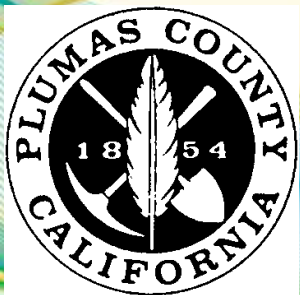


Sierra Valley Special Board meeting

November 3, 2021



Kennedy Jenks



Stillwater Sciences

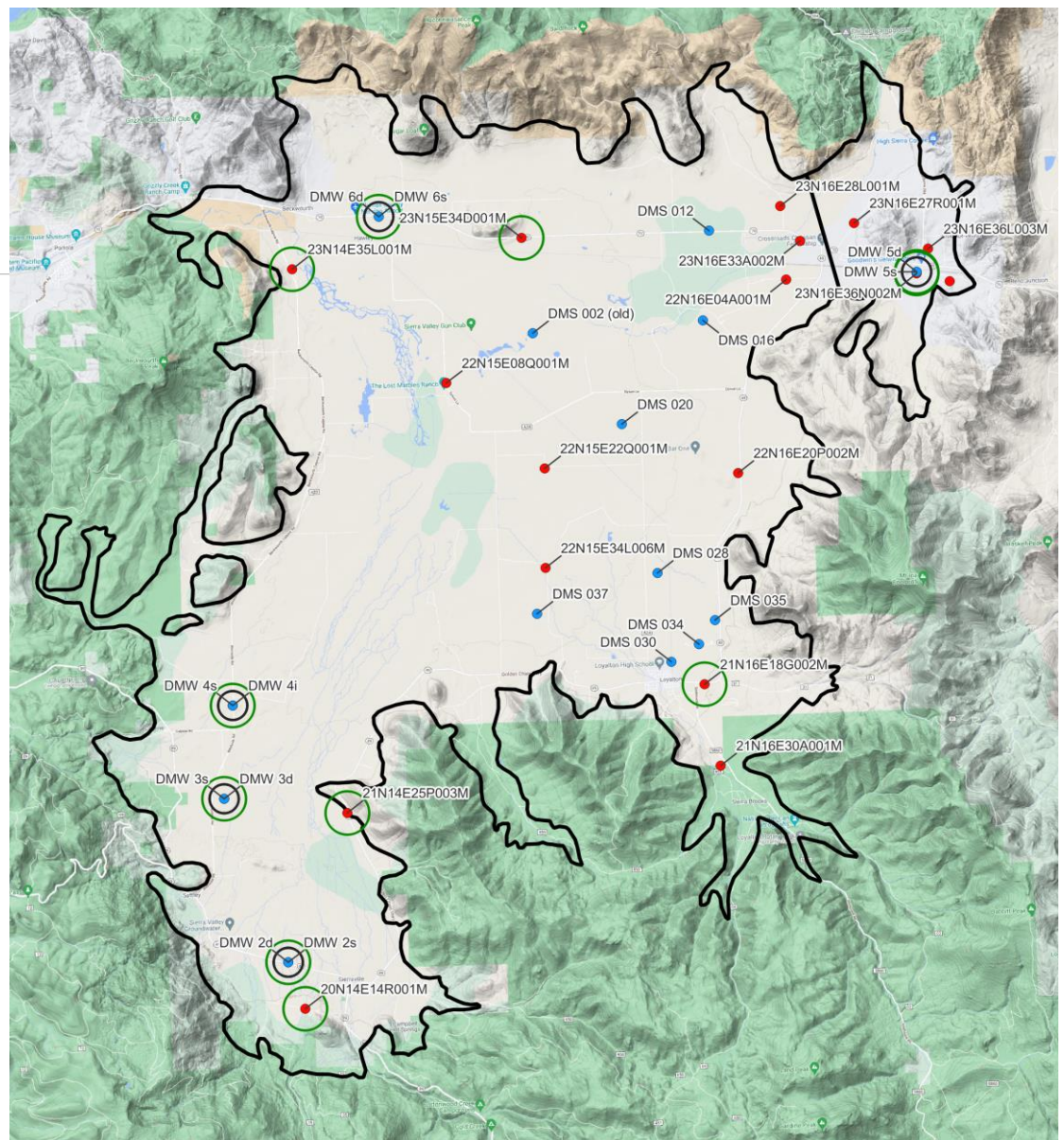
SMC	Wells		Measurement		Other, based on future funding availability
	Existing	New	Existing	New	
Groundwater Levels	19 district wells	0	Measured at least 2x/year, additional measurements during the irrigation season		(a)
	17 CASGEM wells		Measured at least 2x/year. Continuous measurements in the latest multi-completion wells		
Storage	Groundwater Levels as Proxy				N/A
Water Quality	17	Up to 6 (b)	1x/2 years (c)	(b)	N/A
ISW	13 shallow	4 (d)	13 at least 2x/year	Quarterly measurements 4 with continuous data	Up to Ten stream flow gauges (e) and Eight stage gauges (e)
Subsidence	Groundwater Levels as Proxy for the first 2 years		InSAR Data (g)	Four new monuments (f)	

SMCs network

Current locations where groundwater level are available and where Sustainable Management Criteria have been defined so far

DMW7&8 to be included as soon as longer time series of data are available

DMW1 may be considered for ISW



- Monitoring Entity
- DWR
- SVGMD
- Multiple Depth Completion (Nested) Well
- ISW Well
- Groundwater Basin Boundary

SMC Wells
Monitoring Entity

Groundwater levels and storage

- 19 district wells
- 17 DWR wells
- Limited additional cost for Jay expected

Interconnected Surface Water and GDEs

- 13 existing mostly shallow wells (currently 2x/year, need at least quarterly monitoring)
 - Monitor 4 existing shallow wells in areas near GDEs (continuous monitoring is suggested and can be supported by Cat. D funding)
- Expected cost:
- Small increase in cost for Jay
 - For maintenance of 4 continuous monitoring: budget about \$500/year

Groundwater quality

- 17 existing wells in the GAMA network, monitored at different frequency by public health and other entities. Results will be integrated with the GSP monitoring wells
- Monitor 6 (or 7) GSP wells: 5 volunteered by private owners and at least 1 new DWR well (MW7/Roberti and/or MW8/DS)
- Constituents to be analyzed and associated cost:
 - TDS \$52
 - Total nitrogen - \$47
 - Boron - \$36
 - Arsenic - \$36
 - pH - \$32

→ \$203/sample or about \$1218 per sampling event for 6 wells (suggested sampling 1x/2 years for the first 5 years, then maybe 1x/3 years) plus the cost of collecting the samples (maybe Jay or coordinate with UCCE?)

Subsidence

- Monuments can be installed using current cat. D funding (4 monuments suggested)
- Cost for future surveying:
 - DD Geomatics provided an estimate for \$3000 per survey
- Other options?

Projects and Management actions

- Demand management and supply augmentation
- Short term opportunities:
 - Irrigation efficiency improvements
 - Changes in irrigation schedule (need to work on adjudications) in Last Chance Creek, also Smithneck?
 - Pilot project for groundwater recharge or new surface water storage (Smithneck Creek spread on CDFW wildlife areas for recharge, Badenaugh Creek, Chilcoot flooding sandy area, ...)
 - Upland management (thinning forest? Where?)
- How to prioritize? What can be included as “**pilot project**” in cat. D implementation funding for 2022?