Salinas Valley Basin GSA

GSP Overview

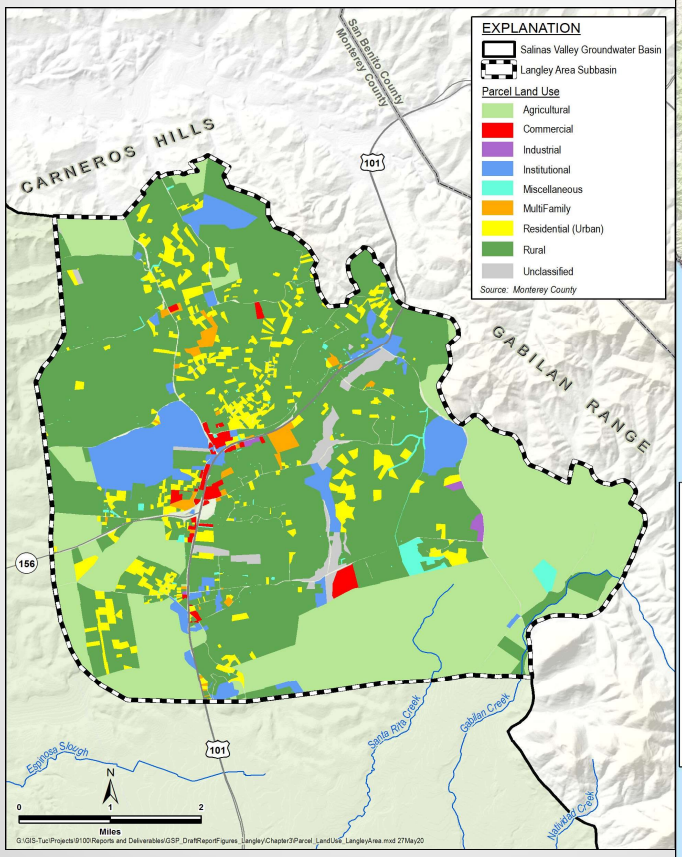
Presented to Langley Area
Subbasin Committee
May 5, 2021

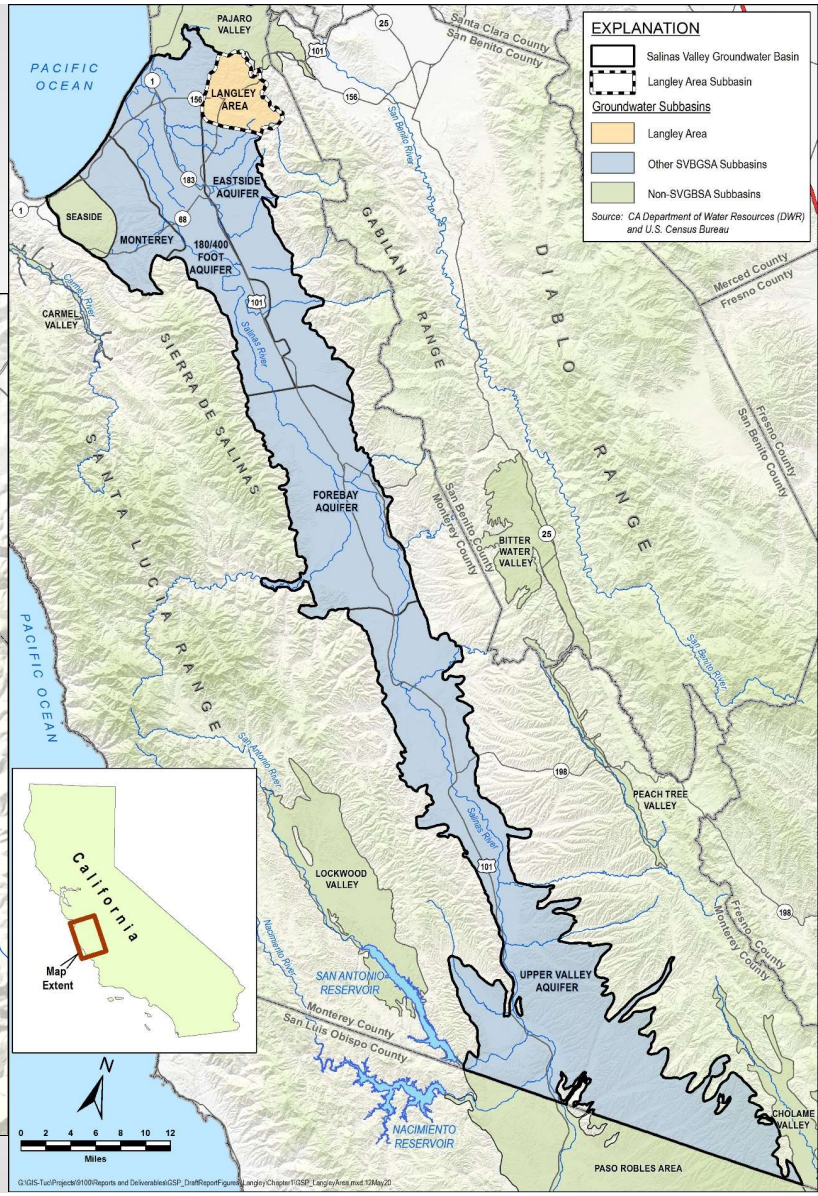
Prepared by

MONTGOMERY
& ASSOCIATES

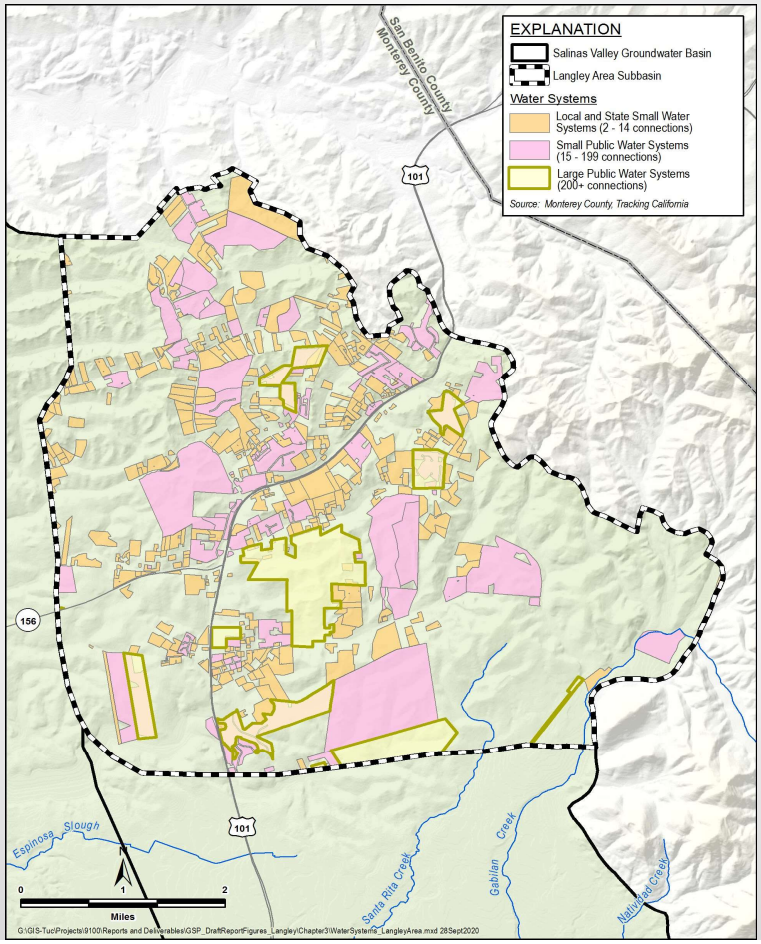
Langley Area Subbasin

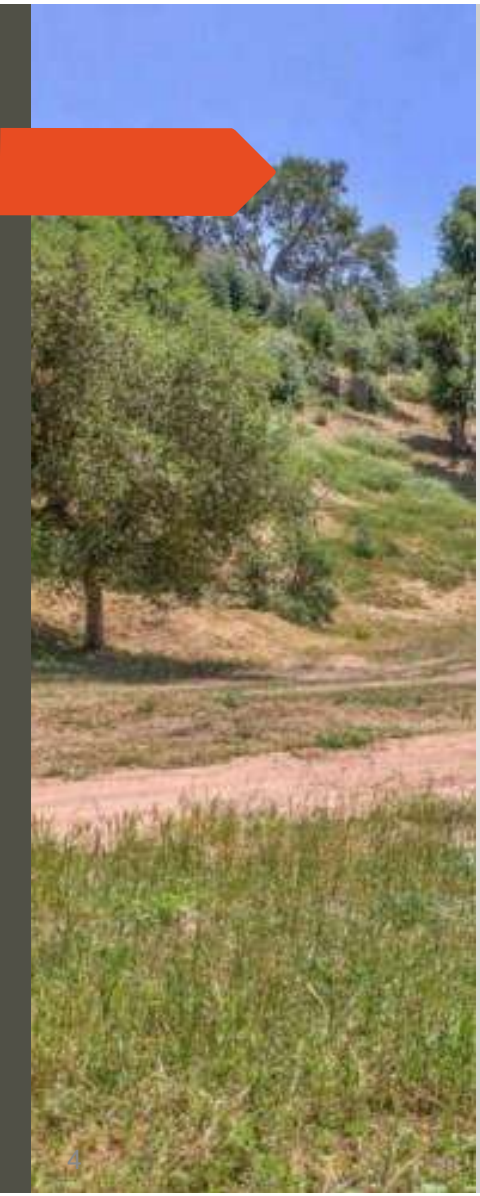
- 17,600 acres
- Most land designated rural (8,862 acres)





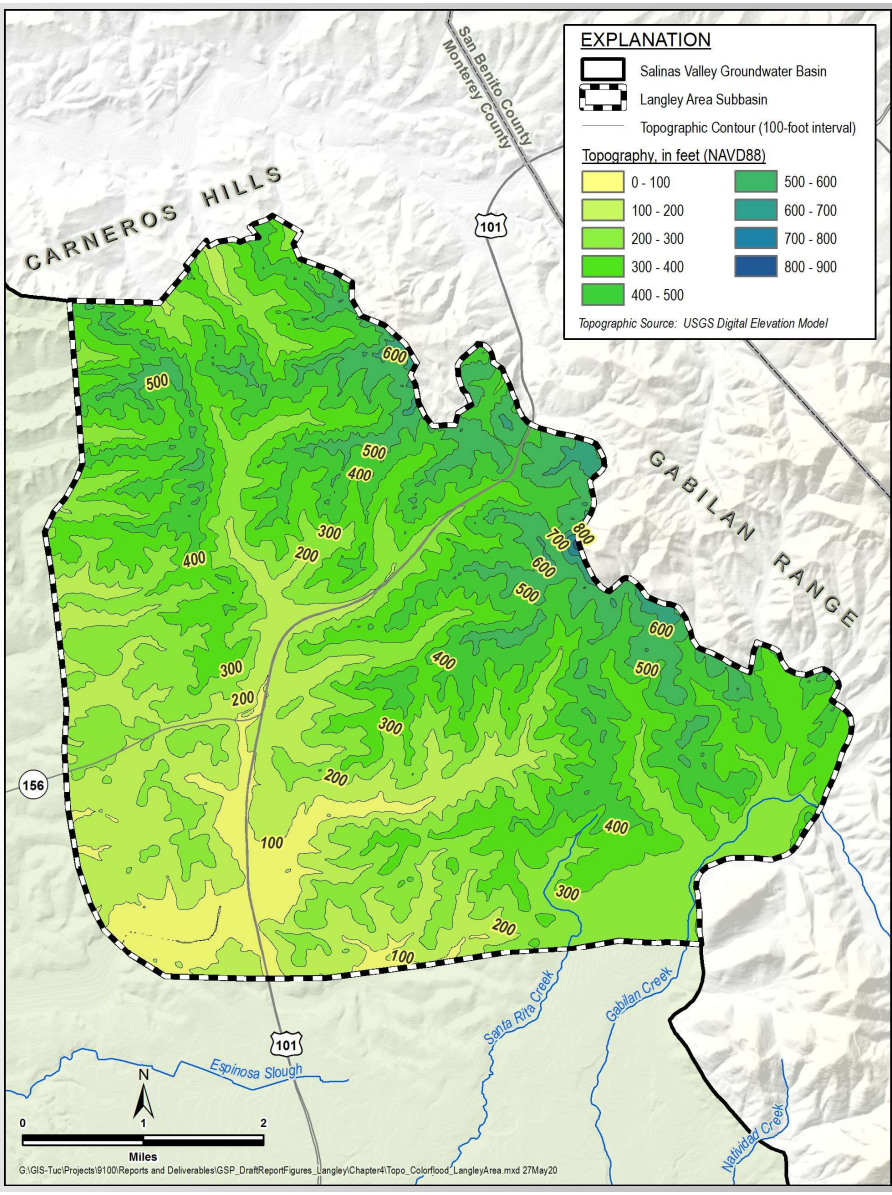
Communities Dependent on Groundwater



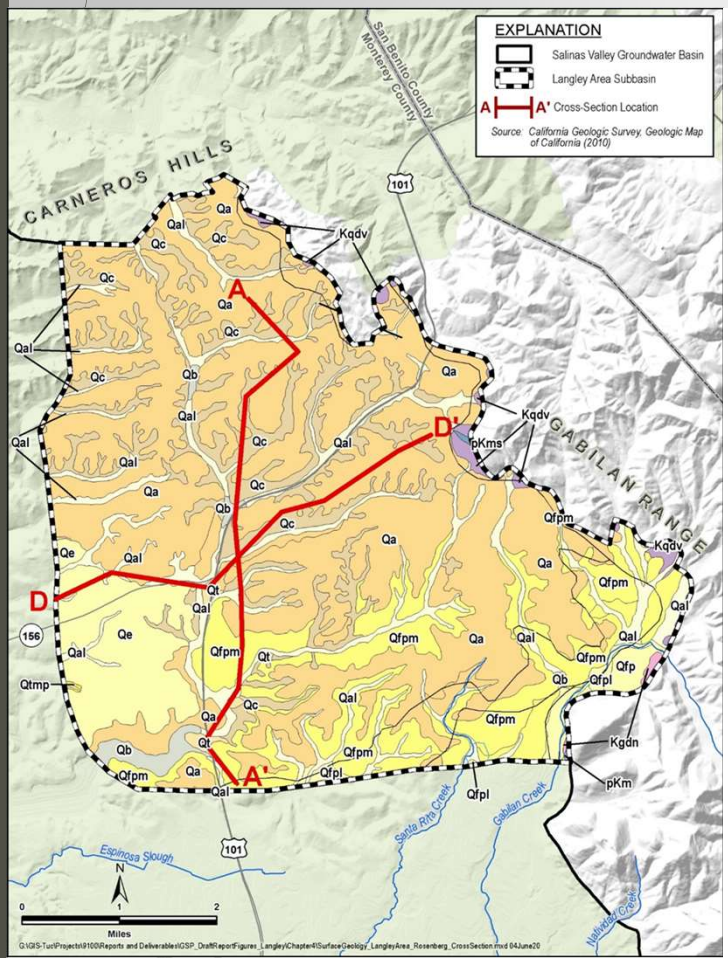


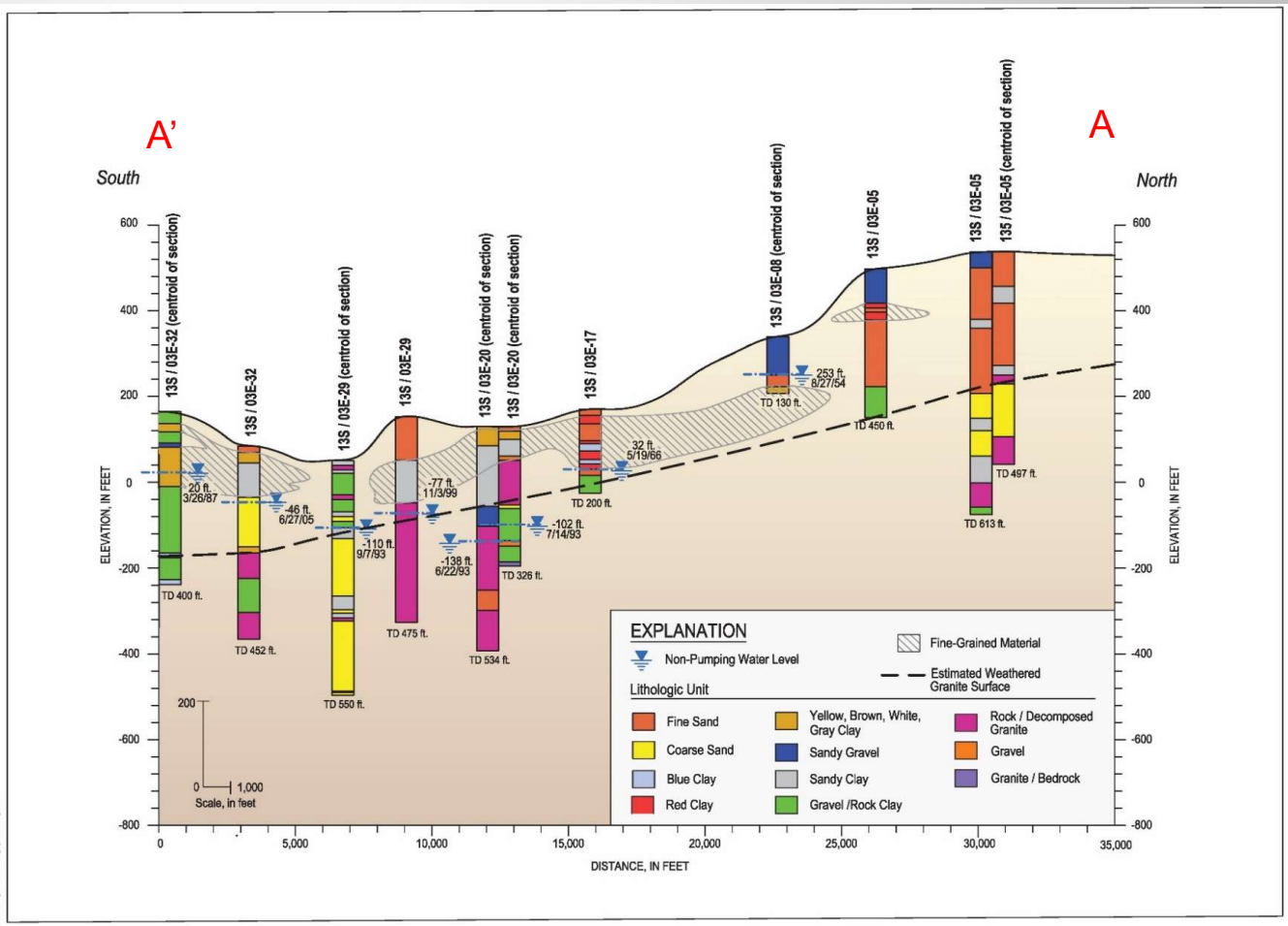
Basin Setting - Topography

- Hilly area
- Not like the other subbasins
- Underlain by fractured granite bedrock



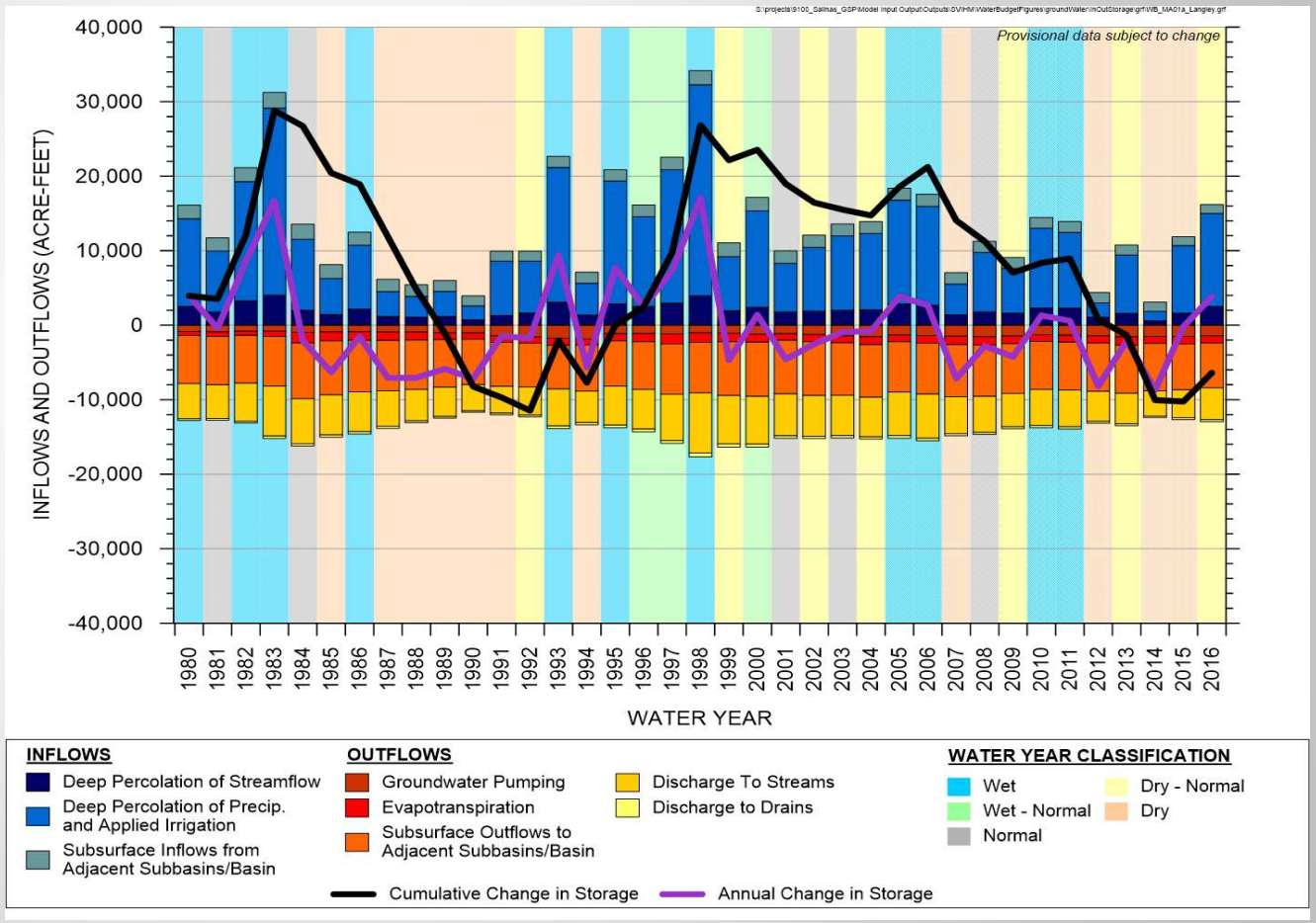
Hydrogeologic Conceptual Model





Water Budget

	Historical Average (WY 1980 2016)	2070 Projection
Total Subbasin Pumping	1,242	1,400
Change in Storage	-778	1,000
Seawater Intrusion	0	0
Estimated Sustainable Yield	464	2,400



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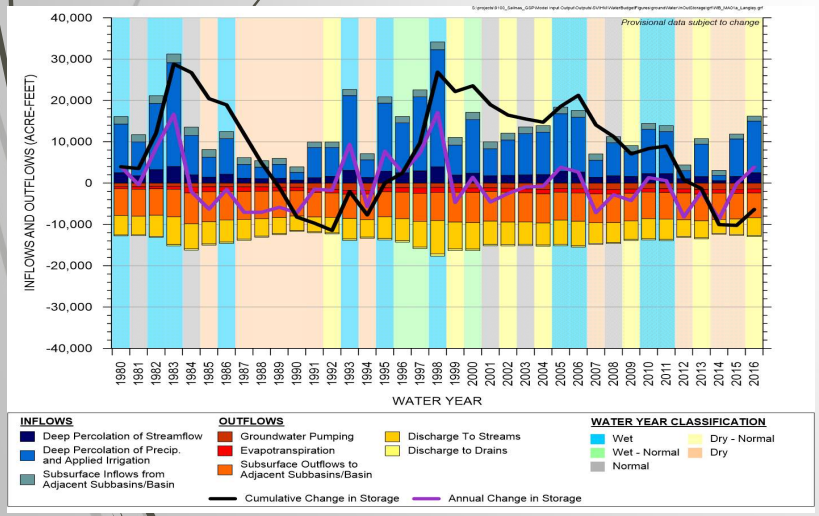
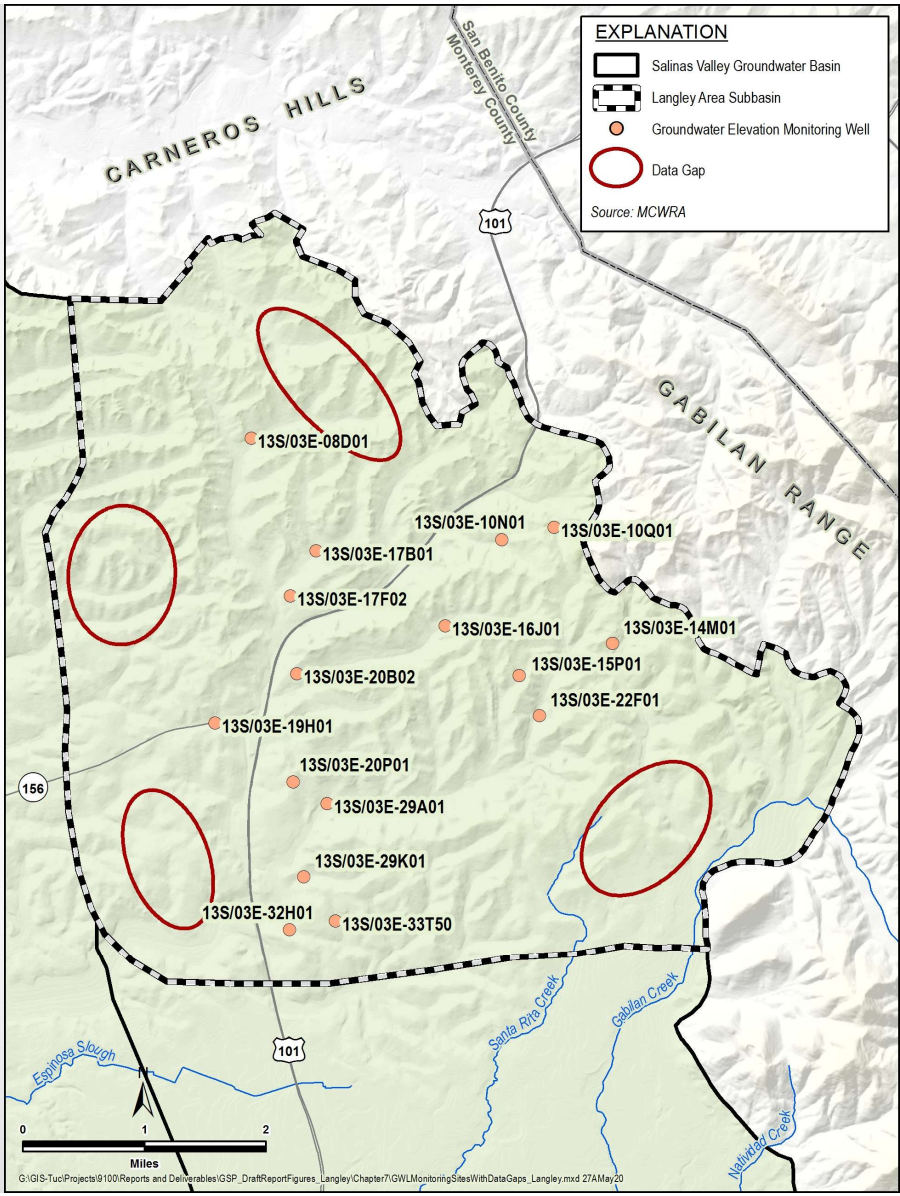


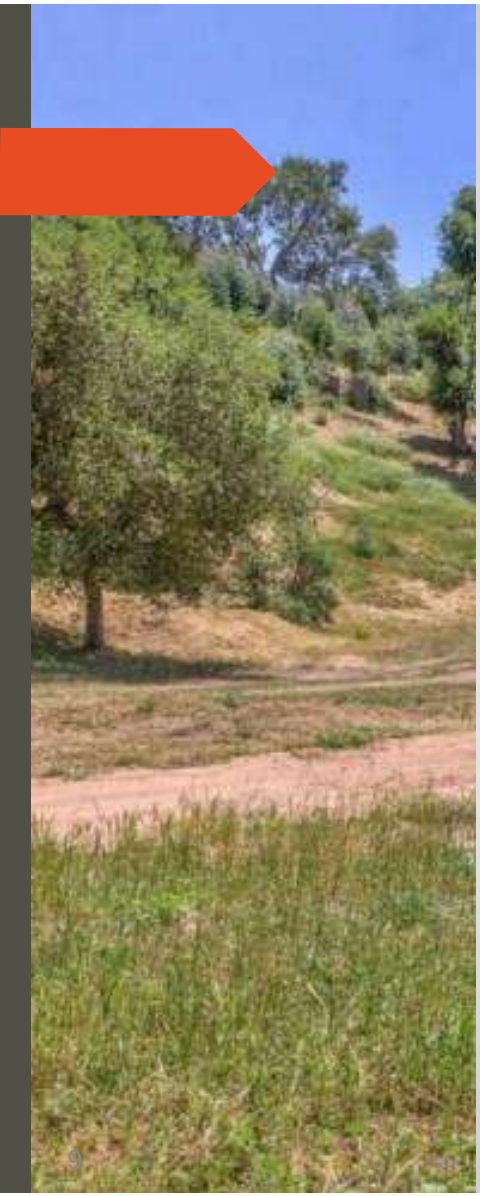
- Overall – there is no chronic decline in water levels and Langley is roughly in balance
- Historical and future are both averages of many years/hydrologic periods
- Current is a snapshot and does not tell us much since it only views change from one year to the next
- Future change in storage is likely overestimated because it starts from a low point.
- Future water budget incorporates average climate change, but does not represent short-term climate change effects

Groundwater conditions/SMC – Groundwater Levels

Monitoring Site	Minimum Threshold (ft) (2019 GWL)	Measurable Objective (ft) (GWL 2010)
13S/03E-08D01	173.3	173.5
13S/03E-10N01	278.2	278.8
13S/03E-10Q01	439.0	440.0*
13S/03E-14M01	356.0	366.9
13S/03E-15P01	89.8*	90.6
13S/03E-16J01	46.3	48.1
13S/03E-17B01	163.3*	167.3
13S/03E-17F02	-41.4	-37.5
13S/03E-19H01	1.9	2.5*
13S/03E-20B02	104.4	106.5
13S/03E-20P01	31.5*	77.3
13S/03E-22F01	84.4	100.6
13S/03E-29A01	-61.2	-58.2
13S/03E-29K01	58.8	60.0
13S/03E-32H01	-47.0	-38.0
13S/03E-33T50	-50.0	-45.0

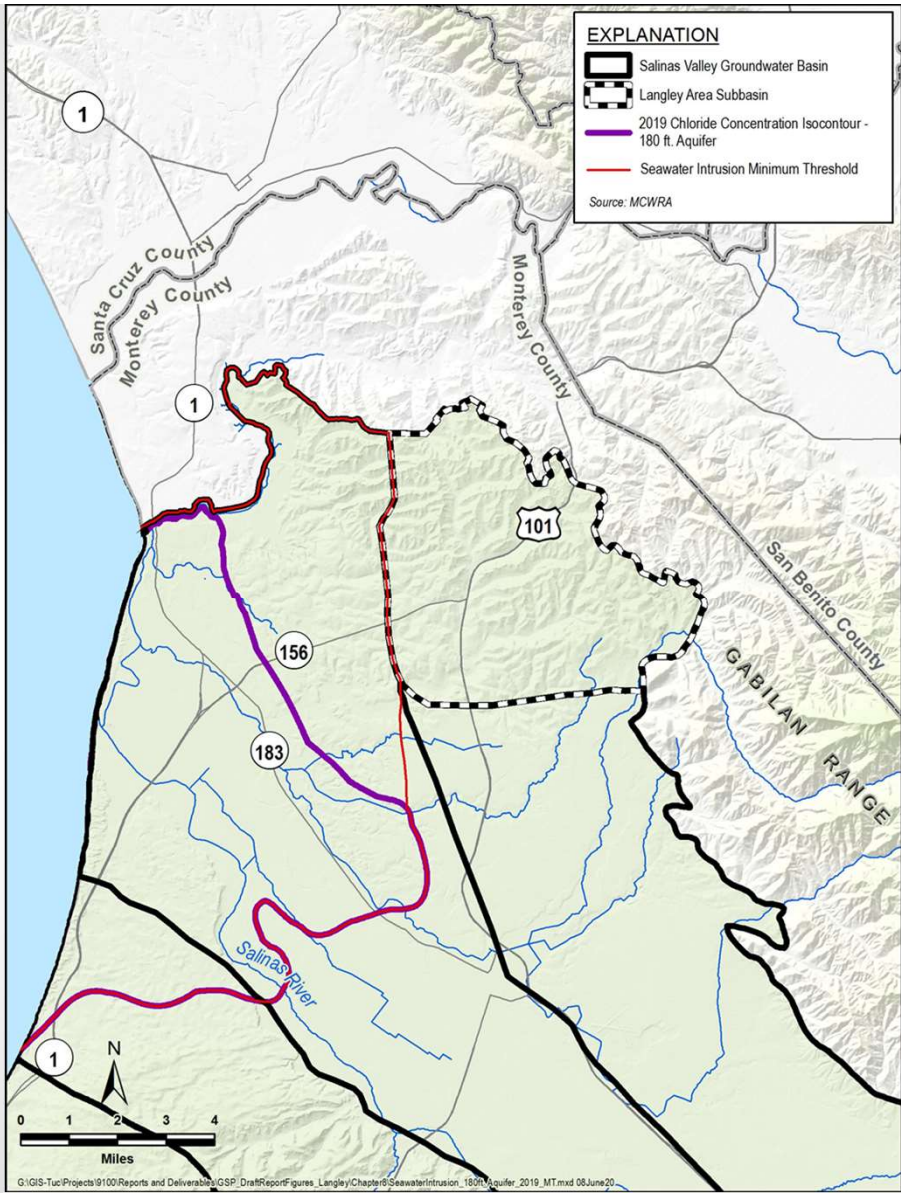
MT/MO are very close together for most wells.



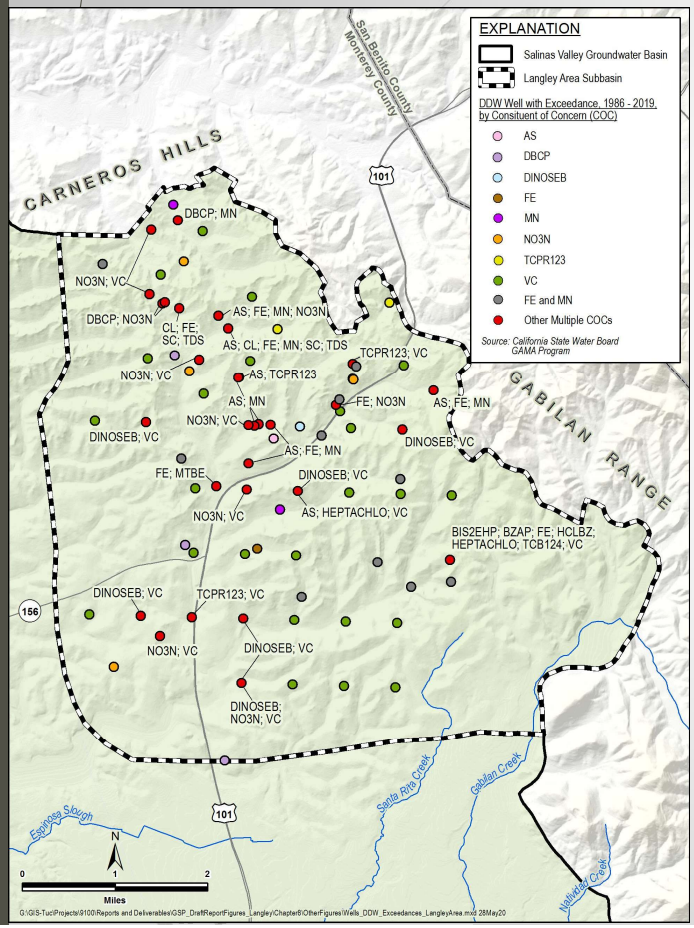


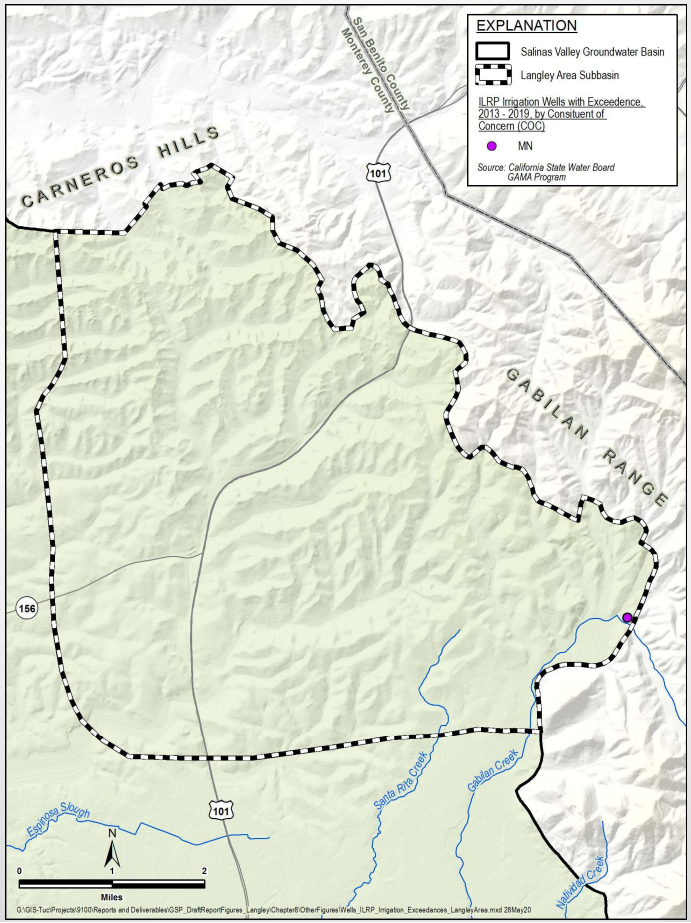
Groundwater conditions/SMC – Seawater Intrusion

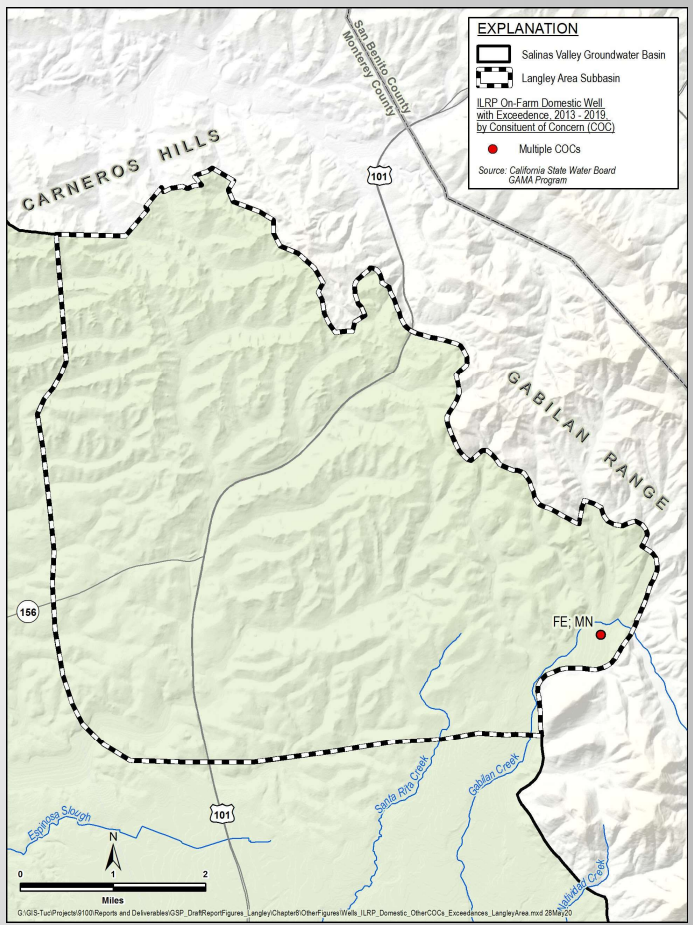
- No seawater intrusion in the subbasin
- Minimum threshold is at the subbasin boundary



Groundwater conditions/SMC – Water Quality Exceedance Maps



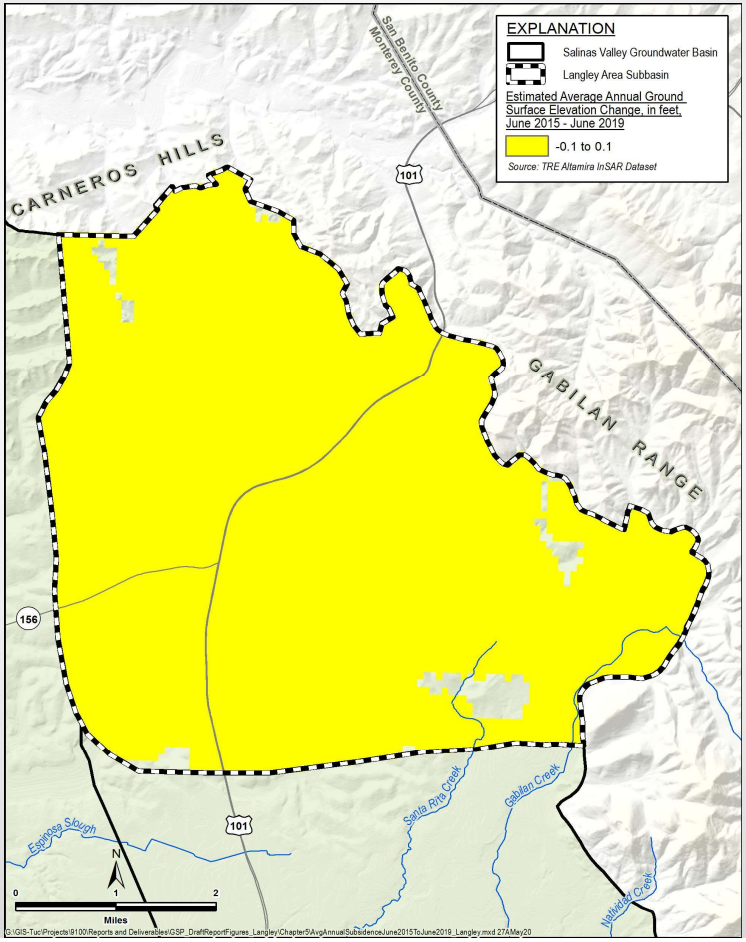




Groundwater conditions/SMC – Water Quality

Constituent of Concern (COC)	Number of Wells Sampled for COC	Minimum Threshold/Measurable Objective Number of Wells Exceeding Regulatory Standard from latest sample
	DDW Wells	
Arsenic	86	3
Di(2 ethylhexyl) phthalate	56	1
Benzo(a)Pyrene	56	1
Chloride	76	2
1,2 Dibromo 3 chloropropane	33	6
Dinoseb	87	8
Iron	78	17
Hexachlorobenzene	31	1
Heptachlor	31	2
Manganese	76	15
Methyl tert butyl ether (MTBE)	85	1
Nitrate (as nitrogen)	164	14
Specific Conductance	88	2
1,2,4 Trichlorobenzene	84	1
1,2,3 Trichloropropane	89	6
Total Dissolved Solids	76	2
Vinyl Chloride	188	88
	ILRP On Farm Domestic Wells	
Iron	1	1
Manganese	1	1
	ILRP Irrigation Wells	
Manganese	9	1

Groundwater conditions/SMC – Subsidence



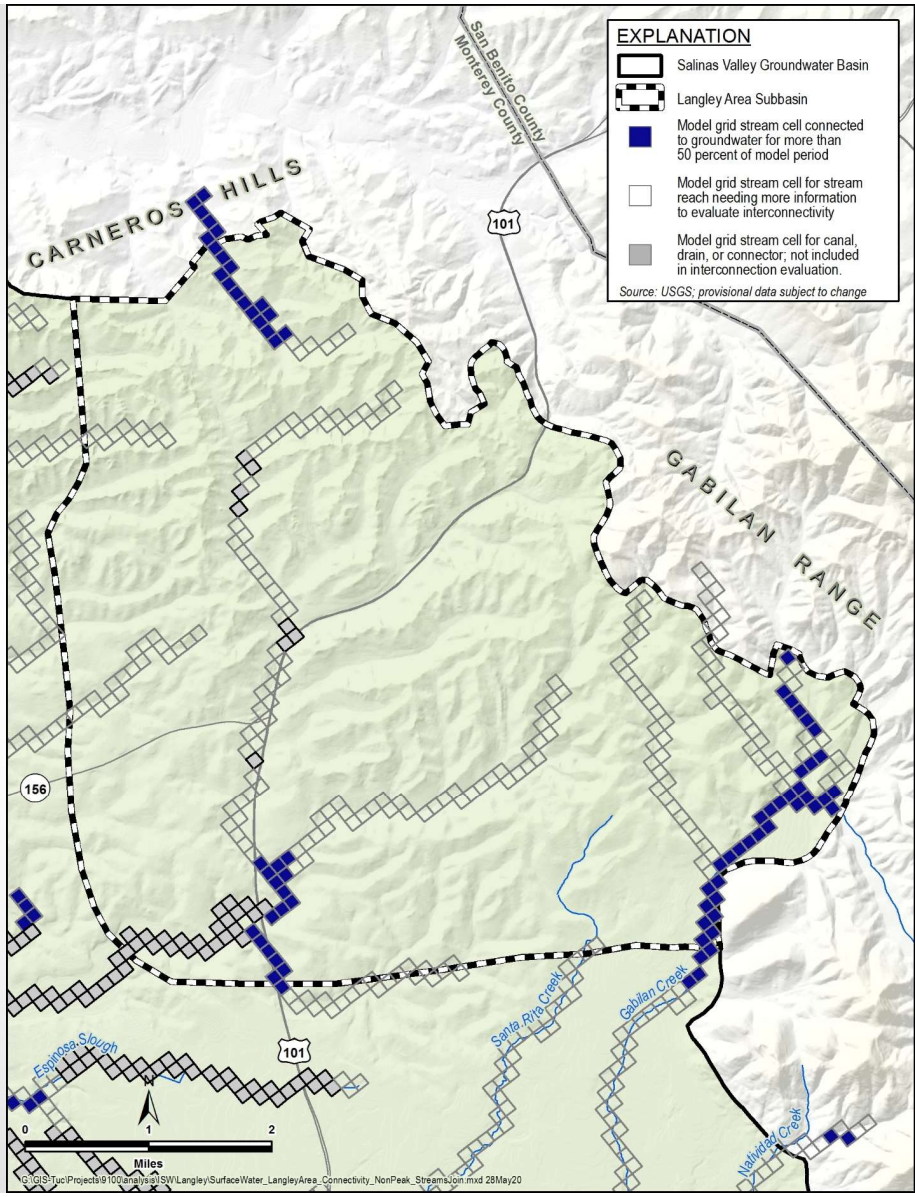
Negligible current subsidence

Future subsidence due to groundwater conditions is unlikely

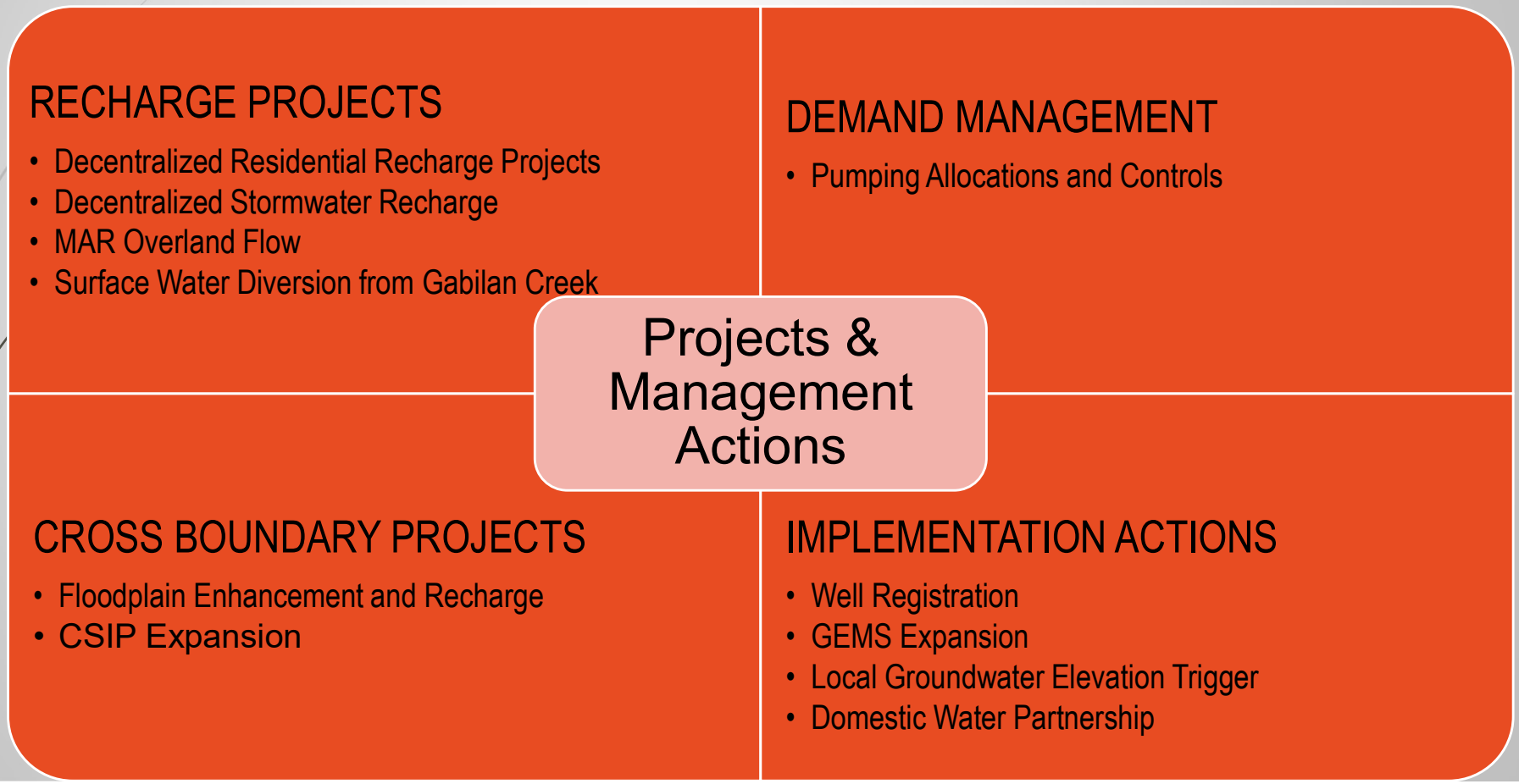
Minimum threshold and measurable objective set at zero long-term subsidence

Groundwater conditions/SMC – Interconnected Surface Water

- No interconnected surface water monitoring points yet
- One shallow well will be added on Gabilan Creek (orange star) and will be paired with USGS gauge in Eastside (green star)
- Minimum thresholds based on 2019 shallow groundwater elevations



Projects & Management Actions



Langley Projects & Management Actions Road Map

January 2022
Year 1
Year 2
Year 3-5
Year 6-10

IMPLEMENTATION ACTIONS

- Data collection
- Engage key agencies and stakeholders'
- Expand GEMS
- Begin well registration
- Establish Domestic Water Partnership and Local Groundwater Elevation Trigger
- Use data for project decision making
- Ultimately use data to document sustainability and tell the story

PUMPING ALLOCATIONS AND CONTROL

- Outreach and stakeholder engagement
- Establish allocation structure
- Develop pumping controls

RECHARGE PROJECTS

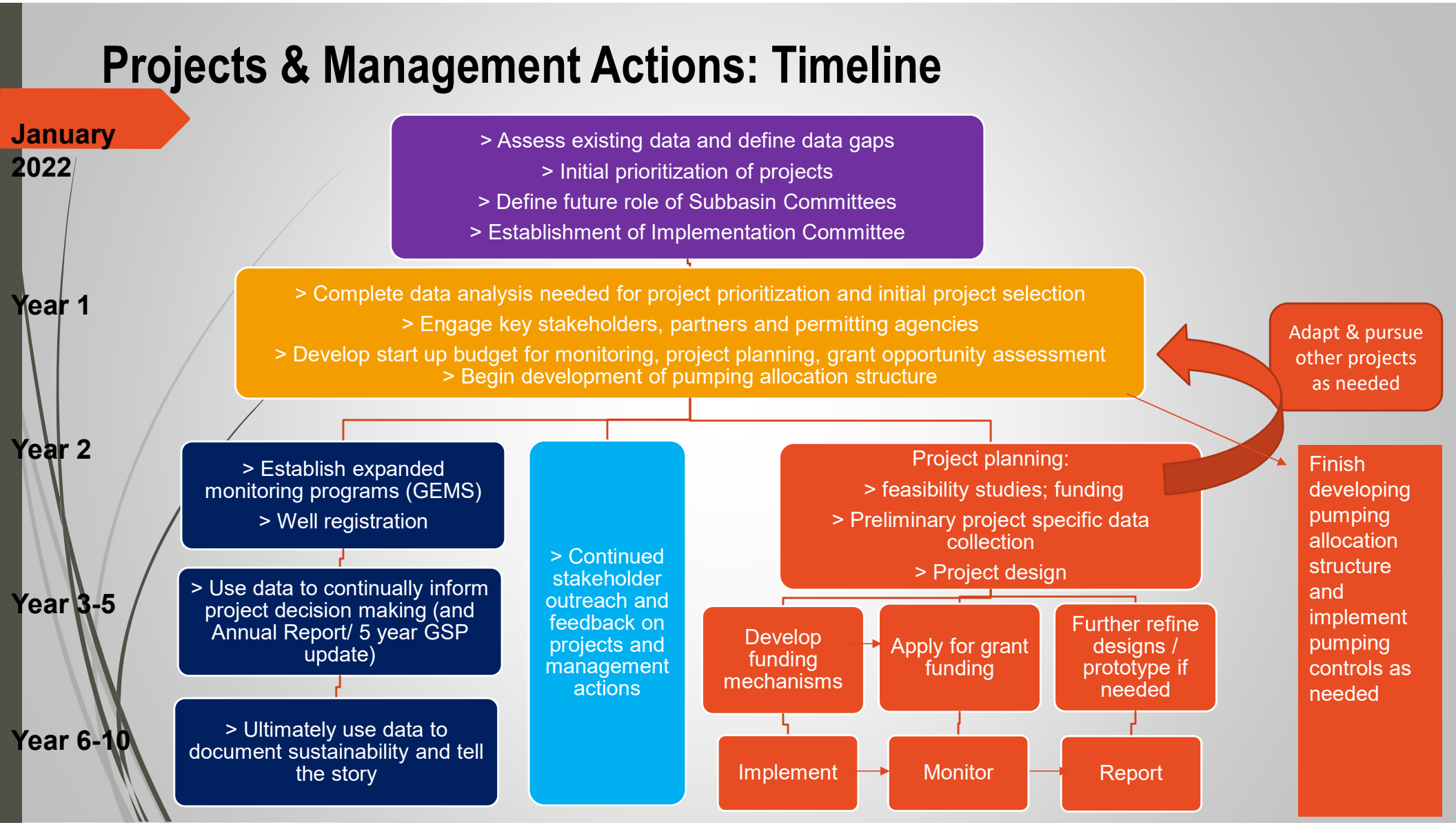
- Outreach to landowners
- Identify suitable sites and do site analysis if needed
- Permitting
- Apply for grants/establish funding mechanism

CROSS-BOUNDARY PROJECTS

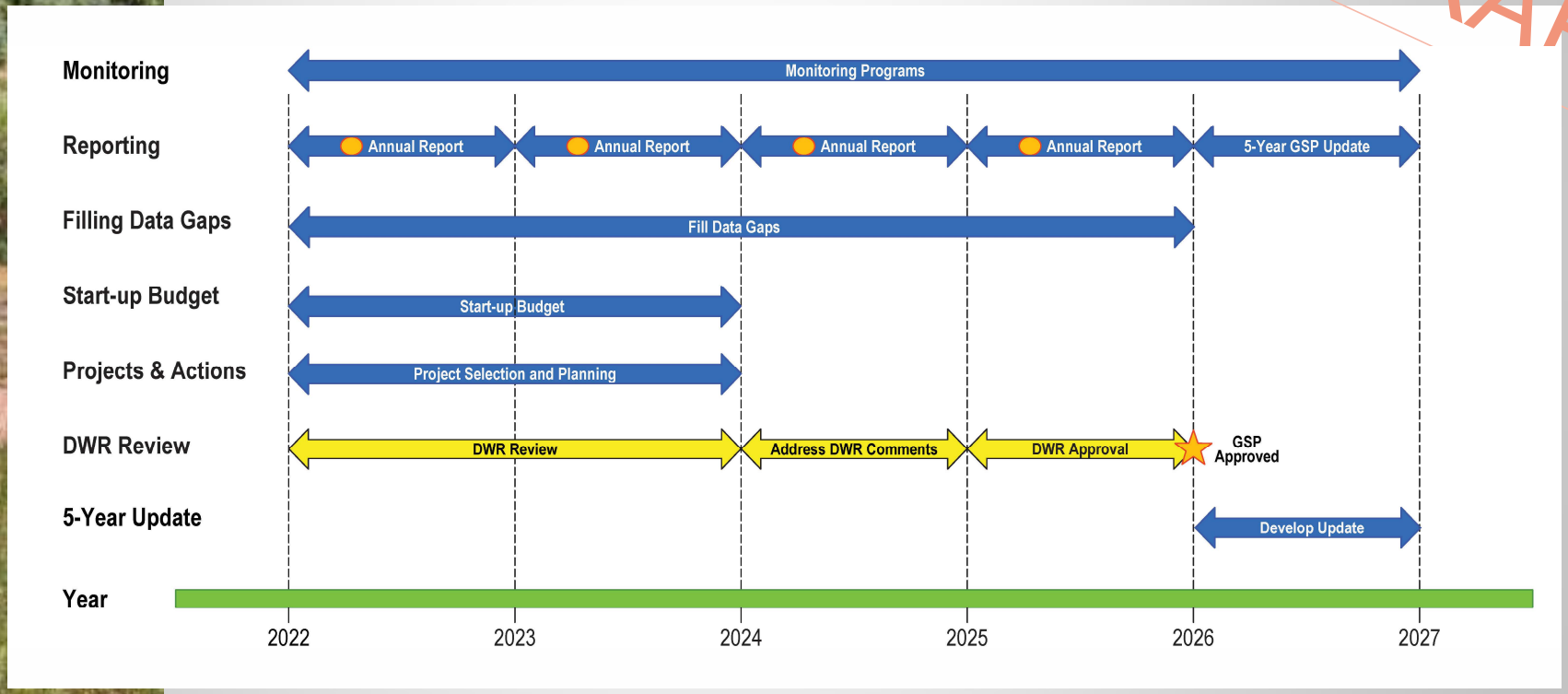
If/when other subbasins move forward with these

- CSIP expansion and ES floodplain enhancement and recharge
- Work to ensure Langley interests are accounted for in design and implementation of project

Projects & Management Actions: Timeline



Implementation Schedule



Questions