

SALINAS VALLEY -PASO ROBLES AREA GROUNDWATER SUBBASIN

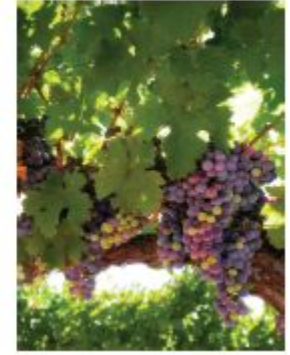
Status of GSP Implementation

August 6, 2024

Blaine Reely, Director

Groundwater Sustainability Department

County of San Luis Obispo



SGMA and B-118 Boundaries



GSA / GSP Timeline

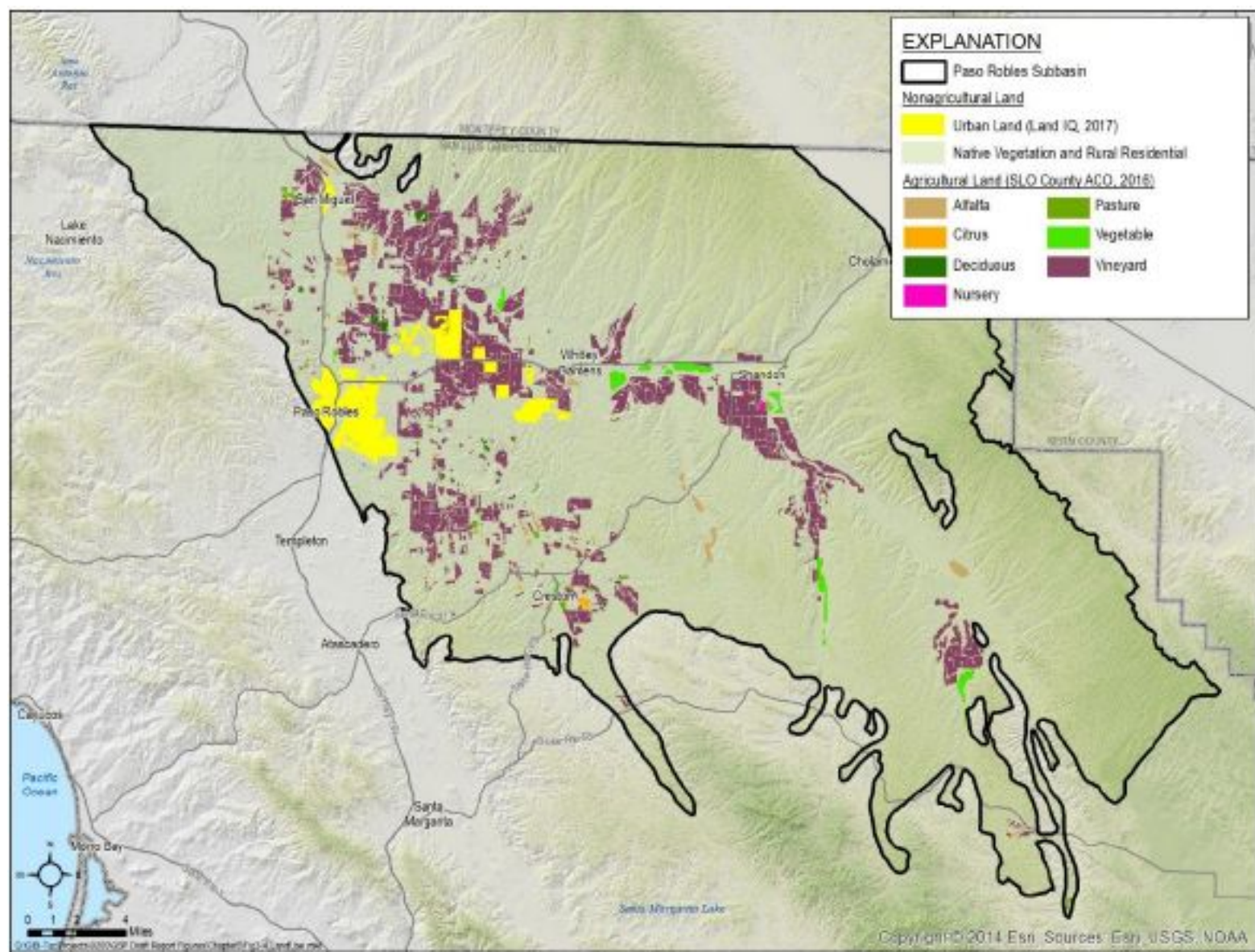
- **2014:** SGMA adopted by Legislature
- 4 GSAs formed in the Basin
- **Jan 2020:** GSP submitted to DWR
- **Jan 2022:** DWR Initial Review of GSP “Incomplete”
- **Jul 2022:** Amended GSP submitted to DWR
- **Mar 2023:** GSP recommended “approved” with *suggested corrective changes (Official Letter from DWR Received June 20, 2023)*
- **Jan 2025:** GSP 5-yr Evaluation due (May result in GSP Update)
- **Annually:** Water Year Annual Reports on basin conditions and GSP implementation



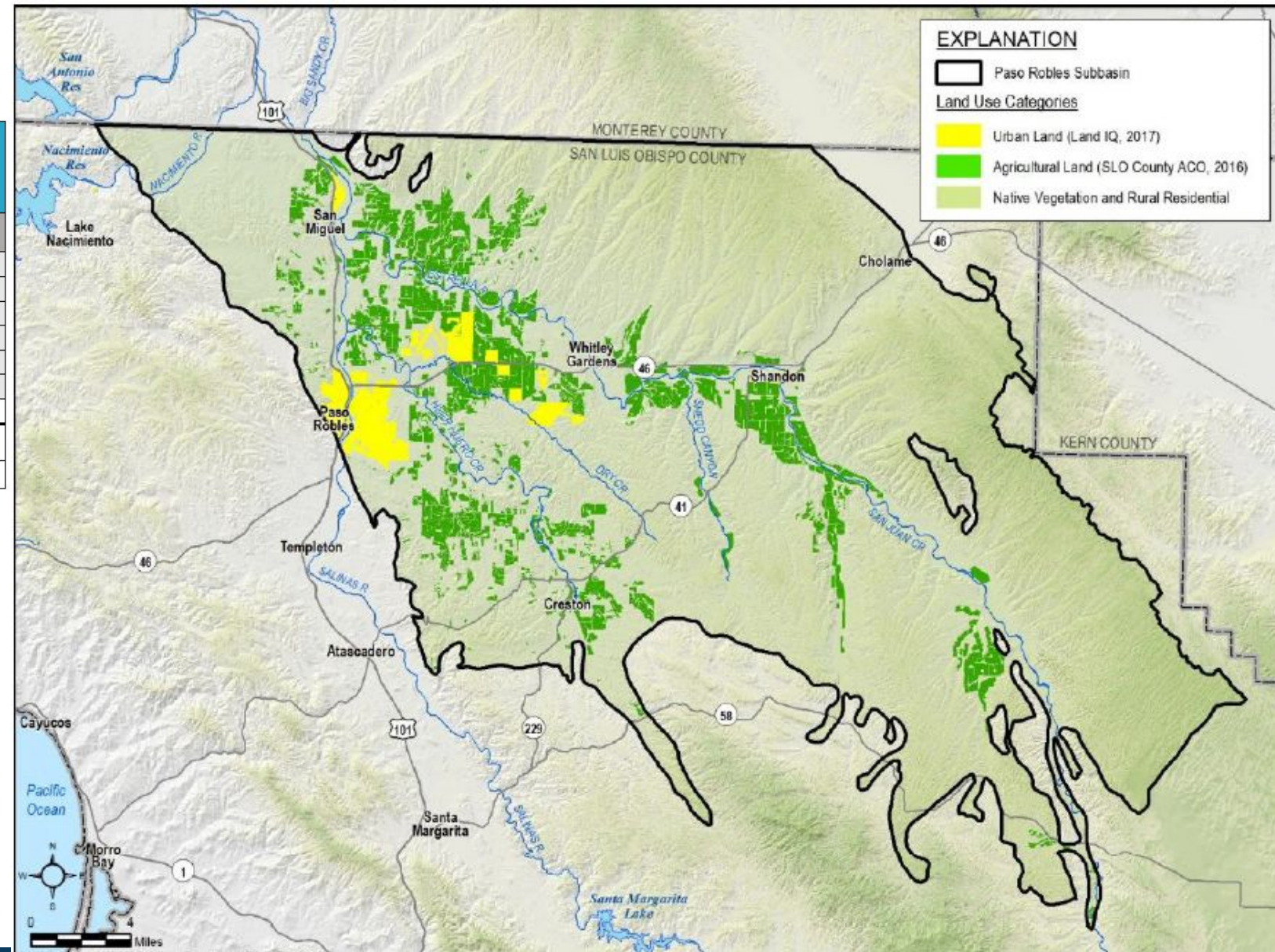
Land Use

Land Use Category	Acres
Citrus	397
Deciduous	471
Alfalfa	1,590
Nursery	63
Pasture	667
Vegetable	1,691
Vineyard	35,349
Native vegetation	387,435
Urban	8,577
Total	436,240

Total Agriculture = 40,228 AC (9.2%)
 Native Vegetation = 387,435 AC (88.8%)



Water



Water Year	Municipal Use		Small PWS, Golf and Rural Domestic (AF)	Agriculture (AF)	Total (AF)
	Groundwater	Surface Water ¹	Groundwater	Groundwater	—
2017	1,626	4,301	3,313	65,300	74,500
2018	1,677	4,829	4,445	80,200	91,200
2019	1,729	4,259	3,553	68,800	78,300
2020	1,509	4,589	4,477	72,600	83,200
2021	1,553	4,861	5,052	74,800	86,300
2022	1,982	4,250	4,332	76,900	87,500
2023	1,134	4,562	3,053	59,600	68,300
Method of Measure:	Metered	Metered	2016 Groundwater Model, varied by water year type	OpenET	—
Level of Accuracy:	high	high	low-medium	medium	—

Notes
¹ Includes imported Salinas River underflow, which is regulated as surface water by the State Water Resources Control Board.
 — = not applicable
 AF = acre-feet
 PWS = public water system

Agricultural GW Pumping = 85% (+/-) of Water Use

Water Budget (Future Conditions)

- Sustainable Yield = 61,100 AFY
- Average GW Storage Deficit = 13,700 AFY

NEED TO REDUCE GW PUMPING BY 13,700 AFY



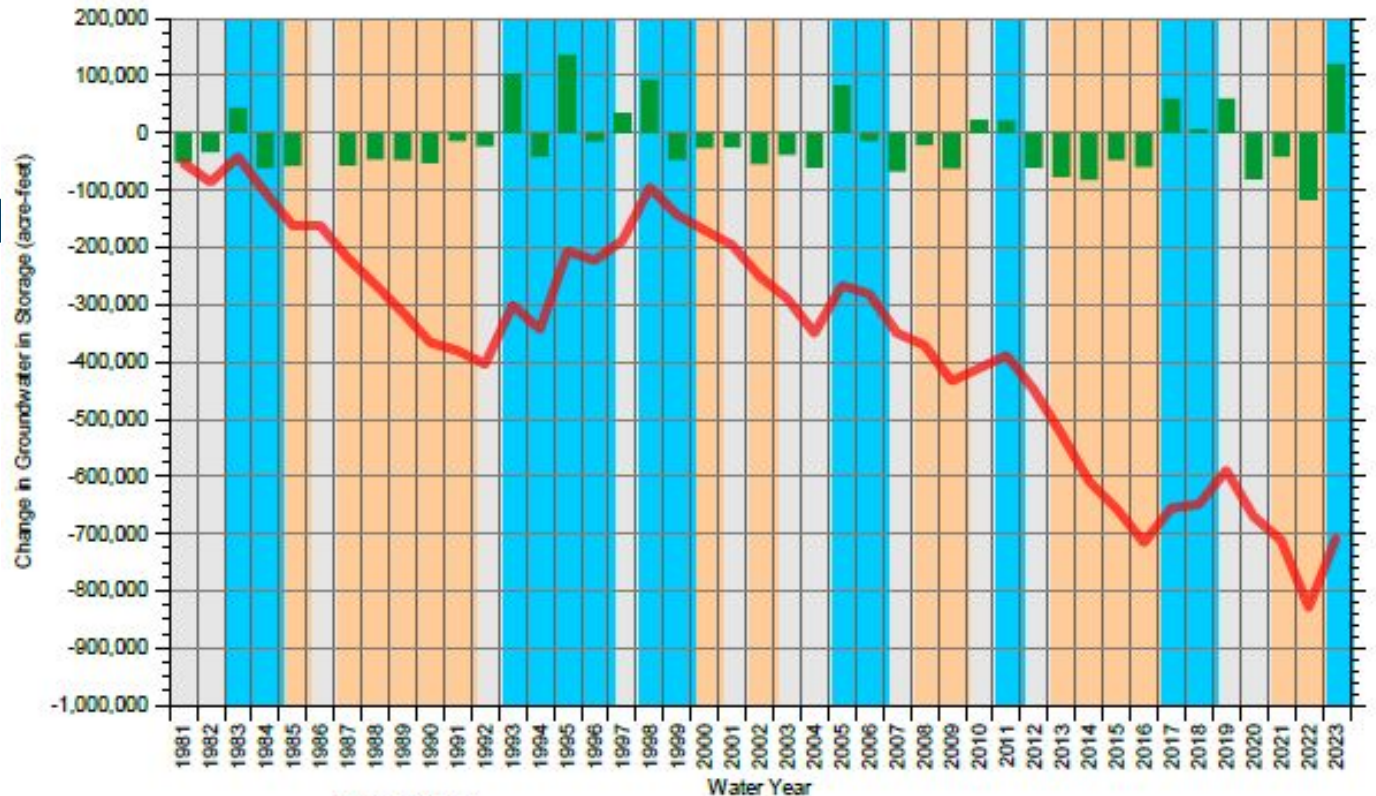
Annual and Cumulative Change in Groundwater in

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Water Year	Annual Change (AF)
2017	60,100
2018	6,400
2019	59,700
2020	-80,800
2021	-41,500
2022	-117,100
2023	120,700

Note
AF = acre-feet

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EXPLANATION

— Cumulative Change in Groundwater Storage ■ Annual Change in Groundwater Storage

CLIMATIC PERIOD CLASSIFICATION

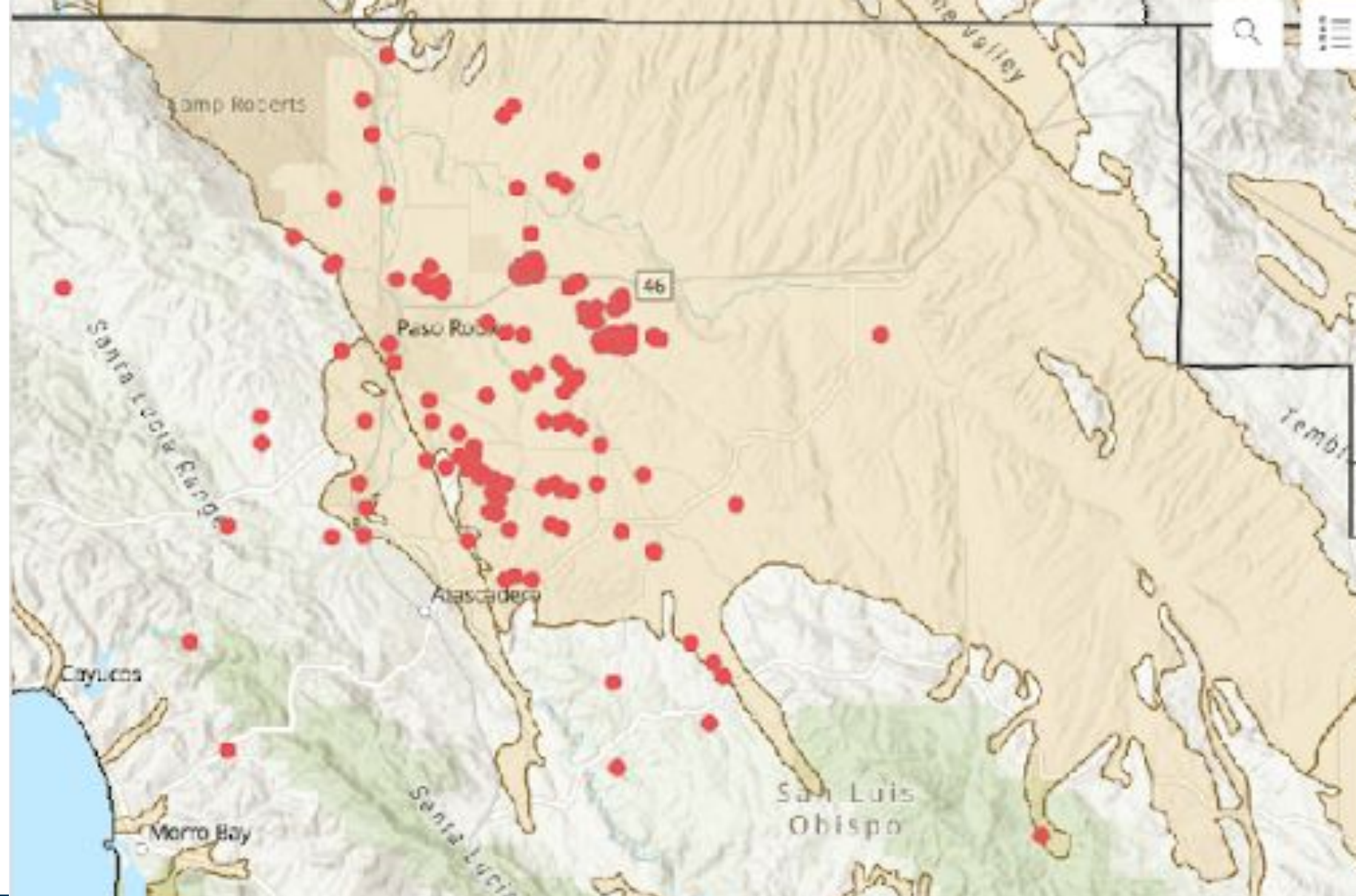
■ Dry ■ Avg/Alternating ■ Wet



Reported Dry Wells

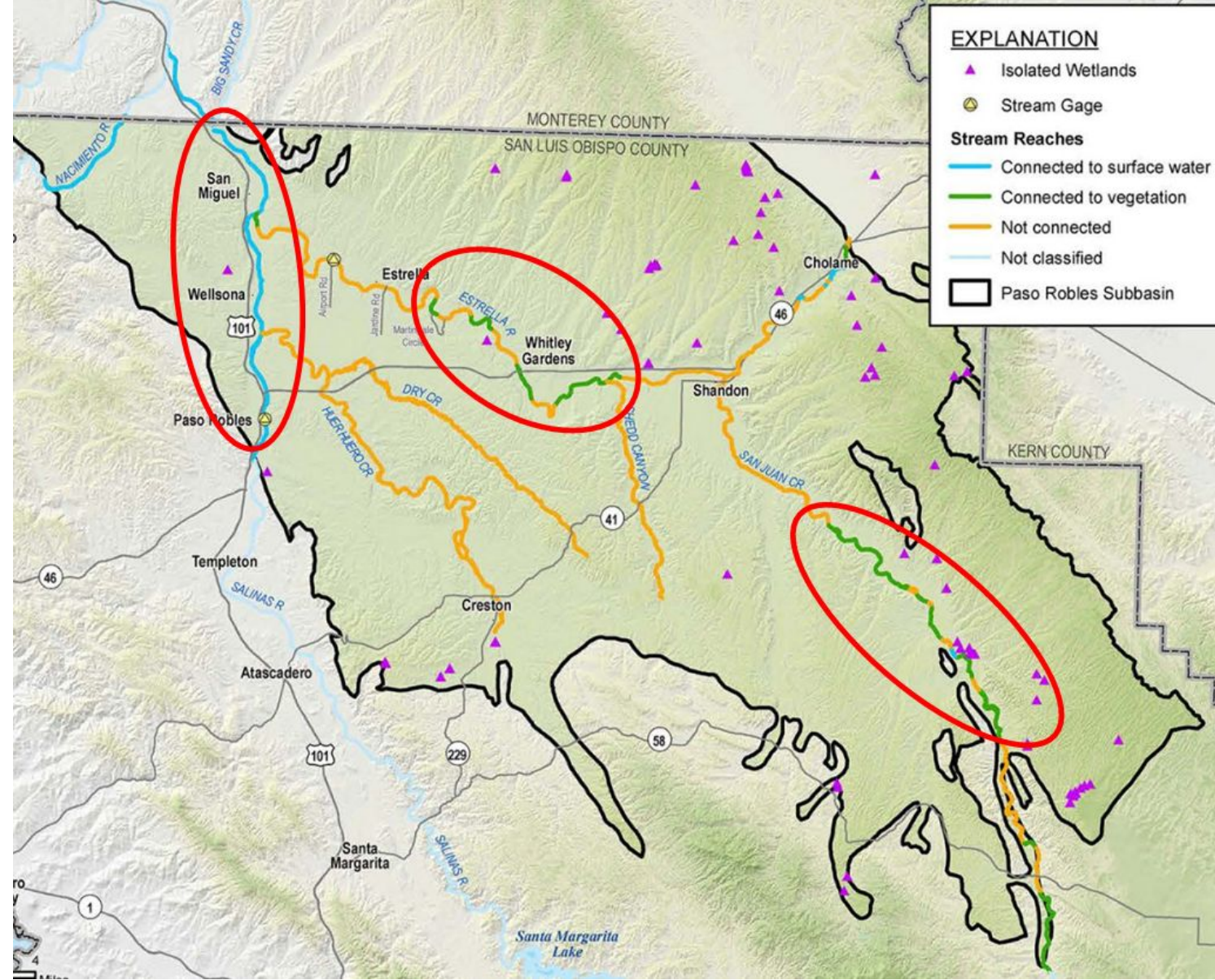
2015-2023

Source: California's Groundwater
Live: Well Infrastructure
<https://storymaps.arcgis.com/stories/f2b252d15a0d4e49887ba94ac17cc4bb>



Interconnected Surface Water Locations

- Used multiple data sets to identify interconnected stream reaches and GDEs
- Delineated interconnected stream reaches
 - Salinas River (Alluvial Aquifer)
 - Estrella River middle reach
 - Upper San Juan Creek



GSP Projects and Management Actions

- Basin-wide management actions include:
 - Expanded monitoring network
 - Identification of potential rural domestic well impacts
 - Enhance understanding of areas of potential surface water and groundwater interaction
 - Promoting voluntary fallowing of irrigated crop land (**MILR Program**)
- Projects include:
 - **Tertiary treated wastewater supplied and sold by City of Paso Robles and the San Miguel CSD to private groundwater extractors to use in lieu of groundwater**
 - State Water Project (SWP) water
 - Nacimiento Water Project (NWP) water (**Blended Water Supply Project**)
 - **Rate Study**
 - Flood flows/stormwater from local rivers and streams

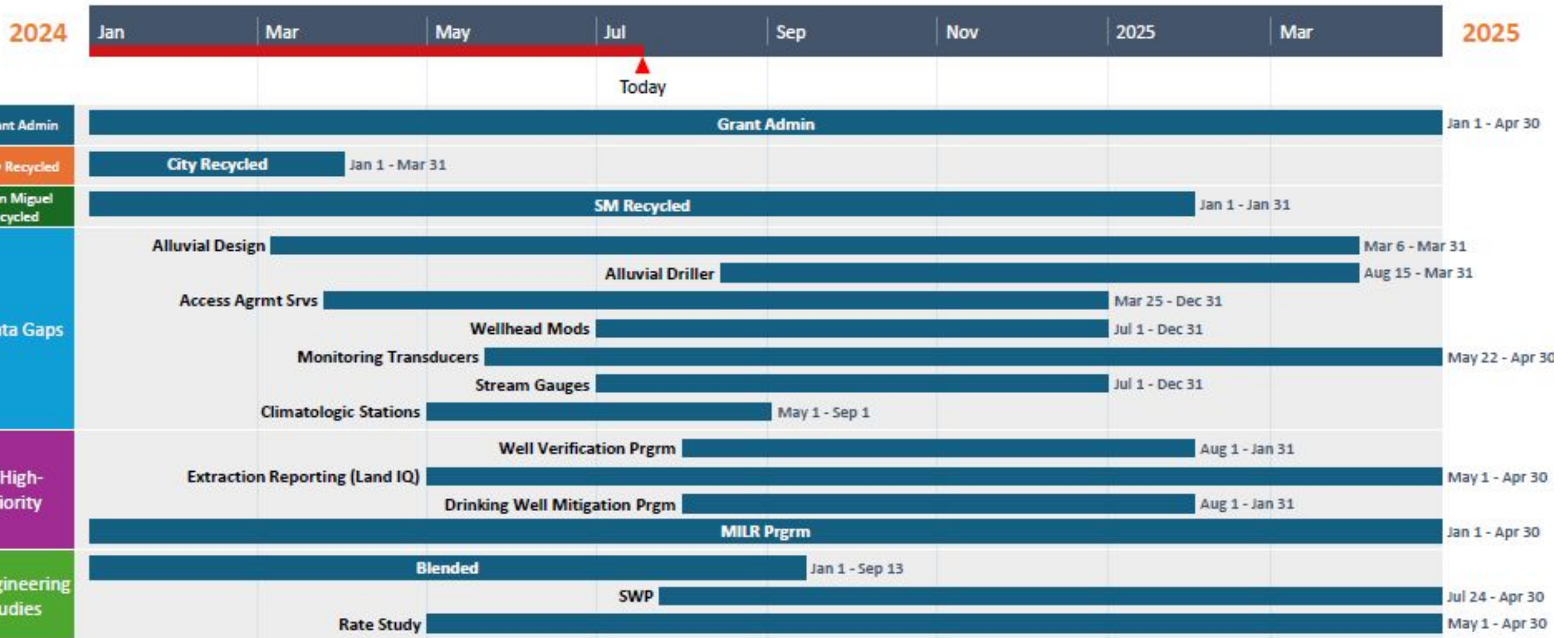


Funded Projects and Programs

No.	Description	Awarded	Est. Cost
1	Grant Admin	✓	\$250,000
2	Recycle Water Project a. City of Paso Salinas Segment	✓	\$3,500,000
3	Recycle Water Project a. San Miguel CSD	✓	\$1,000,000
4	Data Gaps – High Priority a. Expand/Improve Existing Basin Monitoring Network b. Supplemental Hydrogeologic Investigations c. Install New Monitoring Wells, Stream Gauges, Climatologic Stations	✓	\$1,400,000
5	Management Actions – High Priority a. Well Verification and Registration Program b. Groundwater Extraction Measurement Program c. Well Interference Mitigation Program d. Multi-Benefit Land Repurposing Program	✓	\$800,000
6	Supplemental Water Supply Feasibility / Engineering Studies a. Nacimiento Lake b. State Water Project c. Santa Margarita Lake d. Well Impact Mitigation and Alternative Water Supply Projects	✓	\$650,000
	TOTAL FUNDED		\$7,600,000



Paso Basin \$7.6M Grant Implementation Schedule



MILR Program Objectives

- Create a pathway for owners of commercially irrigated agricultural lands in the Paso Robles Basin to voluntarily reduce the volume of groundwater being pumped while protecting and preserving the integrity of the groundwater basin and improve farm operations in the future.
- Provide the opportunity for owners of currently non-irrigated lands that are subject to restrictions in groundwater pumping under the County of San Luis Obispo Ordinance 3484, referred to as the Paso Basin Agricultural Offset Ordinance, to pump groundwater for agricultural irrigation purposes in the future.
- Achieve these objectives through the implementation of a voluntary program that will result in a long-term reduction in groundwater pumping for agricultural irrigation purposes and sustainable conditions in the Basin.



MILR Program Considerations

- MILR Program is intended to work in concert with other SGMA efforts to achieve Basin sustainability (Balance)
- Intended to concentrate of commercial-scale irrigated agriculture
- Developed as an alternative to mandatory pumping reductions
- Intended to prioritize pumping reductions near communities whose drinking water wells have been impacted or are threatened
- Issues to be determined:
 - Funding Sources and Financial Incentive Strategies
 - Priority of Land Repurposing Locations
 - Program Application and Enrollment Process
 - Means by and Conditions under which new irrigates uses can be established



MILR Program

Eligible Participants

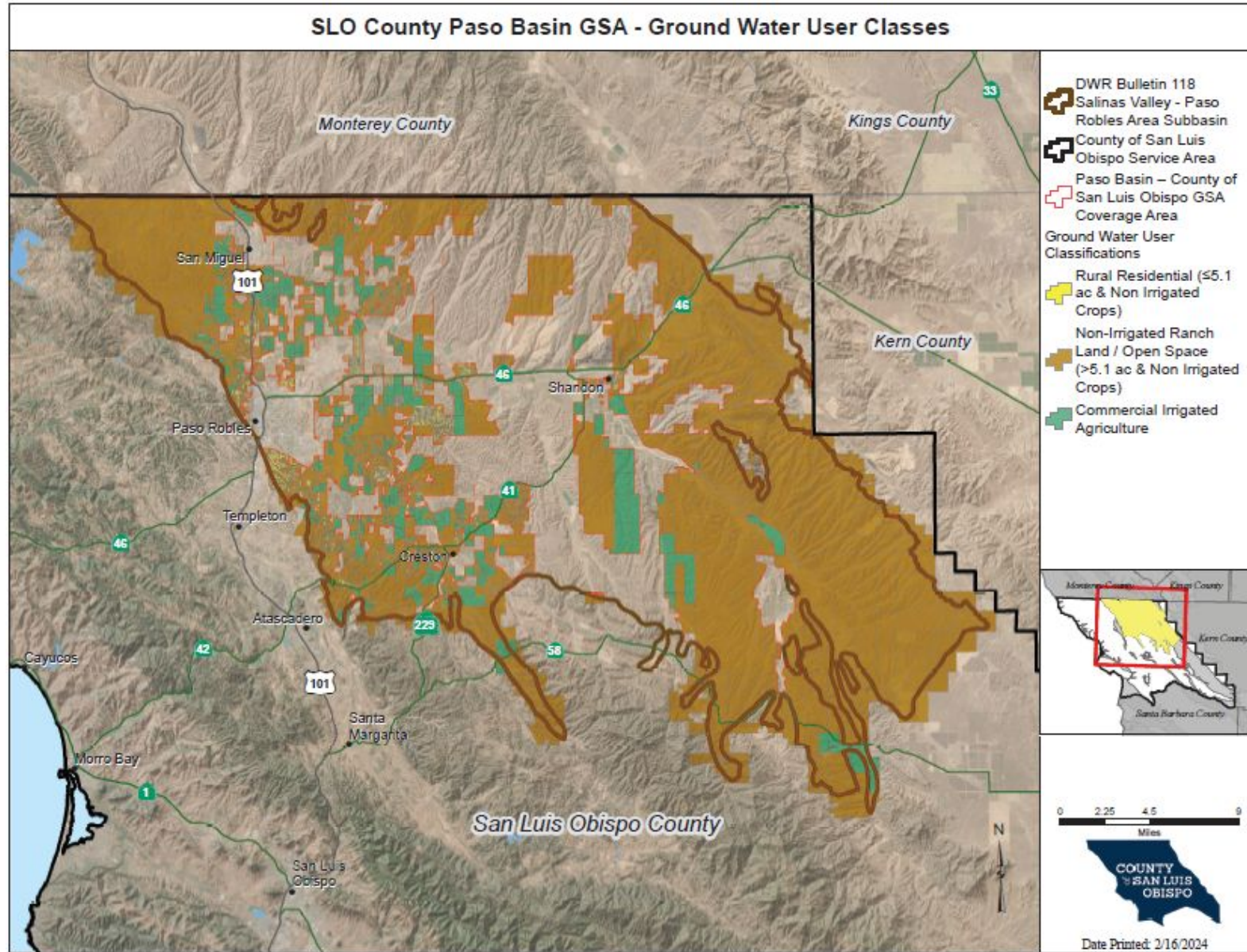
- Owners of commercially irrigated agricultural lands (> 5 acres), or agricultural lands that have been commercially irrigated within the previous 5-years and are not currently subject to groundwater pumping restrictions under the County of San Luis Obispo Ordinance 3484, referred to as the Paso Basin Agricultural Offset Ordinance. Participation of this landowner group may require an exemption from some requirements of the Williamson Act.
- Owners of currently non-irrigated lands, greater than 5-acres, that are subject to restrictions in groundwater pumping under the County of San Luis Obispo Ordinance 3484, referred to as the Paso Basin Agricultural Offset Ordinance, but may plan to pump groundwater for commercial agricultural irrigation purposes in the future. Participation of this landowner group will require an exemption from Ordinance 3484.
- Eligible lands shall be identified as Farming Units. A Farming Unit shall be a collection of semi-contiguous agricultural properties, which are greater than 5 acres in total, that are managed as a single irrigated farming operation (or planned for irrigation in the future).



MILR Program Eligible Properties

Property Size	# Properties	Total Area (Acres)
<1.1 AC	1354	993.66
1.1AC – 5.1 AC	4870	4,915.95
10.11AC-20.1AC	668	9,433.03
20.11AC-40.1AC	481	14,264.19
40.11AC-80.1AC	319	18,464.49
5.11AC-10.1AC	969	8,477.04
80.11AC-160.1A C	311	39,182.04
160.11AC-500.1A C	329	93,986.60
>500.1AC	182	120,007.44

Water Usage Type	# apns	Total Property Acres
Commercial Irrigated Agriculture	564	37,348
Non-Irrigated Ranch Land / Open Space (>5.1 ac & Non Irrigated Crops)	2,730	285,663
Rural Residential (≤5.1 ac & Non Irrigated Crops)	3,186	5,804
Grand Total	6,480	328,814

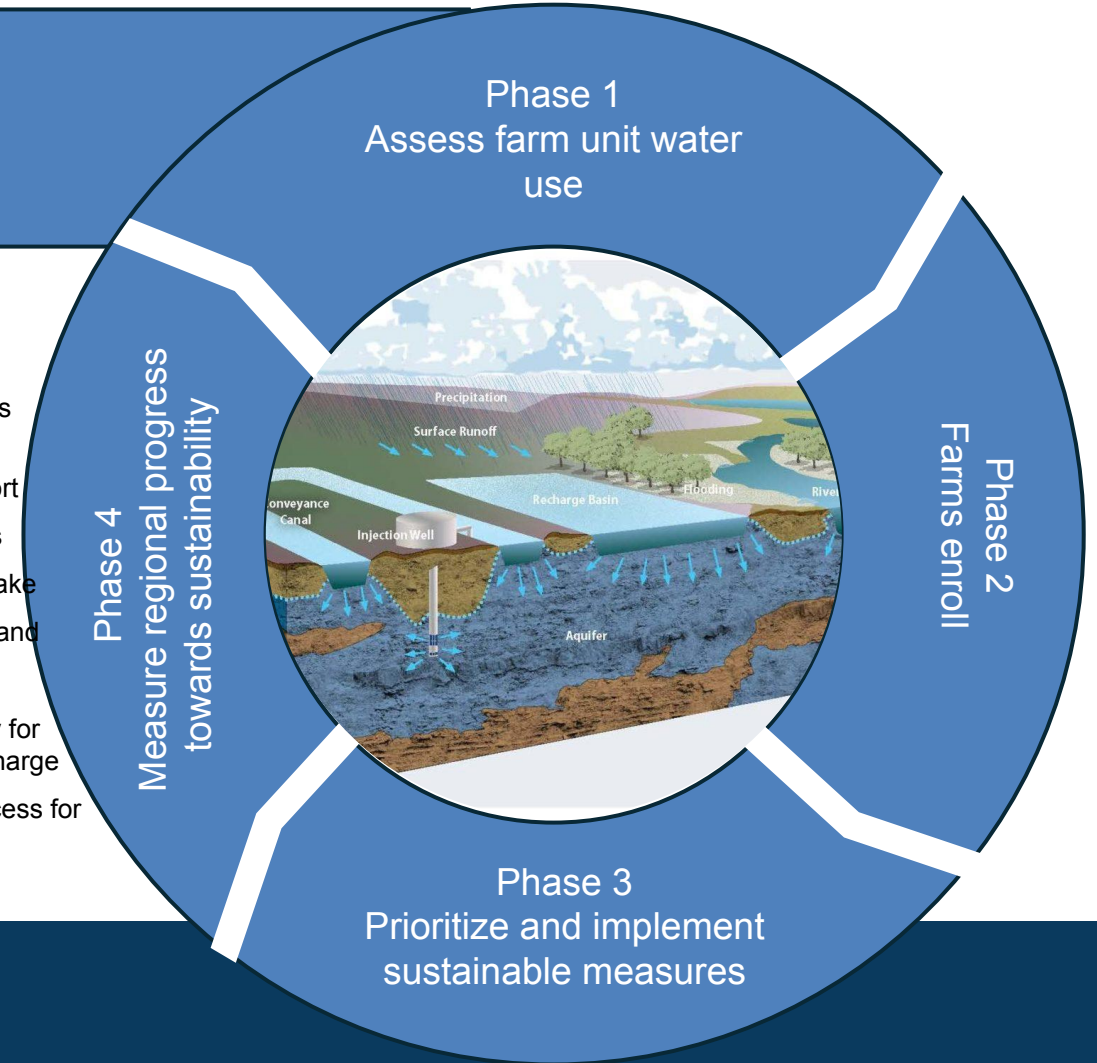
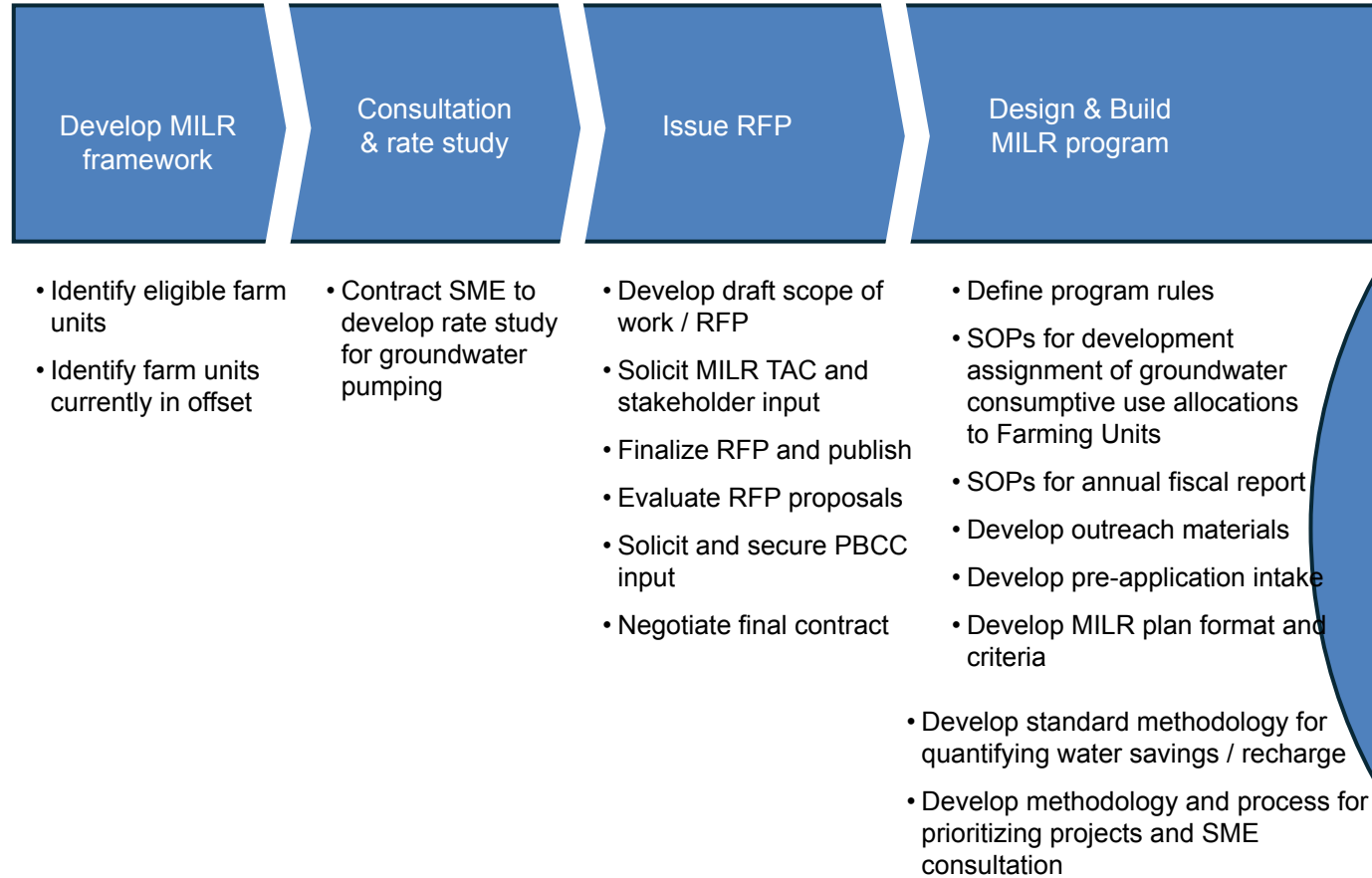


Note: Parcel data is for SLO County GSA area only. Does not include other GSA areas / parcels.



MILR Program Design and Build

Phase 0 – MILR Program Design Build



MILR Program Overview – Ongoing Operations

Phase 4 – Measure regional progress towards sustainability

- Annual progress report on the basin's progress towards sustainability
- Paso Basin GSA Governing Body provides annual financial report / audit
- Paso Basin GSA Governing Body prepares annual progress report on program activity
- Paso Basin GSA Governing Body conducts on-farm audits
- Landowner submits post implementation monitoring reports
- Landowner informs Paso Basin GSA Governing Body of implementation

Phase 3 – Prioritize and implement sustainable measures

- Fund from:
- MILR
 - DWR
 - Water Board
 - Corporations (MSFT, Google, Patagonia, etc.)

Implement efficiency and recharge projects

- Governing body prioritizes plans based on:
- Cost per AF of savings / recharge
 - Strategic location value

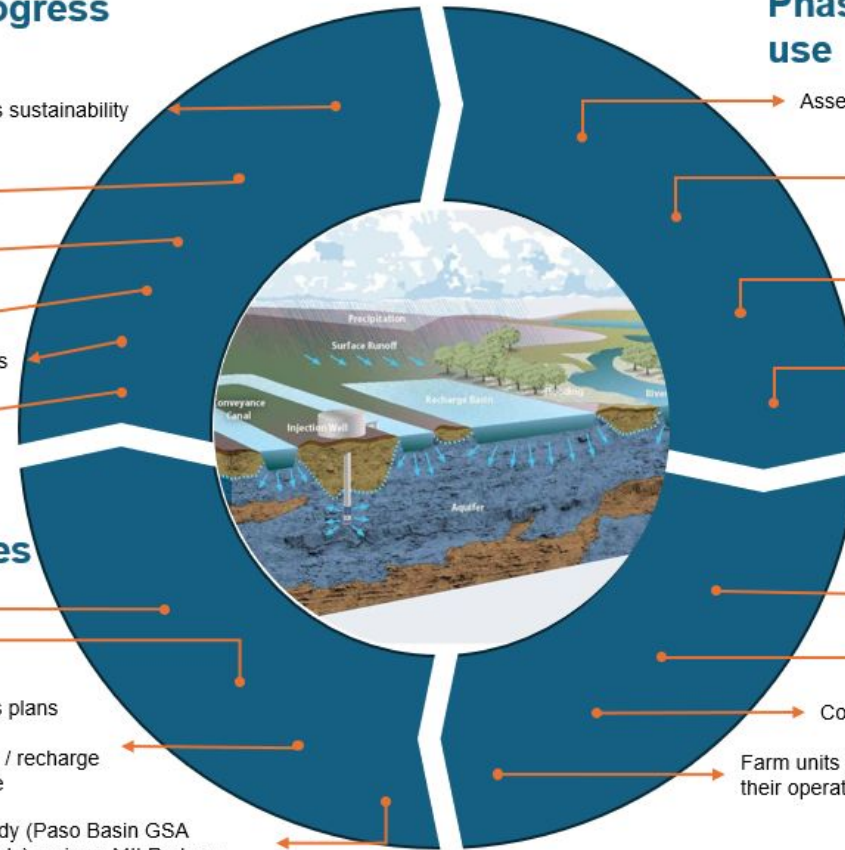
Governing body (Paso Basin GSA Governing Body) reviews MILR plans

Phase 1 - Assess farm unit water use

- Assess farm unit water use
- Assess properties in Paso Basin Agriculture Offset Ordinance for future exemption
- Direct mail / online outreach to farm units about MILR program
- Farm units pay fee based on water use into MILR program

Phase 2 – Farms enroll

- Farm units enroll in MILR program via online tool
- Develop individualized groundwater recharge / efficiency plans ("MILR Plans") for farming units
- Consult with SMEs
- Farm units approve individual recommendations in line with their operations and express interest in adoption



MILR Program Examples

Examples of strategies and projects that may be considered include:

- Creation or restoration of habitat, including pollinator habitat, wetland habitat, upland habitat, and riparian habitat
- Creation of multi-benefit recharge areas
- Conversion of irrigated land to dryland farming or non-irrigated rangeland
- Planting cover crops or conservation cover
- Facilitation of renewable energy projects that have an overall net GHG reduction
- Creation of parks or community recreation areas
- On-Farms storm water capture / recharge measures.
- Repurposing irrigated land to land uses that require zero or significantly reduced groundwater use.
- Irrigation efficiency measures that reduce groundwater use
- Farming best management practices that reduce groundwater use
- Other Measures as may be determined



MILR Program

Desired Outcomes

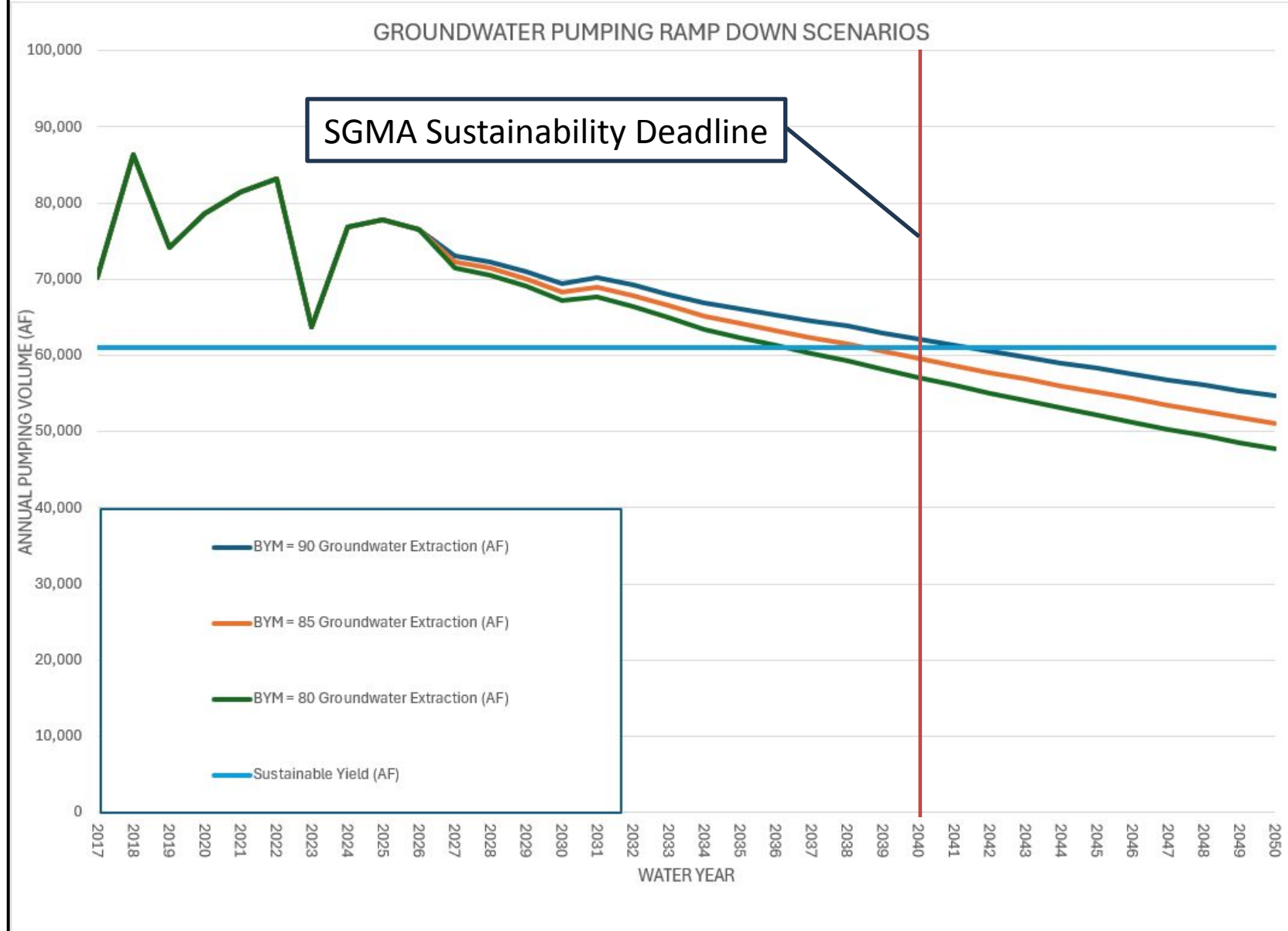
Desired outcomes from the MILR Program may include:

- Reduced groundwater use
- Increased groundwater recharge
- Improved baseflows in rivers and streams
- Conversion of land to less intensive water uses while maintaining natural and working lands
- Creation and/or restoration of wildlife and pollinator habitat and/or migratory resources
- Improved water quality
- Prioritization of lands to be enrolled to maximize benefit to the groundwater basin
- Increased community outreach, involvement, and education
- Mitigation of groundwater conditions in the basin that pose risks to water adequacy and quality for domestic well users (High Priority)
- Protection of areas where interconnected surface water and groundwater systems and groundwater dependent ecosystems exist
- SGMA compliance
- Long-term groundwater basin sustainability



Groundwater Pumping Ramp Down Scenarios

Basin Yield Metric (BYM) = Annual GW Extraction / Basin Sustainable Yield



Groundwater Pumping Ramp Down BYM Goal = 85

**Basin Yield Metric (BYM) =
Annual GW
Extraction/Basin
Sustainable Yield**

Water Year	Groundwater Extraction (AF)	Sustainable Yield (AF)	% Change from Previous Year	Change in GW Extraction from Previous Year (AF)	Basin Yield Metric	Basin Yield Metric Goal	Notes
2017	70,200	61,100			115	85	
2018	86,300	61,100	22.93%	16,100	141	85	
2019	74,100	61,100	-14.14%	-12,200	121	85	
2020	78,600	61,100	6.07%	4,500	129	85	
2021	81,400	61,100	3.56%	2,800	133	85	
2022	83,200	61,100	2.21%	1,800	136	85	
2023	63,800	61,100	-23.32%	-19,400	104	85	
2024	76,800	61,100	20.38%	13,000	126	85	7-YR Running Average
2025	77,743	61,100	1.23%	943	127	85	7-YR Running Average
2026	76,520	61,100	-1.57%	-1,222	125	85	7-YR Running Average
2027	72,254	61,100	-5.58%	-4,266	118	85	7-YR Running Average* 94%
2028	71,402	61,100	-1.18%	-852	117	85	7-YR Running Average* 94%
2029	70,059	61,100	-1.88%	-1,343	115	85	7-YR Running Average* 94%
2030	68,295	61,100	-2.52%	-1,765	112	85	7-YR Running Average* 94%
2031	68,898	61,100	0.88%	604	113	85	7-YR Running Average* 94%
2032	67,837	61,100	-1.54%	-1,061	111	85	7-YR Running Average* 94%
2033	66,507	61,100	-1.96%	-1,330	109	85	7-YR Running Average* 94%
2034	65,163	61,100	-2.02%	-1,345	107	85	7-YR Running Average* 94%
2035	64,210	61,100	-1.46%	-952	105	85	7-YR Running Average* 94%
2036	63,245	61,100	-1.50%	-966	104	85	7-YR Running Average* 94%
2037	62,329	61,100	-1.45%	-915	102	85	7-YR Running Average* 94%
2038	61,528	61,100	-1.29%	-801	101	85	7-YR Running Average* 94%
2039	60,539	61,100	-1.61%	-990	99	85	7-YR Running Average* 94%
2040	59,559	61,100	-1.62%	-980	97	85	7-YR Running Average* 94%
2041	58,626	61,100	-1.57%	-933	96	85	7-YR Running Average* 94%
2042	57,748	61,100	-1.50%	-878	95	85	7-YR Running Average* 94%
2043	56,880	61,100	-1.50%	-868	93	85	7-YR Running Average* 94%
2044	56,025	61,100	-1.50%	-855	92	85	7-YR Running Average* 94%
2045	55,179	61,100	-1.51%	-847	90	85	7-YR Running Average* 94%
2046	54,326	61,100	-1.55%	-853	89	85	7-YR Running Average* 94%
2047	53,492	61,100	-1.54%	-834	88	85	7-YR Running Average* 94%
2048	52,677	61,100	-1.52%	-815	86	85	7-YR Running Average* 94%
2049	51,878	61,100	-1.52%	-799	85	85	7-YR Running Average* 94%
2050	51,090	61,100	-1.52%	-788	84	85	7-YR Running Average* 94%



Questions?

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