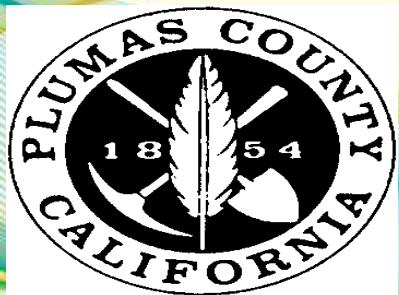


# Sierra Valley

## Technical Advisory Committee

January 11, 2021



Kennedy Jenks



Stillwater Sciences

# Agenda

---

- 3-Months look ahead
- Preliminary summary of surveys results
- Discussion



# 3-months look ahead

TAC meeting	Key topics	Key goals	GSP chapter production
<b>January</b>	<ul style="list-style-type: none"> <li>Summary of Water Quality and subsidence preliminary survey</li> <li>Introduction to Sierra Valley integrated hydrological model: review data and present model approach</li> </ul>	Receive feedback on data used for developing the model Develop a general understanding on the model development More responses for surveys	Technical team working already on Chapter 1 and 2
<b>February</b>	<ul style="list-style-type: none"> <li>Present suggested Monitoring Network and Sustainable Management Criteria for GW Quality and subsidence</li> <li>Overview of Groundwater Dependent Ecosystems (GDEs) approach</li> <li>Model development updates</li> </ul>	Get final TAC direction on GW quality and subsidence Receive preliminary feedback on GDEs	Based on TAC feedback, technical team will start drafting Chapter 3 for GW water quality and subsidence
<b>March</b>	<ul style="list-style-type: none"> <li>Refinement of Groundwater Dependent Ecosystems (GDEs) approach</li> <li>Introduction to declining groundwater levels SMC: preliminary approach</li> <li>Water budget: historical, current and future conditions</li> </ul>	Possibly get final feedback about GDEs and how to integrate that into the other SMCs Receive preliminary suggestions on groundwater levels SMC	Technical Team working on Chapter 2

# Requested Input as Follow-up to December TAC Meeting

---

- Groundwater Quality Survey at [www.surveymonkey.com/r/Z3W69Y8](http://www.surveymonkey.com/r/Z3W69Y8)
- Subsidence Survey at <http://www.surveymonkey.com/r/ZZ8VDTY>
- 9 respondents (3 non-TAC members)

# Groundwater Quality Survey – Constituents of Concern

	Needs SMC	In GSP, No SMC	Not in GSP
Arsenic	2	4	2
Boron	4	3	1
Chloride	1	1	1
Iron	0	3	2
Manganese	0	3	2
MTBE	2	1	1
Nitrate	4	3	0
TDS	2	2	0
Flouride	0	1	2
Other	0	0	0

Comments indicated needing to collect more data prior to setting SMC

Asked about consideration of other environmental quality factors (e.g., instream flows)

# Groundwater Quality Survey – Constituents of Concern

---

- Should SMC thresholds be set at the MCL?

- Yes – 5
- No – 3
- Comments

MCLs are a reasonable starting place

Would like more information on MCLs

- Should use of triggers to set warning/action levels be considered?

- Yes – 8
- No – 1
- Comments

data is limited

triggers could be useful but a first step

# Groundwater Quality Survey – Data Gaps & Additional Information

	Yes	No	Comments
Data gaps?	7	1	Private domestic wells in high density areas Some COCs not monitored No surface water data Data from outside the valley
Aware of Other Data Sources?	1	5	Could look at CASGEM
How to get Domestic Well Data?			Offer no cost testing to well owners (2) Use standard outreach/ask well owners (2) Use UCCE to work with ranchers Many landowners may be resistant



# Groundwater Quality Survey – Best existing wells for annual reporting

---

- Identified specific wells in Chilcoot, Vinton, Beckwourth and Sierra Valley Central
- Sierra Brooks, Loyalton, Calpine, Sierraville water systems
- Survey respondent offered their well
- Areas of subsidence, industrial or highly populated areas



# Groundwater Quality Survey – Additional Actions beyond monitoring and reporting

---

- Relationship of surface water to groundwater, monitoring of stream water quality
- Plan for drinking water wells with MCL exceedances
- Refer to Clean Water Act and other existing regulations
- Impacts from pumping rates, depths, locations
- Prevent water quality degradation

# Groundwater Quality – other comments

---

- Influence of Grizzly Fault Line and clay layer, is there a 3-D understanding of aquifer
- Water exchange occurring at the surface
- Understanding of snow density/ snow melt impact is important

# Subsidence Survey

	Yes	No	Comments
Noticed Effects of Subsidence?	1	6	Change in location and size of seasonal ponds No more artesian wells; increase in flooding during drought years
Should GSP consider private in addition to public infrastructure?	7	0	
Opinion on how much subsidence is too much?	5		0 inches 36 inches 24 inches 6 inches 1 inch

# Subsidence Survey -

---

- Preferred monitoring options for subsidence?
  - Continued ground elevation surveys – 7
  - Use of satellite InSAR data - 4
  - Install extensometers - 2
  - Installation of GPS stations - 3
  - Use groundwater elevation as proxy - 3
- Is there other information that should be considered?
  - Subsidence trend
  - Talk with people in areas with subsidence
  - Evaluate burrowing mammal health

# Discussion

---

