SANTA MARGARITA Groundwater Agency

GSP Periodic Evaluation and Amendment Update

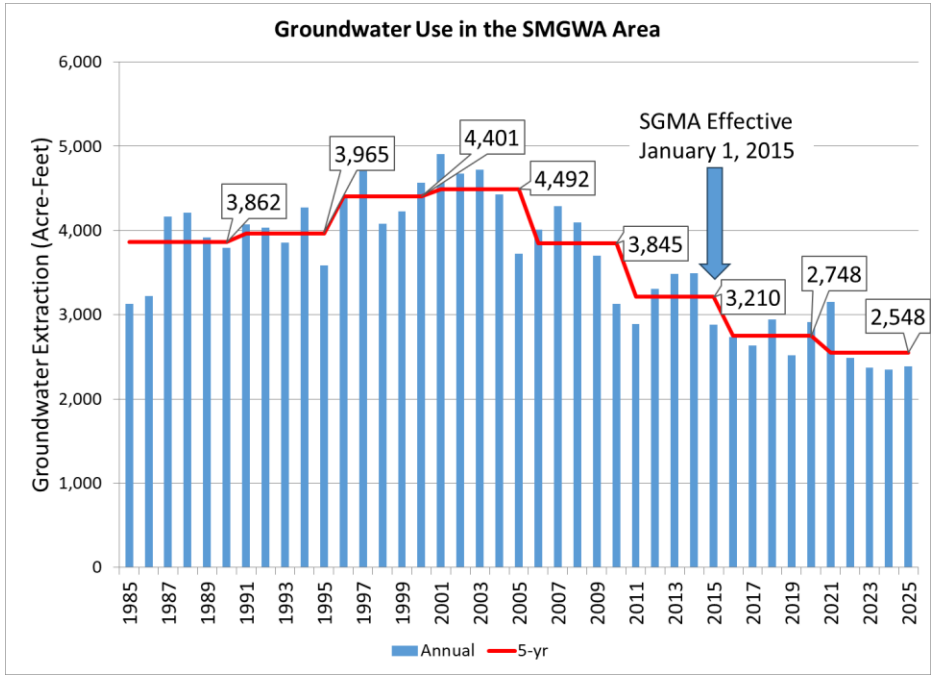
Agenda Item 4.1

August 27, 2026

REGIONAL WATER MANAGEMENT FOUNDATION
a subsidiary of Community Foundation Santa Cruz County

MONTGOMERY & ASSOCIATES
Water Resource Consultants

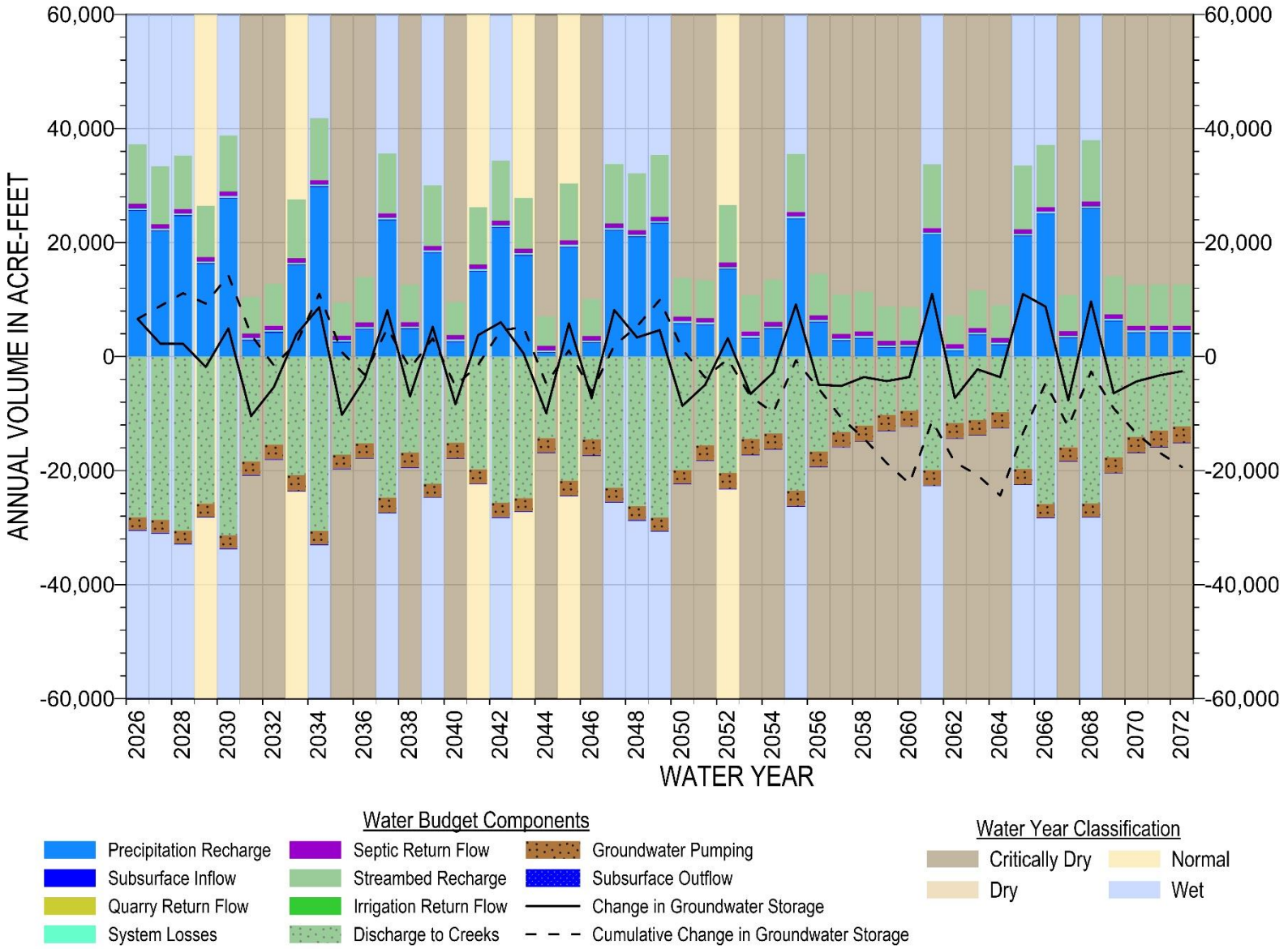
Updated Model Runs



Water Budget Components		Current Water Budget 2015-2025		Historical Water Budget 1985-2014	
Average Total for Current Water Budget (Acre-Feet)		Annual Average (Acre-Feet)	Percent of Total Inflow or Outflow	Annual Average (Acre-Feet)	Percent of Total Inflow or Outflow
Inflows (24,000)*	Precipitation Recharge	13,900	58%	13,600	56%
	Subsurface Inflow	100	1%	200	1%
	System Losses	200	1%	200	1%
	Septic Return Flow	900	4%	1,100	5%
	Quarry Return Flow	<100	<1%	200	1%
	Streambed Recharge	8,800	37%	8,700	36%
	Irrigation Return Flow	100	<1%	100	<1%
Outflows * (23,200)	Groundwater Pumping	2,700	11%	3,900	15%
	Subsurface Outflow	100	<1%	100	<1%
	Discharge to Creeks	20,500	88%	21,300	84%
Storage*	Average Annual Change in Storage	700	--	-1,300	--
	Cumulative Change in Storage	8,200	--	-40,300	--

**Small discrepancies between total inflow and outflow may occur due to rounding*

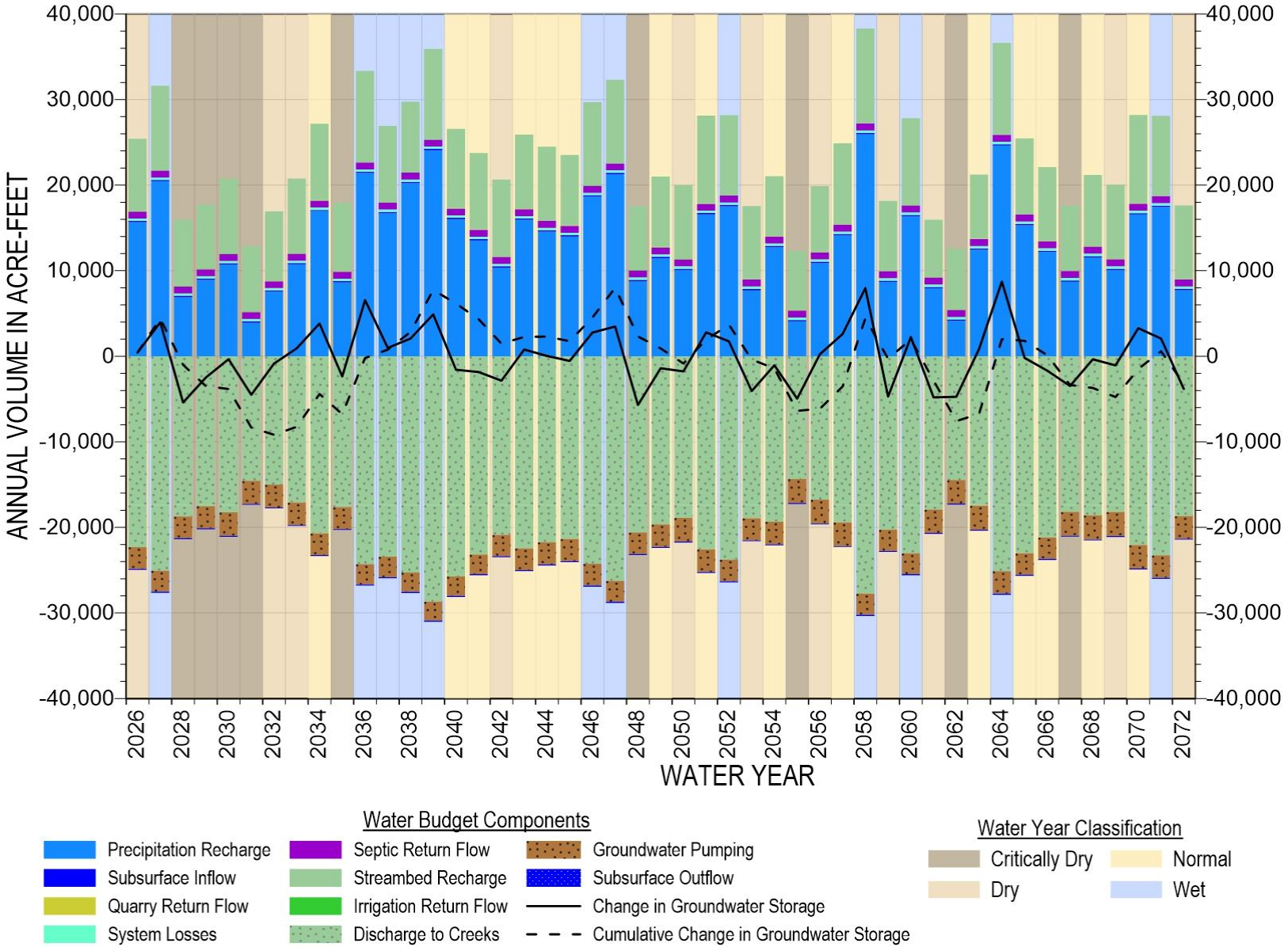
Projected Groundwater Budget With Climate Change



- Used “4 Model Ensemble” from 2022 GSP
- Very dry second half of years
- Average annual change in storage -400 AFY

Projected Groundwater Budget Without Climate Change

- Average annual change in storage <-100 acre-feet per year (AFY)
- Average groundwater usage 2,600 AFY is effectively “sustainable yield”
  - 700 AFY (unconfined Santa Margarita)
  - 1,900 AFY (confined Monterey, Lompico, Butano)



SMC for Reduction of Groundwater in Storage

- Measurable Objective (MO) = 5-year average groundwater extraction at or below sustainable yield
  - 700 AFY unconfined
  - 1,900 AFY confined
- Minimum Threshold (MT) = 5-year average extraction below
  - 750 AFY unconfined
  - 2,250 AFY confined (current average ~1,750 AFY)
- Undesirable Result = 1 or more of the aquifers exceeds its 5-year rolling average MT value

Projects and Management Actions

Primary

San Lorenzo Valley Water District Expanded Conjunctive Use

Water Quality Tracking and Coordination with County

Supplemental

Scotts Valley Water District/City of Santa Cruz Conjunctive Use

Stormwater Recharge

Interconnected Surface Water

FINAL

CITY OF SANTA CRUZ ANADROMOUS SALMONID HABITAT CONSERVATION PLAN

for the

ISSUANCE OF AN INCIDENTAL TAKE PERMIT UNDER SECTION 10(a)(1)(B) OF THE ENDANGERED SPECIES ACT

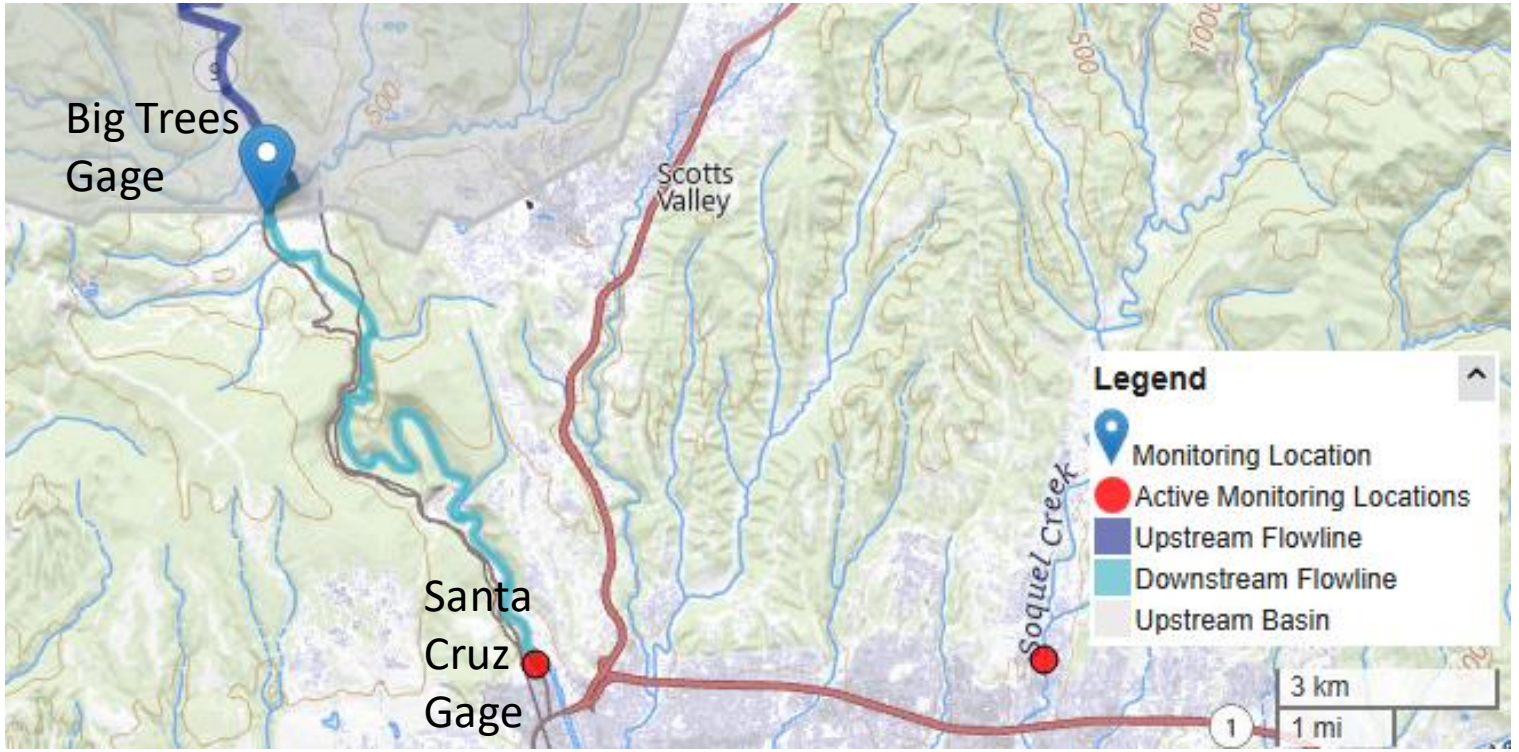
Prepared for:

City of Santa Cruz

Prepared by:

City of Santa Cruz Water Department, Ebbin Moser + Skaggs LLP, Hagar Environmental Science, Gary Fiske and Associates, Balance Hydrologics, Inc., Alnus Ecological

August 2025
(Revised February 2026)



USGS Gages

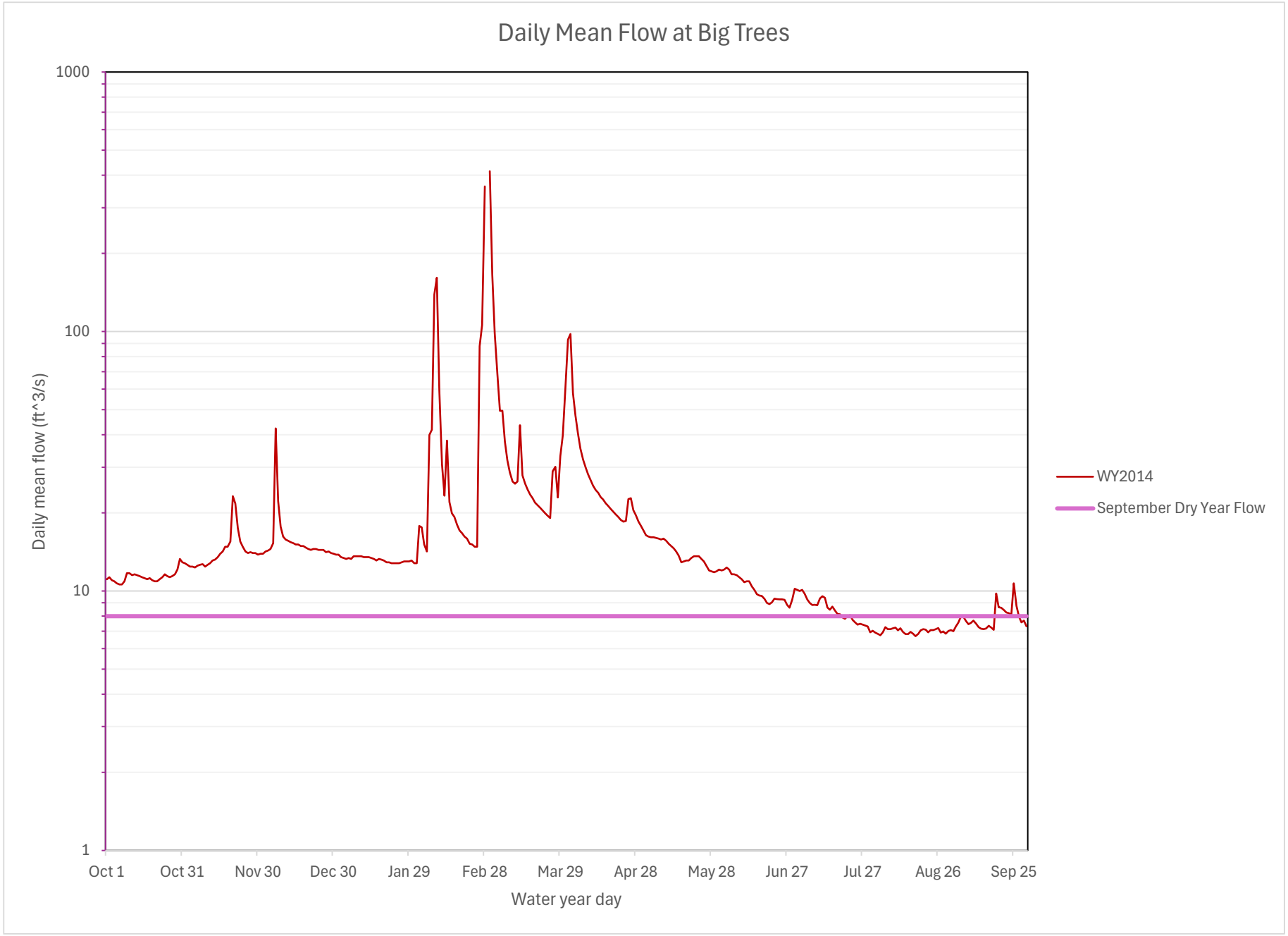
San Lorenzo River Flow Goals

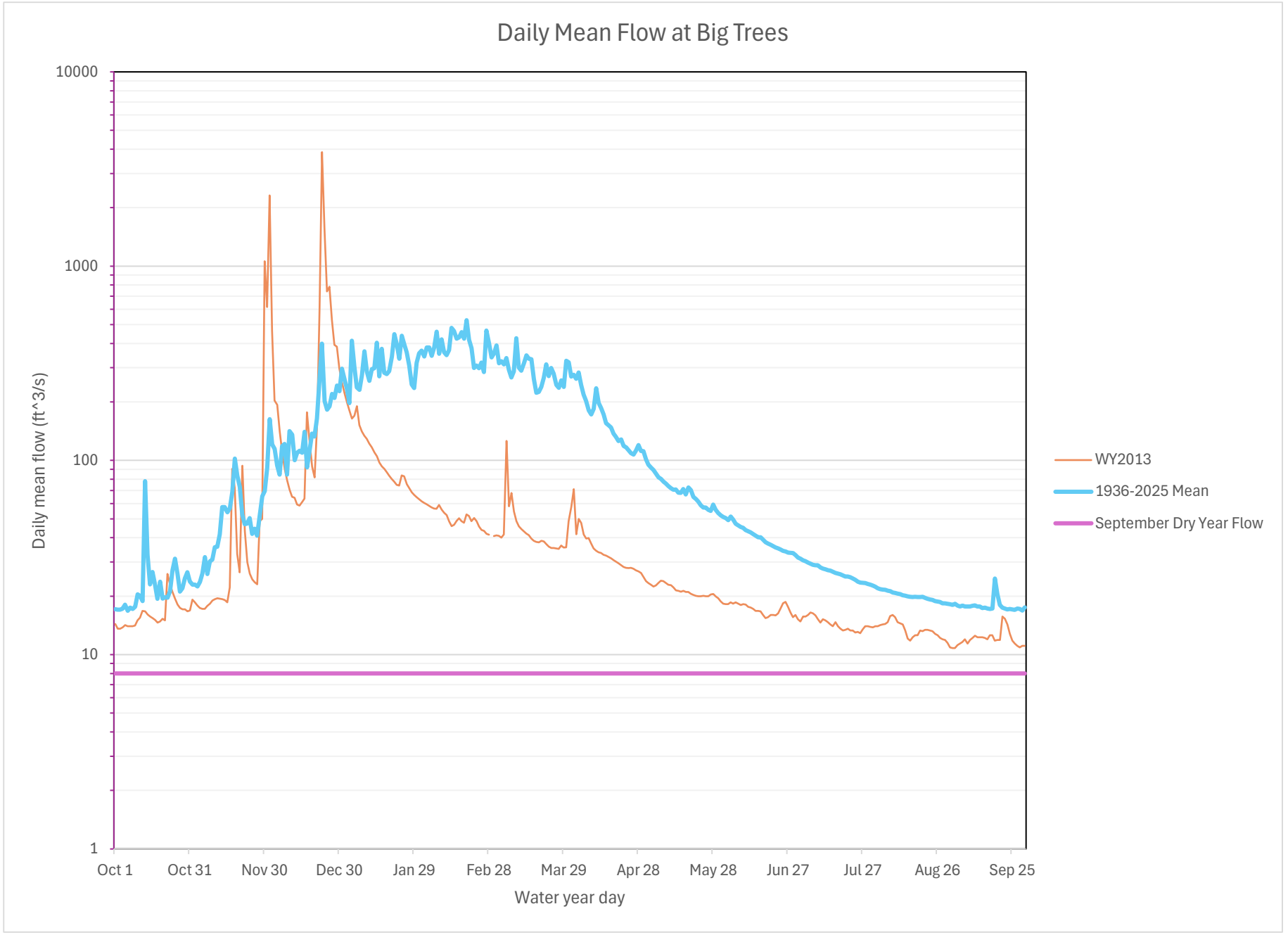
	Minimum Flow in the San Lorenzo River below Tait Street (cfs)								
	Rearing Baseflow					Migration		Spawning[1]	
	Hydrologic condition 5 80-100% (driest)	Hydrologic condition 4 60-80% (dry)	Hydrologic condition 3 40-60% (normal)	Hydrologic condition 2 20-40% (wet)	Hydrologic condition 1 0-20% (very wet)	Adult[2]	Smolt Migration[3]	Spawn	Incubate
Jan	8	8	15.8	16.4	17.5	17/25.2	10		
Feb	8	8	15.9	16.7	18.0	17/25.2	10		
Mar	8	8	16.3	17.3	18.2	17/25.2	10		
Apr	8	8	17.2	17.9	18.4	17/25.2[4]	10		
May	8	8	17.7	18.2	18.5		10		
Jun	8	8	16.6	18.1	18.5				
Jul	8	8	12.4	15.8	18.2				
Aug	8	8	9.8	11.9	16.4				
Sep	8	8	9.0	11.1	13.3				
Oct	8	8	9.8	11.4	13.3				
Nov	8	8	12.5	14.1	16.4				
Dec	8	8	15.1	16.2	17.6	17/25.2			

1 No spawning occurs in this reach.

2 Adult migration flows may be reduced to 3 consecutive days a week if storage levels in Loch Lomond Reservoir fall below the following levels (MG): Dec1900 MG; Jan-2,000 MG; Feb-2,100 (MG); Mar-2,200 (MG). Further, adult migration flows may be reduced to 5 consecutive days after each storm event that exceeds 17 cfs if storage levels in Loch Lomond Reservoir fall below the following levels: Dec-1600 (MG); Jan-1700 (MG); Feb-1800 (MG); Mar-1900 (MG). 3 During critically dry conditions (80% -100% Hydrologic condition) smolt outmigration flows shall be provided at least 3 days per week in March, April, and May. If additional water is determined to be required, the City may further reduce smolt outmigration requirements at the Tait Street Diversion provided that (a) drought has been officially declared; and (b) this reduction in smolt outmigration opportunities will not reduce smolt migration more than one full day/week in the lower San Lorenzo River system or there is evidence from the San Lorenzo River or neighboring watersheds (i.e. Scott Creek) indicating that smolt migration is no longer occurring.

4 April adult migration flows provided in hydrologic conditions 1-3.


Daily Mean Flow at Big Trees
1000
100
10
1
Daily mean flow (ft^3/s)
Oct 1
Oct 31
Nov 30
Dec 30
Jan 29
Feb 28
Mar 29
Apr 28
May 28
Jun 27
Jul 27
Aug 26
Sep 25
Water year day
WY2014
September Dry Year Flow



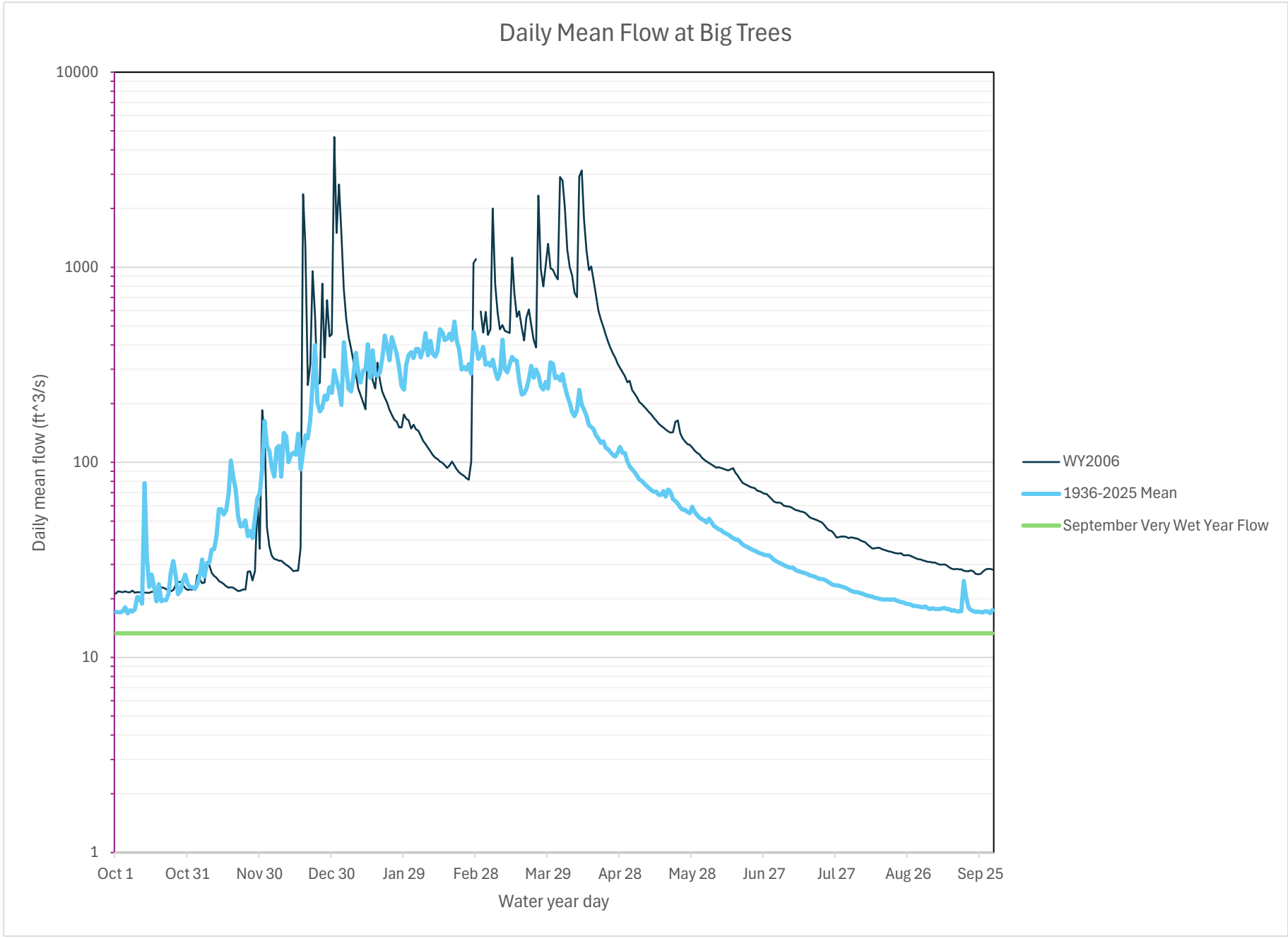
WY2013 low flow of 11 cfs at Big Trees would have resulted in about 14 cubic feet per second (cfs) at Santa Cruz gage

Representative Monitoring Points (RMP)

Well Name	Aquifer	2022 GSP MT	Adjust MT to ~2013	Change in MT from 2022 GSP to 2013	Fall 2025 to Adjusted MT
SLVWD Quail MW-A	Santa Margarita	413	413	0	1
SLVWD Quail MW-B	Santa Margarita	449	457	8	3
SMGWA-6	Santa Margarita	320	325	5	10
SLVWD Olympia 1	Santa Margarita	340	349	9	15
SMGWA-3	Santa Margarita	387	387	0	10
SMGWA-4	Santa Margarita	342	345	3	4
SMGWA-5	Santa Margarita	515	515	0	13
SVWD TW-18	Santa Margarita	462	469	7	4
SMGWA-2	Santa Margarita	389	392	3	7
SLVWD Pasatiempo MW-2	Santa Margarita	498	516	18	8
SVWD AB303 MW-1	Santa Margarita	477	478	1	5
SVWD SV4-MW	Santa Margarita	381	399	18	10
SMGWA-8	Monterey	313	320	7	13
SVWD #9	Monterey	301	340	39	27
SLVWD Pasatiempo #3 (Estrella)	Lompico	337	337	0	27
SLVWD Pasatiempo MW-1	Lompico	334	337	3	27
SVWD #10	Lompico	286	286	0	56
SVWD #11A	Lompico	288	294	6	42
SVWD AB303 MW-2	Lompico	384	387	3	23
SVWD AB303 MW-3A	Lompico	344	354	10	16
SVWD TW-19	Lompico	314	337	23	63
SVWD Canham Well	Butano	427	433	6	7
SVWD Stonewood Well	Butano	836	841	5	6

Indicates RMP

Indicates proposed new RMP



WY2006 low flow of 19 cfs at Big Trees would have resulted in 30 cfs at Santa Cruz gage

Interconnected Surface Water SMC Proposed Undesirable Result (UR) Definition

Draft UR Definition (Based on 12 RMPs in shallow/unconfined aquifer and 11 RMPs in deeper/confined aquifers)

A. Groundwater elevations in 3 or more RMPs fall below the minimum threshold in 2 consecutive years in the shallow/unconfined aquifer system. (MT = fall 2013; MO = fall 2006)

or

B. Groundwater elevations in 3 or more RMPs fall below the minimum threshold in 2 consecutive years in the deeper/confined aquifer system. (MT = fall 2013; MO = fall 2006)

or

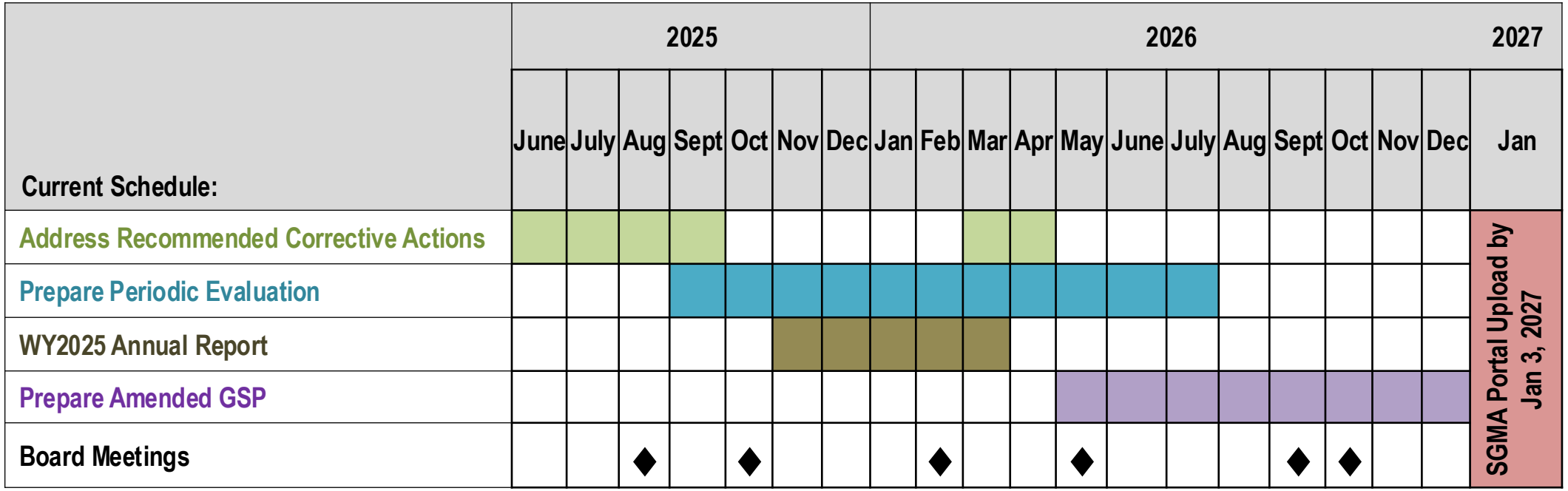
C. 5-year rolling average groundwater extraction from 1 or more aquifer groups exceeds its MT. (MT = 750 AF unconfined; 2,250 confined)

Revised Draft GSP Sustainability Goal

The sustainability goal for the Santa Margarita Groundwater Basin is to achieve and maintain groundwater conditions that support beneficial uses and users and sustain the long-term health of the Basin's community, economy, and environment.

The sustainability goal will be achieved by:

- Monitoring and managing groundwater conditions to meet established sustainable management criteria and striving to achieve measurable objectives to enhance Basin conditions.
- Maintaining groundwater levels sufficient to protect domestic, municipal, agricultural, and industrial supply wells.
- Maintaining groundwater levels that support streamflow and groundwater dependent ecosystems, where applicable.
- Maintaining groundwater quality for current and future beneficial uses.
- Implementing adaptive management strategies, including expanding conjunctive use and drought response measures, to enhance drought resilience and long-term supply reliability.



Board Meetings / Milestones

Revised Schedule

Jul 24, 2026: Notice to City/County (90-days required by SGMA) of Proposed Adoption of GSP Amendment

Sep 15, 2026 Release Board/Public Draft PE and GSP Amendment

Oct 15, 2026: Board/Public Comment on Draft PE and GSP Amendment Due

Oct 22, 2026: Board Approve PE and GSP Amendment

Jan 3, 2027: PE and GSP Amendment Due

If we don't meet Sep 15 Draft, may need Special Board Meeting