency, land use changes, population growth and recharge projects.

Board Action: Direction to staff regarding scenario considerations for population growth, Potter Valley Project changes and increased storage at Lake Mendocino.

d. Discussion and Possible Action Regarding Integrated Model Updates and Preliminary Surface Water and Groundwater Interaction Results

Presenter/s: Ms. Laura Foglia, Senior Engineer, Larry Walker Associates; Mr. Amir Mani, Larry Walker Associates; and Ms. Sarah Dukett, Deputy Chief Executive Officer, Mendocino County

Public Comment: Devon Jones, Mendocino County Farm Bureau

The Board received a presentation updating the Board on the Integrated Model progress. The Coupled GSFLOW is in final calibration. Demands and diversions are being included in the GSFLOW based on IDC results. Additional observation points for groundwater levels and streamflow are included for the next round of calibration. The next steps include sensitivity analysis, calibration of GSFLOW and assessment of adding the Ag package. The Board also received information on various options that can be utilized with satellite imagery to better understand surface water/groundwater interactions and groundwater dependent ecosystems.

Board Action: Direction to staff to run the precipitation gamma distribution for 100 years, 50 years and 25 years for comparison to help inform the future baseline decision.

7. DIRECTOR REPORTS

Presenter/s: Chair Brown

Public Comment: None.

8. ADJOURNMENT

(3:25 pm)



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Attest: Secretary

CARRE BROWN, Chair

DRAFT



Ukiah Valley Basin Groundwater Sustainability Agency

Agenda Summary

Item No.:	6.a
Date:	11/12/20
To:	Board of Directors
Subject:	Discussion and Possible Action Including Adoption of the 2021 Board of Directors Master Meeting Calendar
Consent Agenda ☐ Regular Agenda ☒ Noticed Public Hearing ☐	

Summary:

The Joint Power Agreement requires that the Board of Directors meet at least quarterly (Section 8.2). Therefore, the Board of Directors should consider the proposed 2021 Board of Directors Master Meeting Calendar.

Recommended Action:

Adopt the 2021 Board Of Directors Master Meeting Calendar

Background:

On May 10, 2017, the general consensus of the Board was the Board shall meet on the Second Thursday of the month at 1:30 P.M. in the Mendocino County Board of Supervisors Chambers; initially meeting monthly, then transitioning to quarterly meetings. The meetings are currently scheduled monthly to deal with any last minute issues in the last six months of the GSP Planning Phase.

Public Meetings will also be tentatively scheduled throughout the next year on February 23, April 20, June 22, and September 21. These meetings will allow for public updates and discussion of comments on the plan.

Fiscal Summary: N/A



Ukiah Valley Basin Groundwater Sustainability Agency

Agenda Summary

Action: _____

Motion: _____ **2nd:** _____

2021 Proposed Schedule

UVBGSA Board

JANUARY

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

FEBRUARY

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28						

MARCH

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APRIL

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MAY

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23	24	25	26	27	28	29
30	31					

JUNE

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20	21	22	23	24	25	26
27	28	29	30			

JULY

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25	26	27	28	29	30	31

AUGUST

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15	16	17	18	19	20	21
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29	30	31				

SEPTEMBER

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26	27	28	29	30		

OCTOBER

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24	25	26	27	28	29	30
31						

NOVEMBER

S	M	T	W	T	F	S
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14	15	16	17	18	19	20
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28	29	30				

DECEMBER

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

February 11

Regular Meeting

March 11

Regular Meeting

April 8

Regular Meeting

May 13

Regular Meeting

June 10

Regular Meeting

July 8

Regular Meeting

October 14

Regular Meeting

Meeting Location

501 Low Gap Rd. Room 1070,
Ukiah, CA 95482

Meeting Time

1:30 p.m.

Ukiah Valley Basin GSA

501 Low Gap Road, Room 1010

Ukiah, CA 95482

707.463.4441

uvbgsa@mendocinocounty.org

www.mendocinocounty.org/uvbgsa

Key

UVBGSA Board Meetings





Ukiah Valley Basin Groundwater Sustainability Agency

Agenda Summary

Item No.:	6.b
Date:	11/12/20
To:	Board of Directors
Subject:	Update on Outreach and Working Group Meetings
Consent Agenda ☐ Regular Agenda ☒ Noticed Public Hearing ☐	

Summary:

The Board will receive an update regarding the public, tribal and working group meetings that were held in the last three months.

Recommended Action:

Receive presentation regarding the outreach undertaken by MCWA staff and give recommendations on other stakeholders to conduct outreach.

Background:

On April 18th, 2017 with the passage of the Joint Powers Agreement, the UVBGSA was authorized to exercise all powers afforded to a GSA under SGMA legislation. This includes conducting public outreach with stakeholders within the Basin as well as focused one on one stakeholder interviews to better understand the needs of the Basin. To gain further understanding of basin dynamics a series of working group meetings were also convened to discuss the technical aspects of developing a model for the UVB.

Fiscal Summary: N/A

Action: _____

Motion: _____ **2nd:** _____



Ukiah Valley Basin Groundwater Sustainability Agency

Agenda Summary

Item No.:	6.c
Date:	11/12/20
To:	Board of Directors
Subject:	Discussion and Possible Action Regarding Updates to the Monitoring Network
Consent Agenda ☐ Regular Agenda ☒ Noticed Public Hearing ☐	

Summary:

The Board will receive an update on the progress on instrumentation of existing wells, installation timeline for new stream gages, and Technical Support Services.

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Recommended Action:

Provide direction to staff regarding the monitoring network.

Background:

On April 29, 2019, the Department of Water Resources tentatively approved the Agency's Technical Support Services application to drill monitoring wells in the Ukiah Valley to support the Groundwater Sustainability Plan development and compliance. In March 2020, DWR awarded additional Proposition 68 funding for instrumenting wells and gages.

Fiscal Summary: N/A

Action: _____

Motion: _____ **2nd:** _____



Ukiah Valley Basin Groundwater Sustainability Agency

Agenda Summary

Item No.:	6.d
Date:	11/12/20
To:	Board of Directors
Subject:	Discussion Regarding the Development of Groundwater Sustainability Plan (GSP) Chapters and Upcoming Opportunities for Review
Consent Agenda ☐ Regular Agenda ☒ Noticed Public Hearing ☐	

Summary:

The Board will receive an update on the progress on GSP Chapter 2 edits, development of additional chapters, and upcoming opportunities for review by the Board, Technical Advisory Committee and the public.

Recommended Action:

Provide direction to staff regarding the UVGSP commenting process.

Background:

On June 14, 2018, the Ukiah Valley Basin Groundwater Sustainability Agency (UVBGSA) recommended approval of a contract with Larry Walker and Associates for the development of the Ukiah Valley Groundwater Sustainability Plan (GSP). On July 10, 2018, the Mendocino County Water Agency Board of Directors approved the contract with Larry Walker and Associates. On September 13, 2018, Larry Walker and Associates present an overview of the project and schedule to solicit feedback from the Board. Larry Walker and Associates will be presenting to the Board on a regular basis to review components of the GSP for feedback and approval.

Fiscal Summary: N/A

Action: _____



Ukiah Valley Basin Groundwater Sustainability Agency

Agenda Summary

Motion: _____ **2nd:** _____



Ukiah Valley Basin Groundwater Sustainability Agency

Agenda Summary

Item No.:	6.e
Date:	11/12/20
To:	Board of Directors
Subject:	Presentation and Discussion Regarding the Future Scenarios and Collaboration with Sonoma Water
Consent Agenda ☐ Regular Agenda ☒ Noticed Public Hearing ☐	

Summary:

The Board will receive an update and presentation from Larry Walker and Associates on future scenarios to consider in the model for GSP development.

Recommended Action:

Provide direction to staff regarding potential scenarios

Background:

The integrated model is in the final stages of development and will be utilized during the summer to run appropriate future scenarios, as wells as baseline historical and future conditions. Larry Walker and Associates is working collaboratively with the Technical Advisory Committee to generate a list of model scenarios for Board feedback and consideration that would inform the decision-making process surrounding the Ukiah Valley Basin GSP. These scenarios should preferably help us in one or more of the following areas:

- Improve our understanding of the Ukiah Valley Basin;
- Set sustainable management criteria for one or more of the undesirable results;
- Develop management actions and future projects;
- Evaluate possible future changes; and,
- Illustrate the sustainable management of the basin by 2042.



Ukiah Valley Basin Groundwater Sustainability Agency

Agenda Summary

Fiscal Summary: N/A

Action: _____

Motion: _____ **2nd:** _____

DRAFT

Ukiah Valley Basin Groundwater Sustainability Agency

Ukiah Valley Groundwater Sustainability Plan Development Update

November 12, 2020



Outline

- Introduction to GSP Monitoring Network and Instrumentation Updates
- Outreach Meetings Update
- GSP Writing and Review:
 - Review and commenting of draft Chapter 2 and schedule for next deliverables
 - Revised proposed schedule for chapter delivery and review
- Future Scenarios
 - Summary of Scenario Development Survey
 - Examples of Simulated Future Scenarios
 - Development of Further Scenarios

Outline

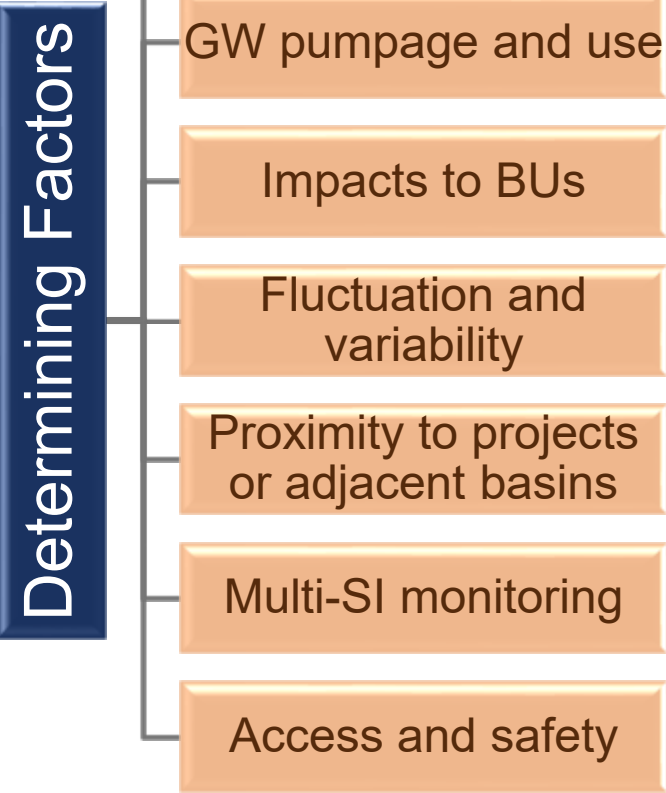
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Monitoring Networks

- Why is it important?
 - Measures progress toward the achievement of any management goal
 - Sustainability criteria are defined based on the components of the monitoring network
- **May be different for each sustainability indicator**
- Must have sufficient temporal frequency and spatial distribution to:
 - demonstrate short-term, seasonal, and long-term trends in basin conditions
 - demonstrate progress toward achieving measurable objectives
 - monitor impacts to the beneficial uses or users of groundwater
 - monitor changes in groundwater conditions relative to MOs and MTs
 - quantify annual changes in water budget components

Monitoring Networks: Density and Extent

“There is no definitive rule for the density of groundwater monitoring points needed in a basin.”



Reference	Monitoring Well Density (wells per 100 miles ²)
Heath (1976)	0.2 - 10
Sophocleous (1983)	6.3
Hopkins (1984)	4.0
Basins pumping more than 10,000 acre-feet/year per 100 miles ²	
Basins pumping between 1,000 and 10,000 acre-feet/year per 100 miles ²	2.0
Basins pumping between 250 and 1,000 acre-feet/year per 100 miles ²	1.0
Basins pumping between 100 and 250 acre-feet/year per 100 miles ²	0.7

UVGB: 59 sq mile

Ongoing installation: What has been done?

■ GW Level Monitoring:

- Instrumented 4 existing CASGEM wells; Will instrument 4+ more.
- 3-4 wells to be drilled by the DWR, at least 2 are nested wells.
- These provide continuous measurement of GW levels published on LWA portal for planning use and owners' use.

■ Streamflow monitoring:

- 4 existing USGS streamflow gages exist within the Basin (including Hopland gage outside of the basin)
- 2 streamflow gages are being prepared to be installed on Russian River in Redwood Valley and on Forsythe Creek. Probably a third tributary gage to be installed later.

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Existing and Planned Monitoring Network for Chronic Lowering of Groundwater Levels

- We want to rely on existing CASGEM and what we drill and/or instrument.
- Our initial proposal is to include DWR wells, instrumented CASGEM wells, and TSS Wells. Then, we can add a few CASGEM wells for better spatial coverage.
 - Aquifer I: 3 (DWR) + 6|8 (Instrumented) + 4 (TSS)
 - Aquifer II: 1* (DWR) + 1 (Nested Instrumented) + 2|3 (TSS)
 - Aquifer III: 1* (DWR) + 1 (Nested Instrumented) + 2|3 (TSS)
- We can use RMPs for setting SMCs:
 - Aquifer I: DWR wells
 - Aquifer II: No long-term data, we should decide if we are setting SMCs
 - Aquifer III: No long-term data, we should decide if we are setting SMCs



DRAFT

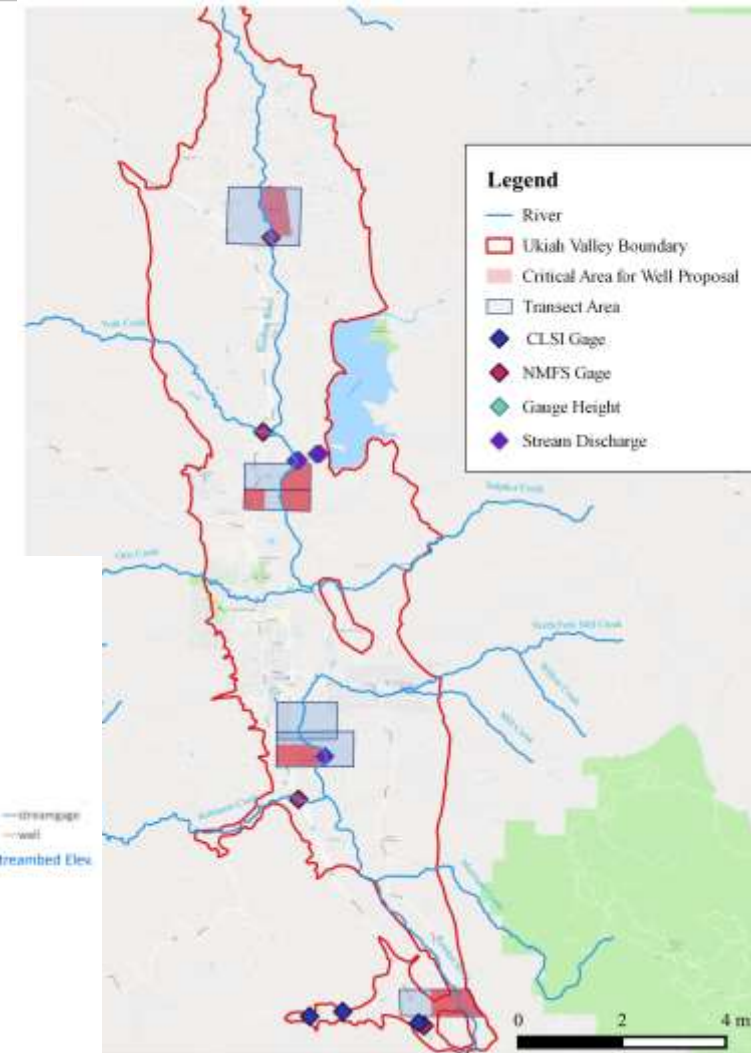
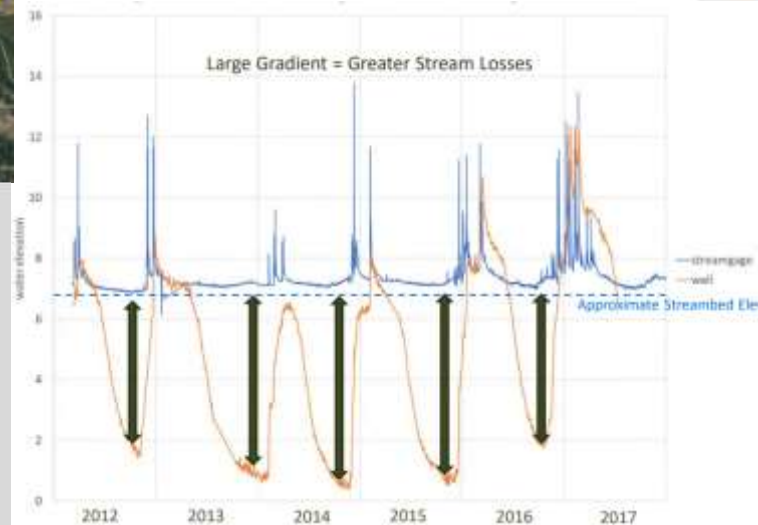
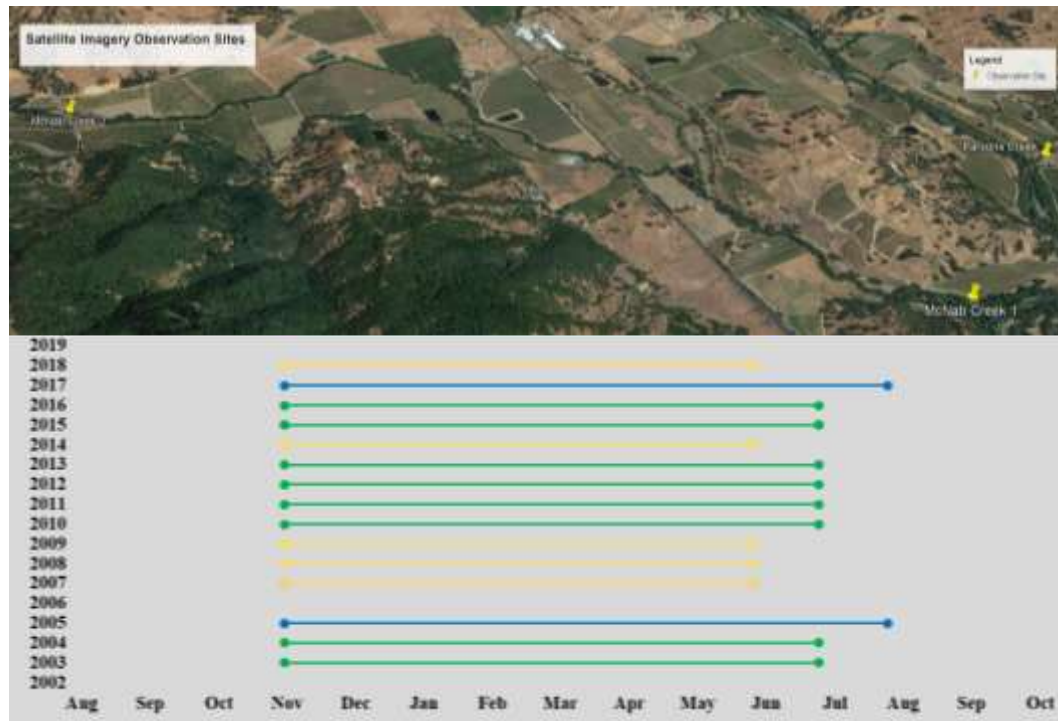
Existing and Planned Monitoring Network for Groundwater Quality Degradation

- PLACEHOLDER

DRAFT

Monitoring Network for Interconnected Surface Water (ISW) and GDEs

- Under development and evaluation
- Transects will play a critical role
- Satellite images analysis for GDEs and ISW



Outline

- Introduction to GSP Monitoring Network and Instrumentation Updates
- Outreach Meetings Update
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Status Update

- Public meeting
 - September 29th (Zoom in English and Spanish). Recordings available on County's YouTube account
- Tribal meeting
 - October 19th 6-8 PM. Follow-up meeting to be held in December.
- Stakeholder interviews
 - 1-on-1 interviews ongoing:
 - Sonoma Water (meetings in September and November 2020)
 - Farm Bureau (meeting to be scheduled in November)
 - City of Ukiah: follow up meeting in November to confirm scenarios and data
 - PVP working group meeting: September 30th.
 - Chronic Lowering of GW Levels SMC Working Group: October 28th.

Outline

- Introduction to GSP Monitoring Network and Instrumentation Updates
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GSP Writing and Review

A GSP has five chapters:

1. Introduction



2. Plan Area and Basin Setting



3. Sustainable Management Criteria



4. Projects and Management Actions



5. Plan Implementation



Status of Chapter 2

- Components of chapter 2 are under review by the TAC and comments are being included.
- Missing sections are summarized below:

Missing Subsection	Delivery (By the End of month)
Jurisdictional Areas and Land Use: Small water districts' information to be filled	November 2020
Water Resources Monitoring and Management Programs: We need feedback	November 2020
County Zoning Plan	October 2020
GW contamination, cleanup, and migration: We need your feedback	November 2020
Impacts on GDEs	Will be written as we progress (Feb 2021)
Updated CommPlan (Notice and Communication)	November Board Meeting
Change in GW Storage	Will be written as we progress (Feb 2021)
Identification of Interconnected Surface Water Systems	Will be written as we progress (Feb 2021)
Identification of Groundwater-dependent Ecosystems	Will be written as we progress (Feb 2021)
Water Budget	January 2021
Modeling Appendix	January 2021
Water Quality Appendix	November 2021

GSP Writing and Review

Proposed schedule for the next chapters:

- Chapter 3: Sustainability Management Criteria
 - Individual SMCs will be delivered to the TAC as they are discussed
 - Water Quality and Subsidence SMC by Nov 2020
 - Lowering levels and reduction in storage by February 2021
 - Interconnected Surface Water and GDEs by April 2021
- Chapter 4: Projects and Management Actions
 - Planned to be done and delivered by Apr-May 2021
- Chapter 5: Plan Implementation
 - Planned to be delivered by June 2021
 - Will be most likely delivered as part of the draft GSP rollout

Outline

- Introduction to GSP Monitoring Network and Instrumentation Updates
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What is the future baseline scenario?

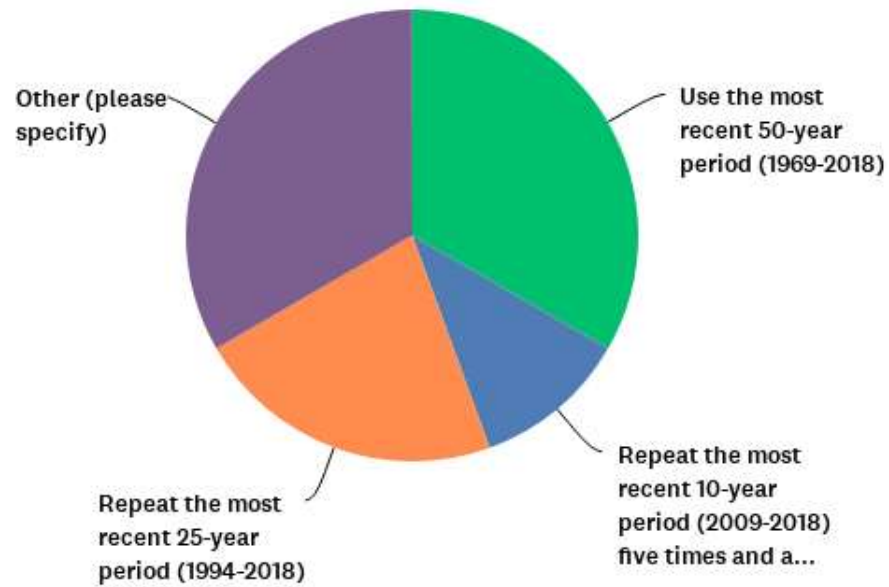
Section 354.18(c)(3):

...The projected water budget shall utilize the following methodologies and assumptions to estimate future baseline conditions concerning hydrology, water demand and surface water supply availability or reliability over the planning and implementation horizon: (A) Projected hydrology shall utilize 50 years of historical precipitation, evapotranspiration, and streamflow information as the baseline condition for estimating future hydrology. The projected hydrology information shall also be applied as the baseline condition used to evaluate future scenarios of hydrologic uncertainty associated with projections of climate change and sea level rise.

- The 50-year baseline has not been uniformly assigned among submitted GSPs and GSAs have chosen the most representative periods to form 50+ year baselined for their basins.
- This baseline will be used as the business-as-usual scenario for future for comparison to other management scenarios and planning purposes.

Future Scenario Survey: Future Baseline

- In order to generate a representative future baseline scenario, we need to form a 50-year period from the basin's historical record. What would be the most representative 50-year baseline?



Major Comments:

- Last 50-years may be the least conservative because it does not take into account the most recent period → suggest to repeat the last 25 years
- Either 25-50 year periods are fine but we should look at how the water years are assigned with the Gamma Distribution.

Future Scenario Survey: Climate change

- DWR methodology for climate change simulation through precipitation and ET multipliers:

Is:

Is not:

Climate time-period analysis || Conditions at the end of the simulation and each year in between are not the expected conditions at those years rather how things may look like around 2030 or 2070

Transient analysis || Forecast aims to produce a timeseries of results that are representative or the progression of changes into the future.

Suitable for relative comparison to the historical simulations and assessing statistical trends and summary statistics

Suitable to be considered as specific occurrences in points of time

Suitable to single out changes due to climate change impacts

Fully capable to project changes to interannual phenomena like changes to seasonality, rainfall duration and intensity, etc. due to climate change

Straight forward and recommended by the DWR and widely used by other basins

Being used or supported by Sonoma Water in their basins.

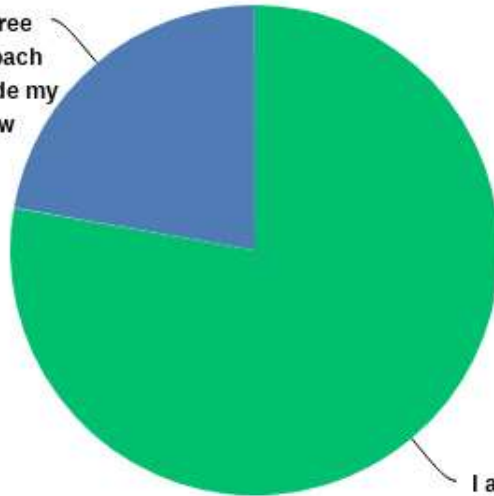
Already including a group of GCM/RCP Scenarios in its development

Equivalently justifiable as using single transient scenarios unless they are studied for the local region

Future Scenario Survey: Climate change

- Do you agree with using the DWR recommended approach to conduct the climate change simulations for the Ukiah Valley Basin GSP? If not, please provide your suggestion while also considering that additional time and budget needed to conduct different approaches may become significant.

No, I do not agree with the approach and will provide my comment below



I agree with using the DWR recommended approach

Major Comments:

- A transient method would be more appropriate for evaluating potential impacts to Lake Mendocino and surface water flows in the main stem Russian River.
- Include additional climate change simulations as may be available to the consultants and deemed relevant for this basin.

Future Scenario Survey: Changes to PVP

- There is an expectation that PVP operations would change during the implementation period of the GSP. This scenario, or a set of scenarios, would simulate how those changes would impact the basin and the beneficial uses.

Major Comments:

- All respondents say it is helpful and we can run Sonoma Water scenarios.
- No diversion, partial (winter only) diversion, and run of the river scenario should be run.
- Everybody agrees it would not be immediate, responses from 5 to 15 years.
- Everybody thinks we should combine it with other scenarios, including climate change, fish flow habitat,

Future Scenario Survey: summary of PVP scenarios

- LWA to conduct bookending scenarios to gauge the impacts of the PVP scenarios to the extent possible.
- Final 3 scenarios that were agreed upon are:
 - Removal of the dam and no additional flows (worst-case scenario)
 - No change
 - Run of the river
- All scenarios will be set up to start happening in 15 years
- Difficult issue is to estimate appropriate flows from CVD and PVP for different scenarios.

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Future Scenario: To be run for GSP Submittal

Can be fit in
our current
budget

Depending on
input data and
conditions may
be doable or
may need more
time than
originally
expected

Would not fit in
this planning
period

Scenario	What we are required to have	What we have now or plan to have for GSP Submittal in Jan 2020
Future Baseline	A 50-year representation	50-year repeat of historical baseline (could be changed to two 25-year)
Climate Change	Capture impacts of climate change using best available science and knowledge	2 DWR provided climate period analyses 2030 & 2070
CVD Releases	Best available science and information: forecast appropriate releases for each scenario	Historical and future baseline using hard input measured by gages/ Future changes taken directly from Sonoma Water ResSim outputs
PVP	PVP outputs based on reasonable possibilities to assist with setting SMCs and developing management actions	Historical/future baseline input to basin from gages/ Scenarios taken directly from Sonoma Water ResSim outputs
Overall for other future scenarios	Best available science and accurate representation of basin and possibilities to develop SMCs and MAs	We are reliant on historical inputs and ResSim outputs for combination of scenarios assuming no major discrepancies between their flow and diversion calculations and our model

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Future Scenario: To be Considered for the Next Stage

Can be fit in our current budget Depending on input data and conditions may be doable or may need more time than originally expected Would not fit in this planning period	Scenario	What we are required to have	Proposed/possible Improvements for 2027 Milestone
	Future Baseline	A 50-year representation	Coordinate with Sonoma Water to use similar water years and similar setup as USGS Model
	Climate Change	Capture impacts of climate change using best available science and knowledge	Transient simulation of 50-year period using GCM/RCP/Downscaling method scenarios to be used in Sonoma basins and the Ukiah basin
	CVD Releases	Best available science and information: forecast appropriate releases for each scenario	Using compatible Sonoma ResSim with matching climate data and diversions as GSFLOW model; Coordinated with USGS model
	PVP	PVP outputs based on reasonable possibilities to assist with setting SMCs and developing management actions	Using compatible Sonoma ResSim with matching climate data and diversions as GSFLOW model; Coordinated with USGS model
	Overall for other future scenarios	Best available science and accurate representation of basin and possibilities to develop SMCs and MAs	Rerun impactful scenarios or additional scenarios with updated ResSim outputs and compare with USGS model

Other management scenarios to be considered

- Changes in Land Use and Ag
- Urban expansion, population growth, and increase in demand
- Recycled Water
- Recharge Projects
- Changes in Lake Mendocino Release

Future Scenario Survey: Changes in Land Use and Ag

- General expectation that cannabis cultivation would grow in the basin. This scenario would simulate such changes and how they might affect the water resources and beneficial uses within the basin.

Major Comments:

- Majority of respondents say it is not helpful/maybe helpful or not sure.
- Review Upper Russian River/Lake Mendocino Reliability report.
- Increased utilization of water rights in 20 years may cover for these scenarios.

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Future Scenario Survey: Urban expansion, population growth, and increase in demand

- These three changes are codependent and will happen to some extent according to historical trends. This scenario would show the extent of the changes and how they would impact the basin, its water resources, and beneficial uses.

Major Comments:

- Majority of respondents say it is a helpful scenario.
- Review Upper Russian River/Lake Mendocino Reliability report.
- Not everyone agrees on the trend or if historical trends are representative.
- Combine with PVP, land conversion, and climate change.

Future Scenario Survey: Recharge projects

- There has been a consensus among TAC members on implementing recharge projects in the future. This scenario would simulate possible recharge projects and how they would impact the basin.

Major Comments:

- Majority of respondents say it is a helpful scenario.
- Scale and location answer did not converge.
- Step-wise and in small steps was emphasized for when it may happen.
- Combine with PVP, RW, Ag land conversion, and climate change.

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Future Scenario Survey: Changes in Lake Mendocino Release

- Changes in Lake Mendocino releases are expected to happen due to FIRO and other regulatory measures. This scenario would simulate how these changes would impact the basin.

Major Comments:

- Majority of respondents say it is a helpful scenario.
- Most say to coordinate with Sonoma to the extent feasible.
- Step-wise and in small steps was emphasized for when it may happen.
- Combine with PVP, RW, Ag land conversion, and climate change.

Future Scenario Survey: Recycled Water

- City of Ukiah has been implementing its Recycled Water project and is scheduled to expand it in the near future. This scenario would simulate the impacts of increased Recycled Water use within the basin.

Major Comments:

- Majority of respondents say it is a helpful scenario.
- Follow the City's plan.

Discussion on Scenarios Prioritization

- Which scenario(s) would be more helpful for planning?
- What scenarios are better to be run in coordination with other scenarios?
- Other comments?

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Questions?

Thank you!