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US Army Corps
of Engineers®
Albuquerque District



Pecos River 2025 Annual Operating Plan

April 18, 2025

Carolyn Donnelly, Reclamation



Pecos River Basin: Major Irrigation Facilities

0 30 60
Miles



Data Attribution: USCB, USGS, USDA and Esri Living Atlas



















Hydrology Terms

- cfs: cubic feet per second (flowrate)
- ac-ft: acre-feet, the volume of water needed to cover one acre to depth of one foot
- Hydrograph: graph of flowrate over time
- Runoff forecast: predicted streamflow volumes for March through July provided by Natural Resources Conservation Service (NRCS)
- Exceedance: chance that actual volume will be greater than (or exceed) predicted volume



Dam Information

Dam	Agency Owner/Operator		Authorized Purposes		
	Reclamation	USACE	Water Supply	Recreation	Flood Control
Santa Rosa					
Sumner					
Two Rivers					
Brantley					
Avalon					

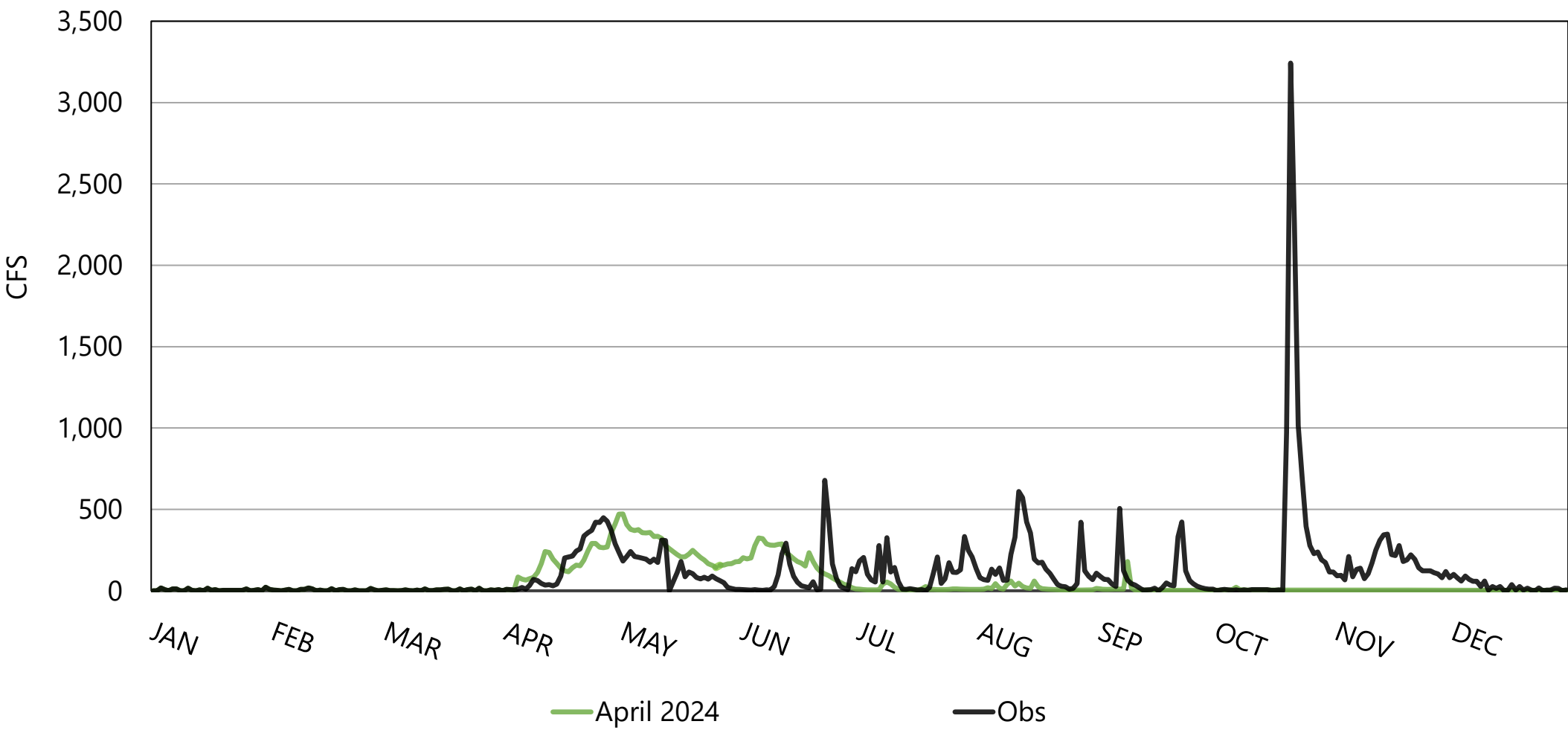


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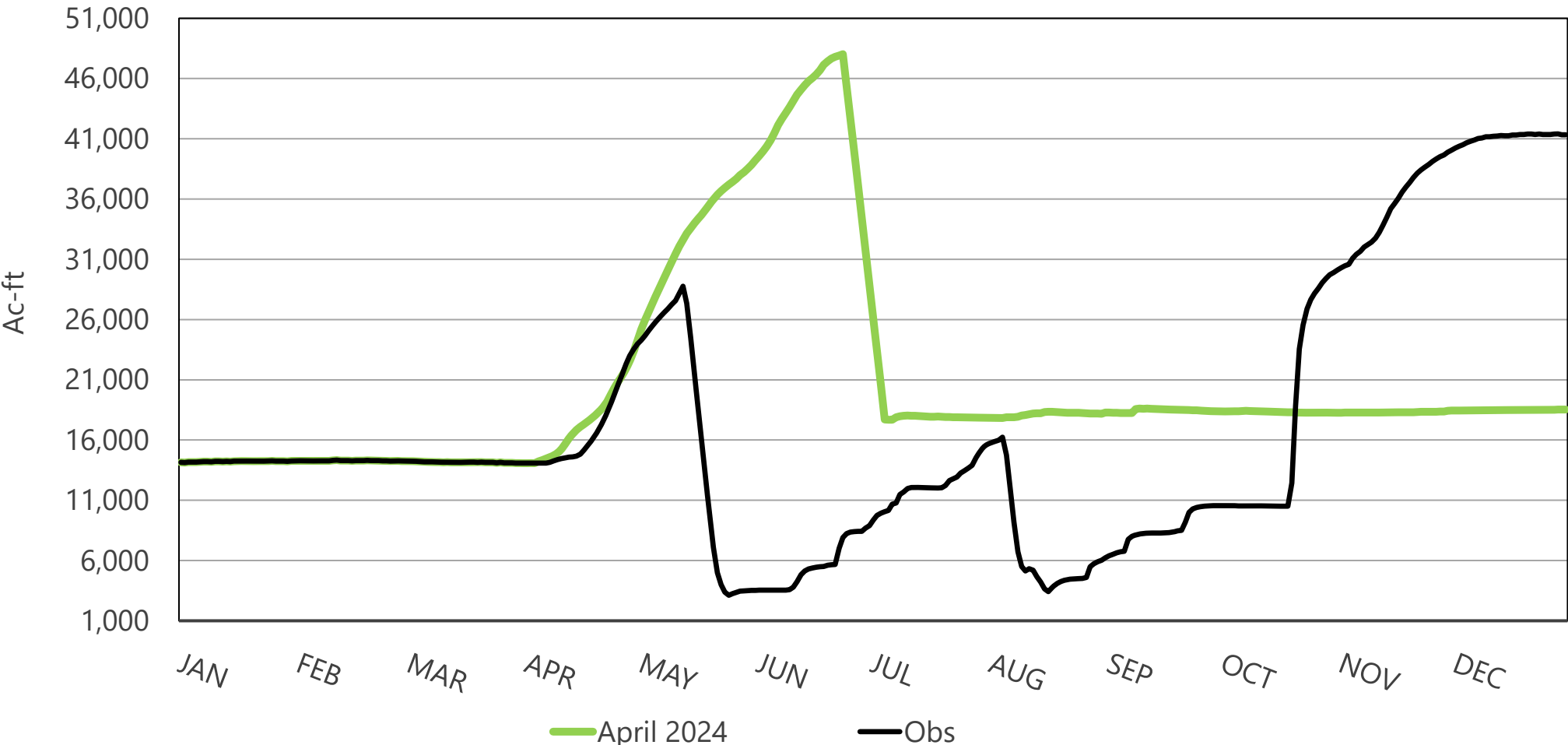
2024 Comparison

How did last year's Annual Operating Plan
compare to what actually happened?

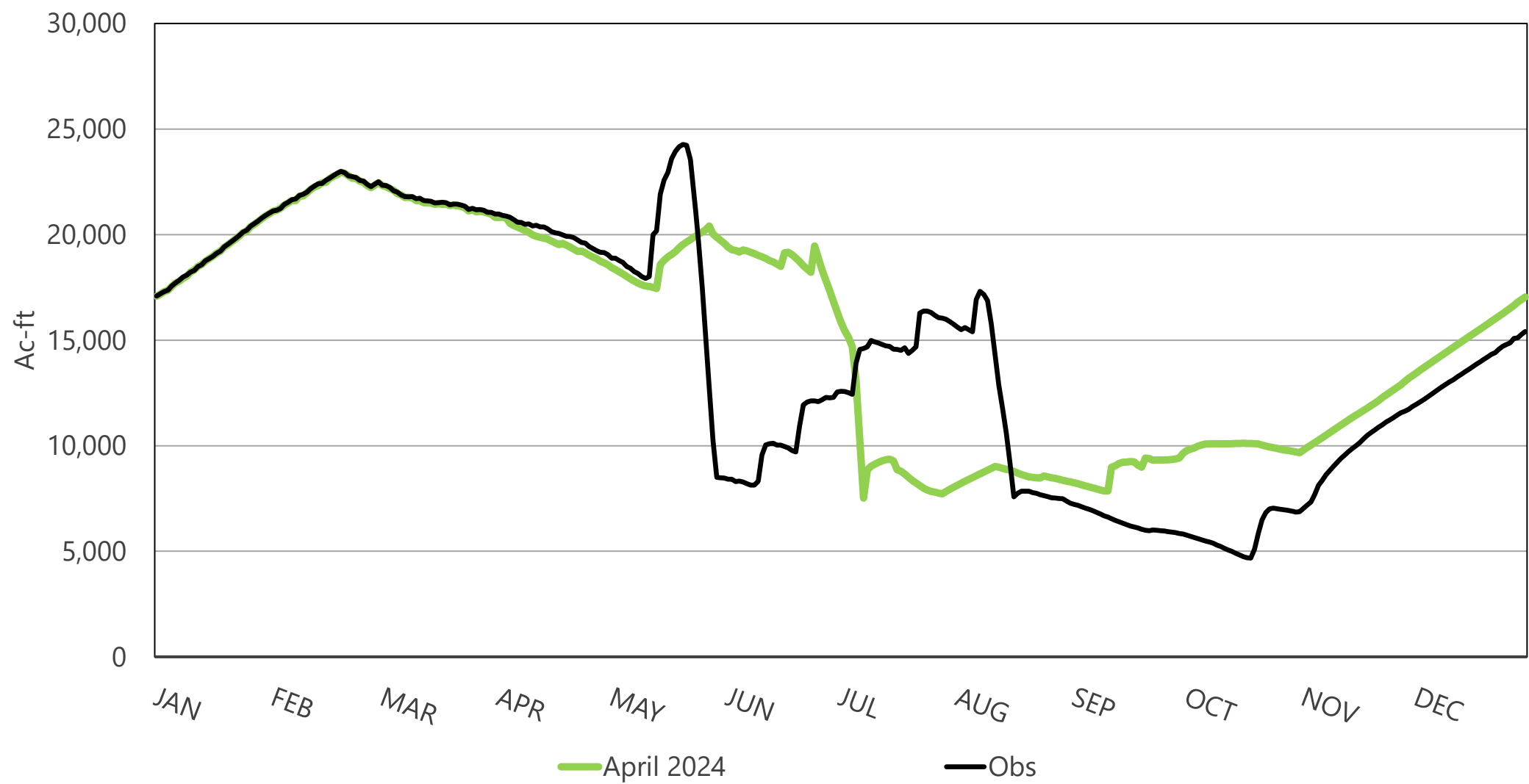
2024 Santa Rosa Inflow Comparison



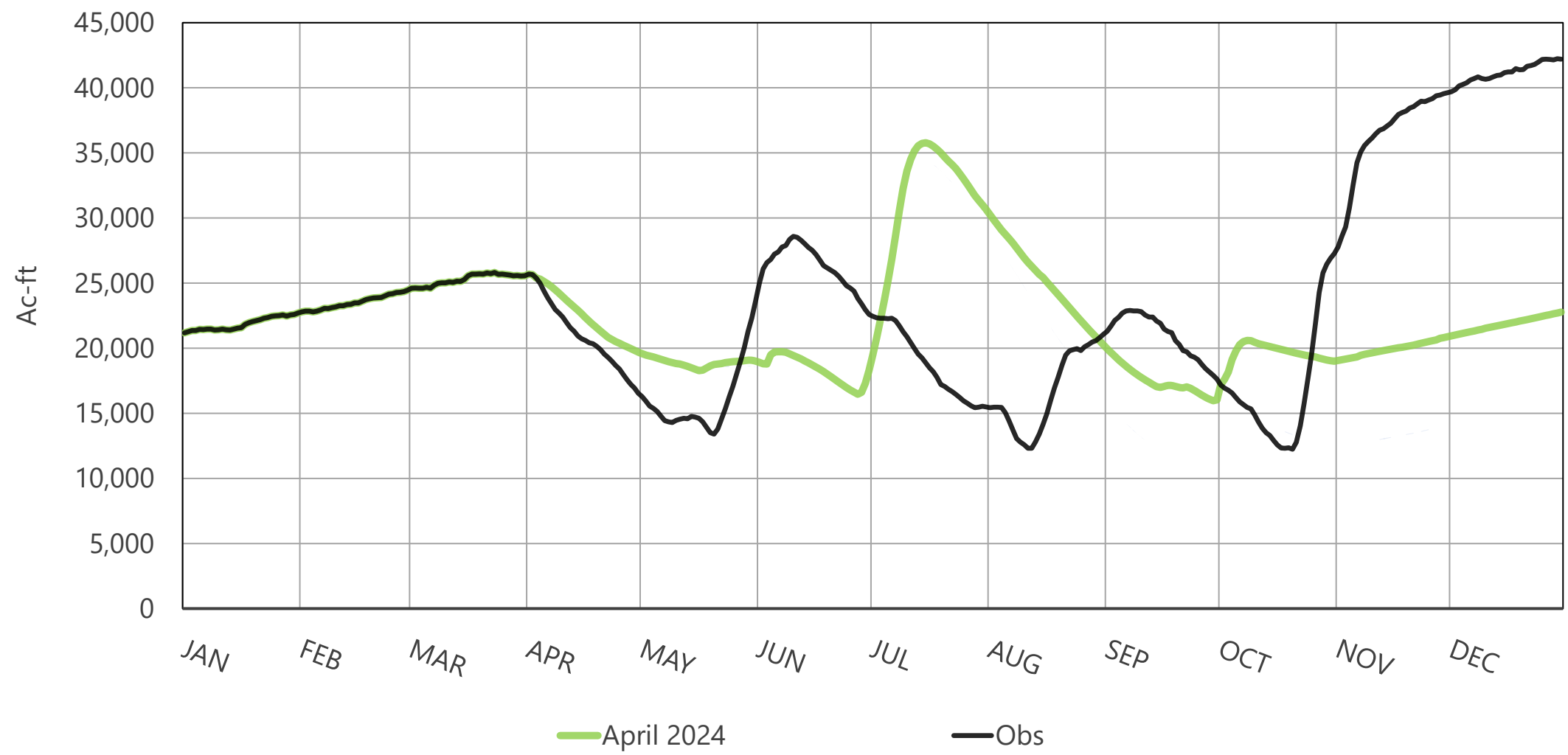
2024 Santa Rosa Storage Comparison



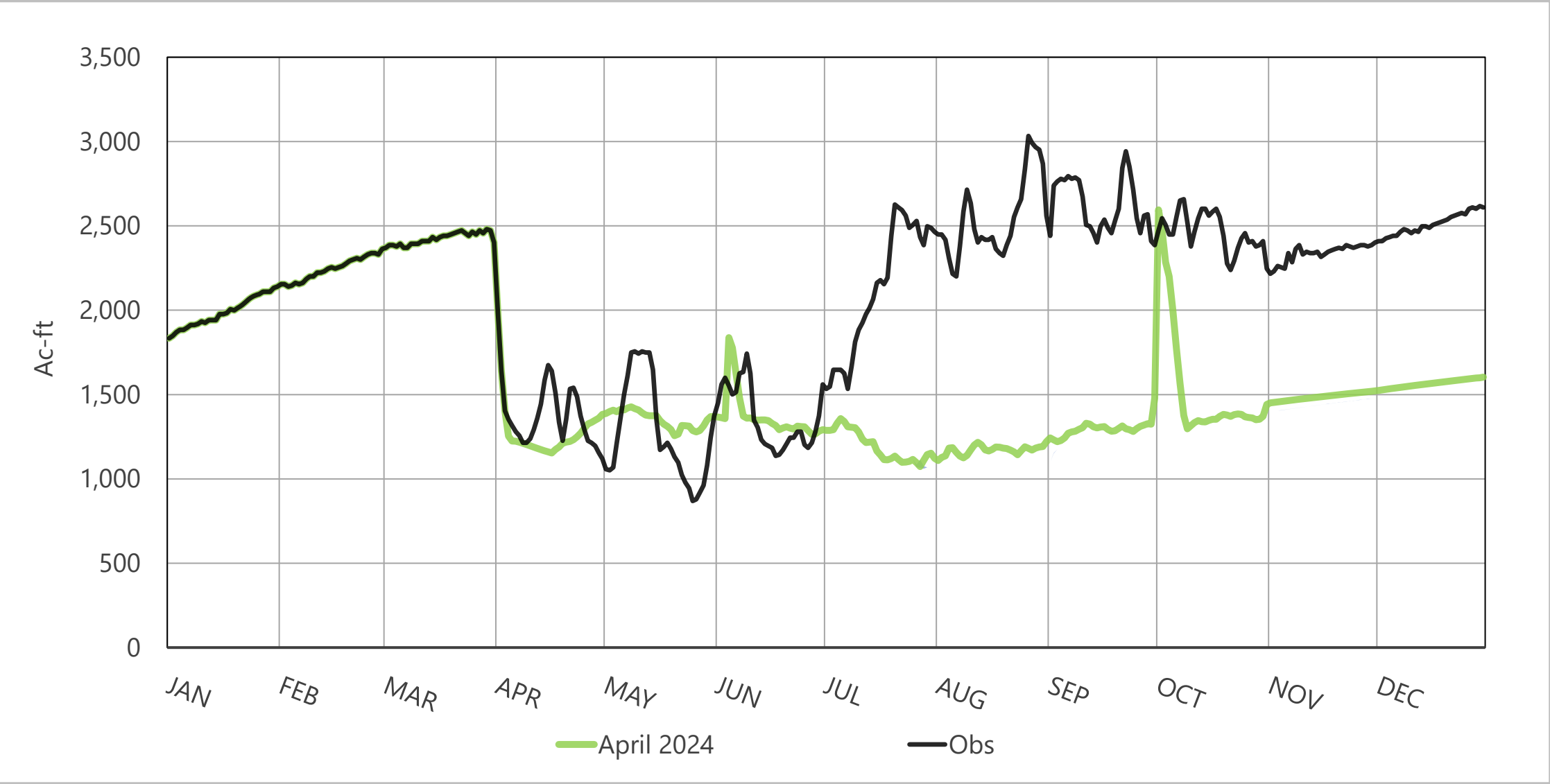
2024 Sumner Storage Comparison



2024 Brantley Storage Comparison



2024 Avalon Storage Comparison

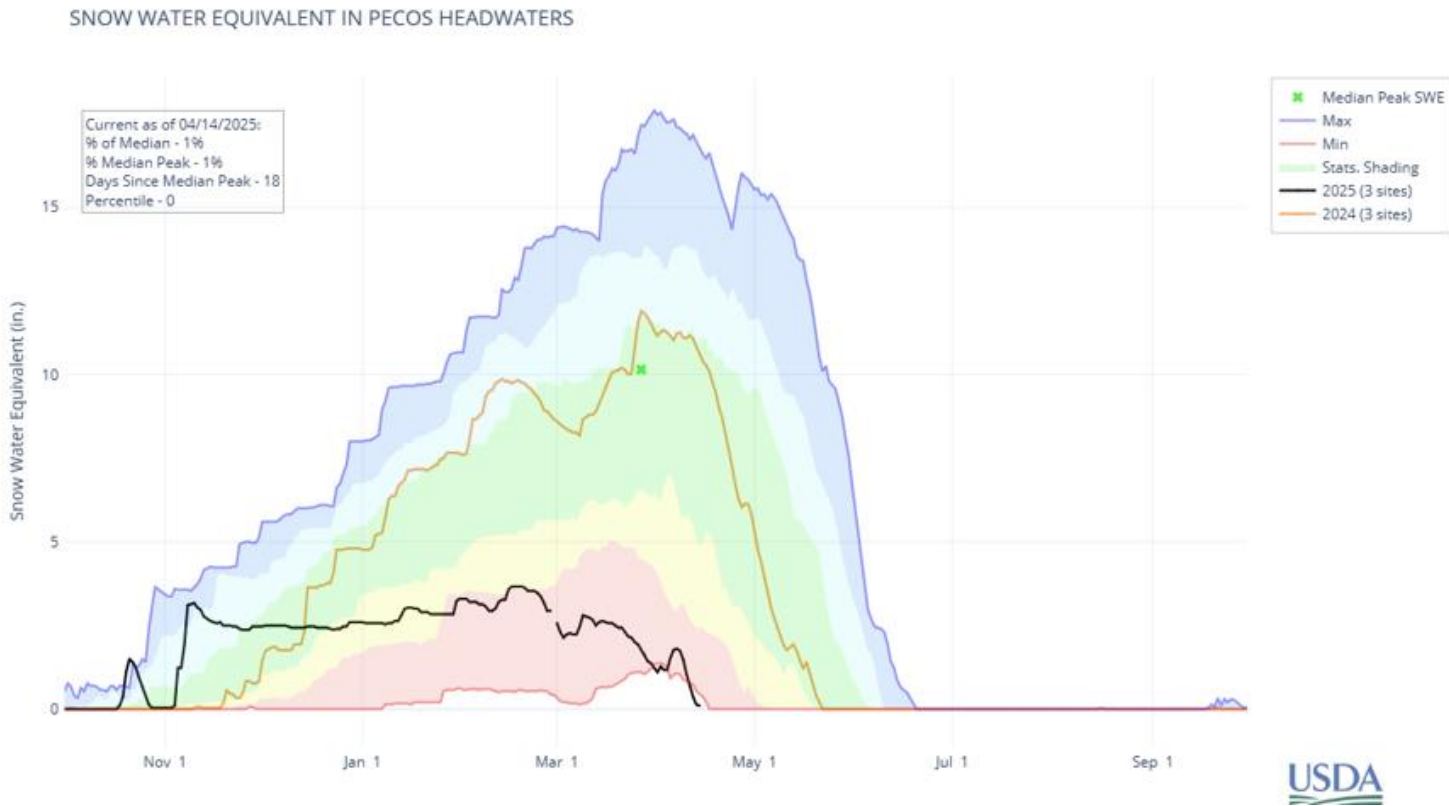
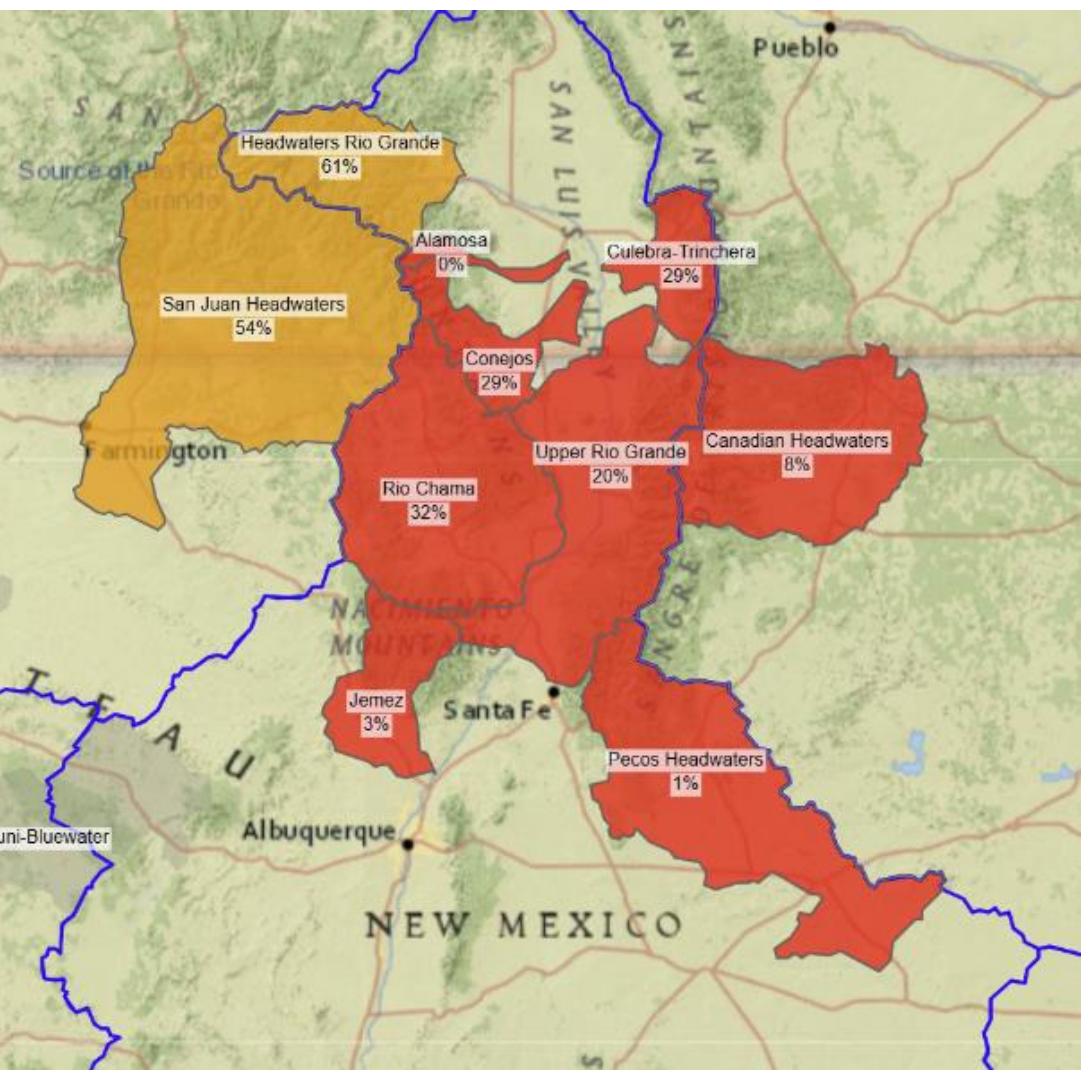




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2025 Annual Operating Plan

2025 Snowpack

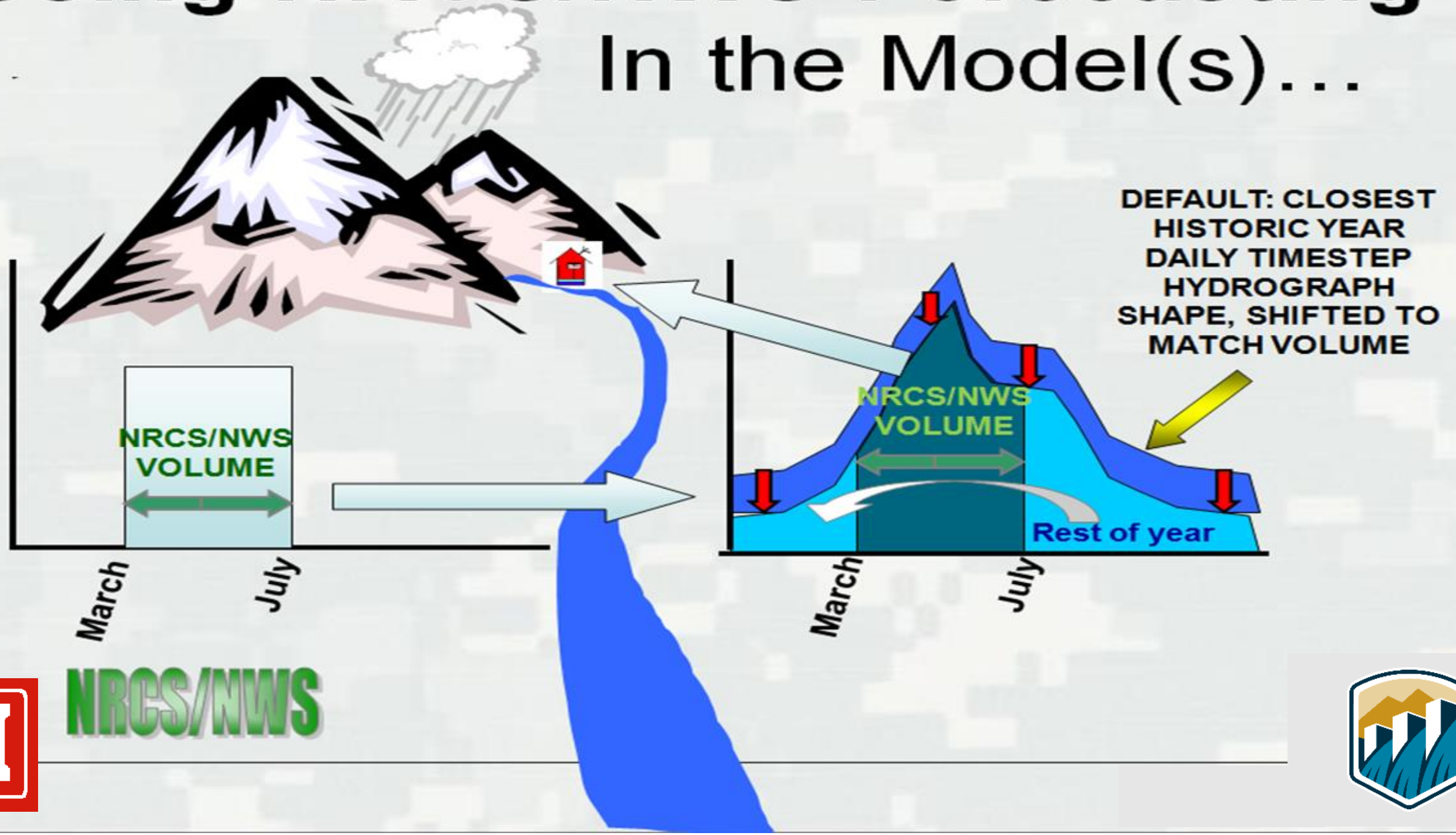


Pecos River Basin April Streamflow Forecasts

Forecast Point	period	10% (KAF)	30% (KAF)	50% (KAF)	70% (KAF)	90% (KAF)	30-yr med
Pecos R nr Pecos	Mar - Jul	33.9	24.9	20.1	14.4	8.3	53
Pecos R nr Anton Chico	Mar - Jul	31.9	20.9	13.9	8.2	4.5	53
Gallinas Ck nr Montezuma	Mar - Jul	6.3	3.9	2.6	1.8	0.98	8
Pecos R ab Santa Rosa Lk	Mar - Jul	28.5	15.1	9.5	5.8	2.9	41



Using NRCS/NWS Forecasting In the Model(s)...

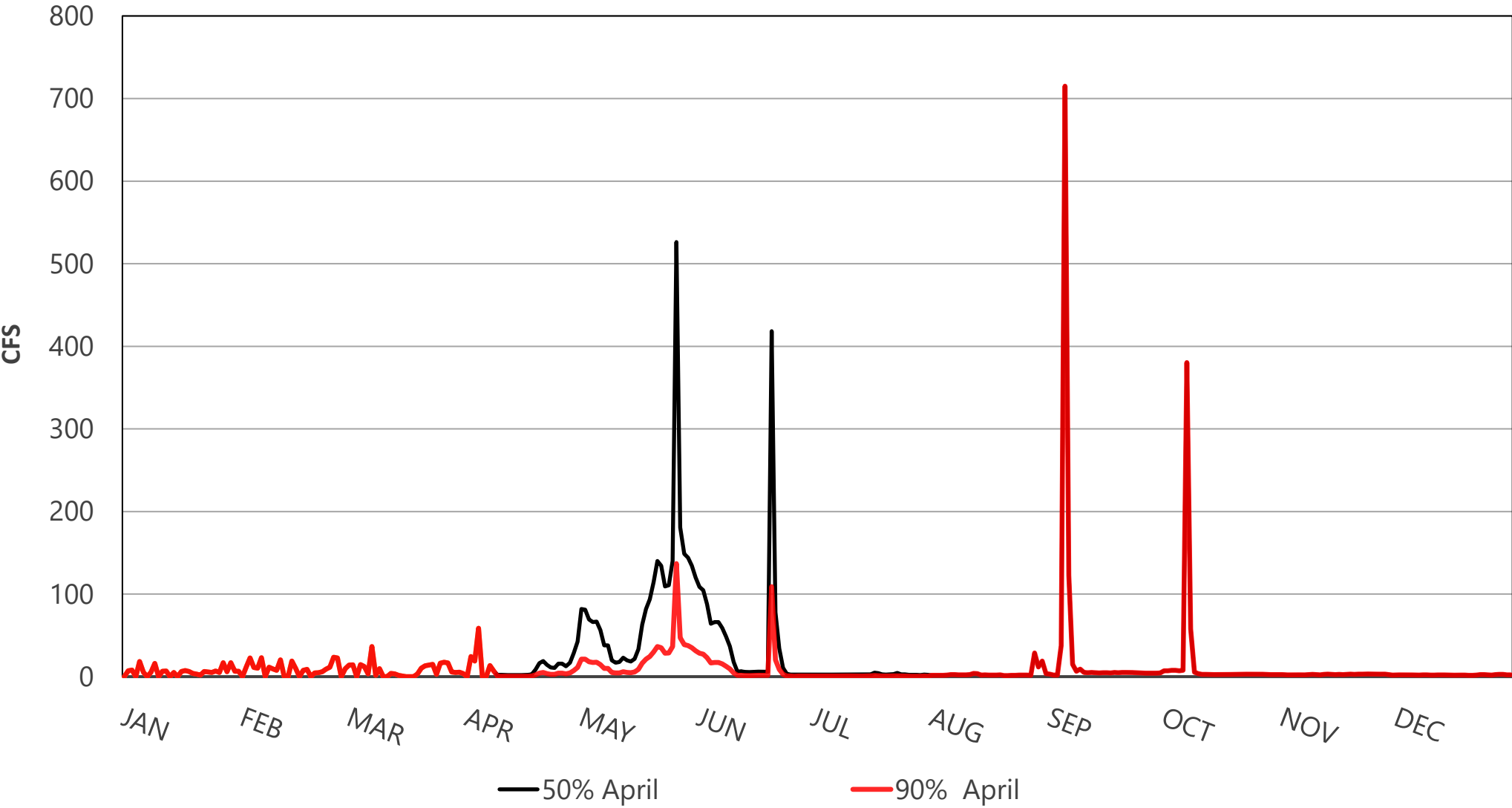


Planning Model Input

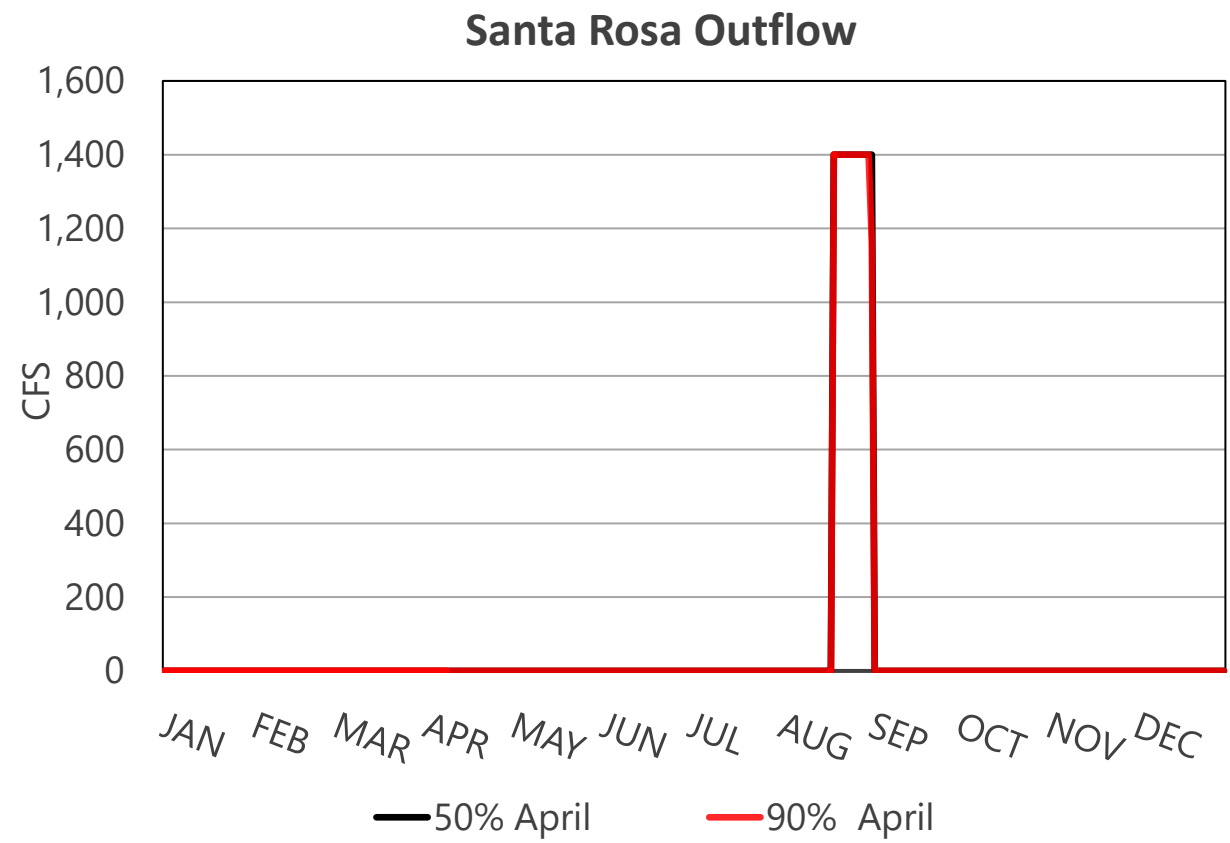
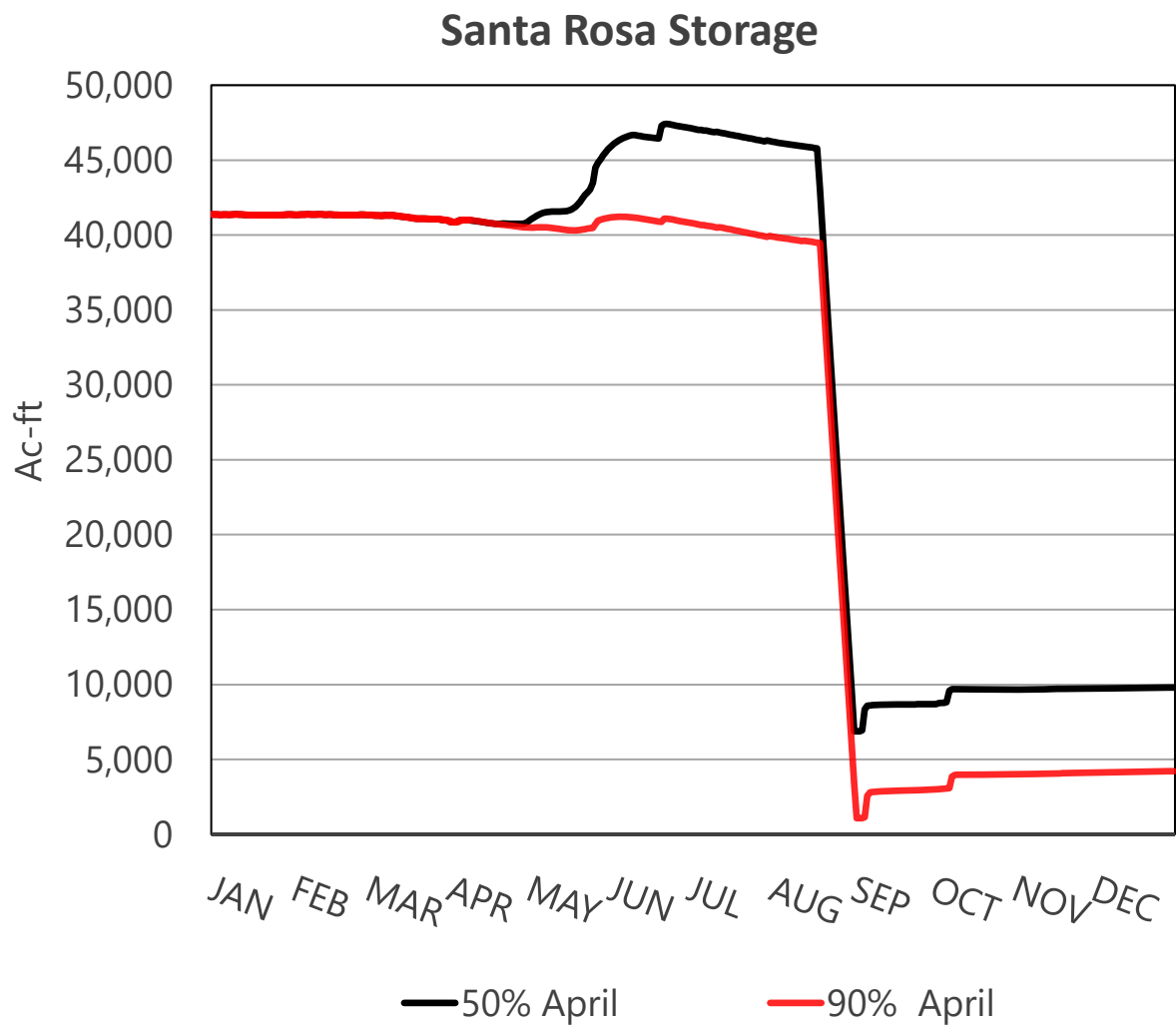
- NRCS' April 1 Santa Rosa Lake inflow forecast
- Observed USGS streamflow data from January 1 through April 8
- Used 50% (most probable) and 90% (lowest expected) exceedance forecasts through July
- Used 2003 hydrograph shape to forecast volumes
- Fort Sumner Irrigation District began season on February 21
- Carlsbad Irrigation District's initial allocation was 2.4 ft, now at 2.5 ft; began season March 27



2025 Santa Rosa Inflow

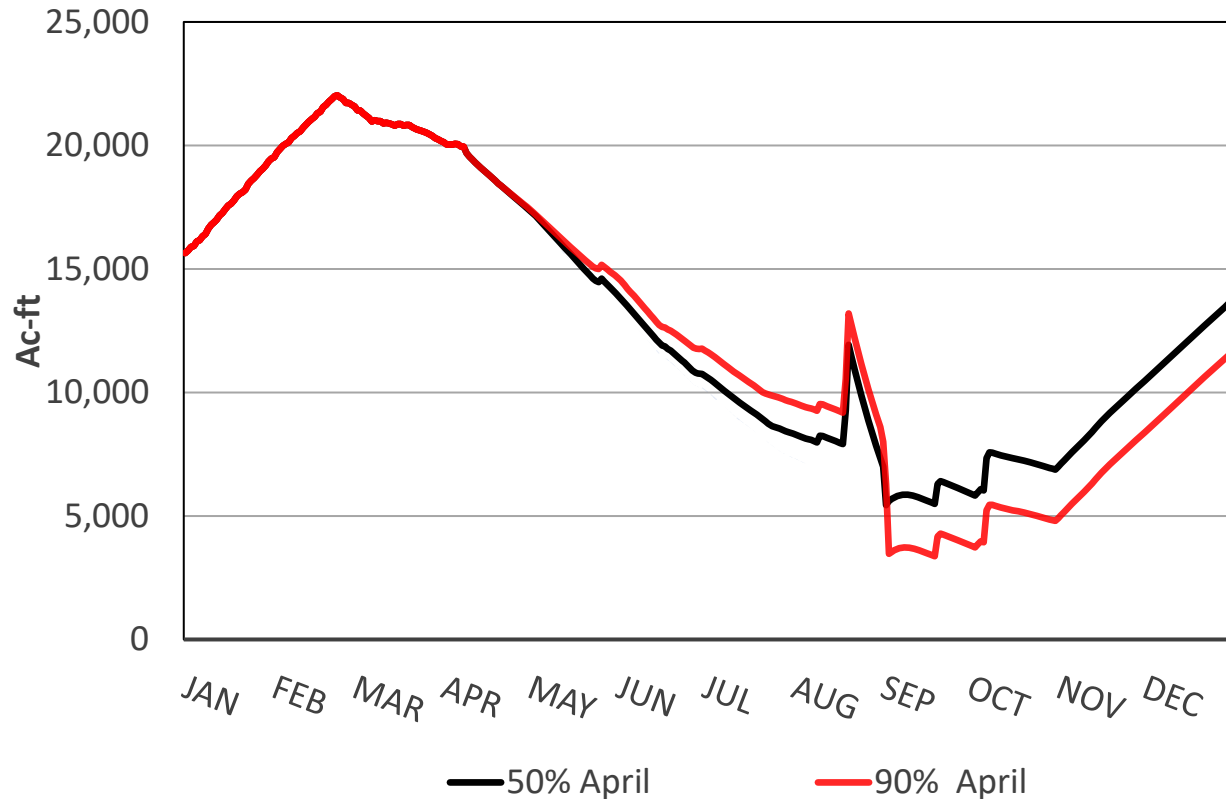


2025 Santa Rosa Operations

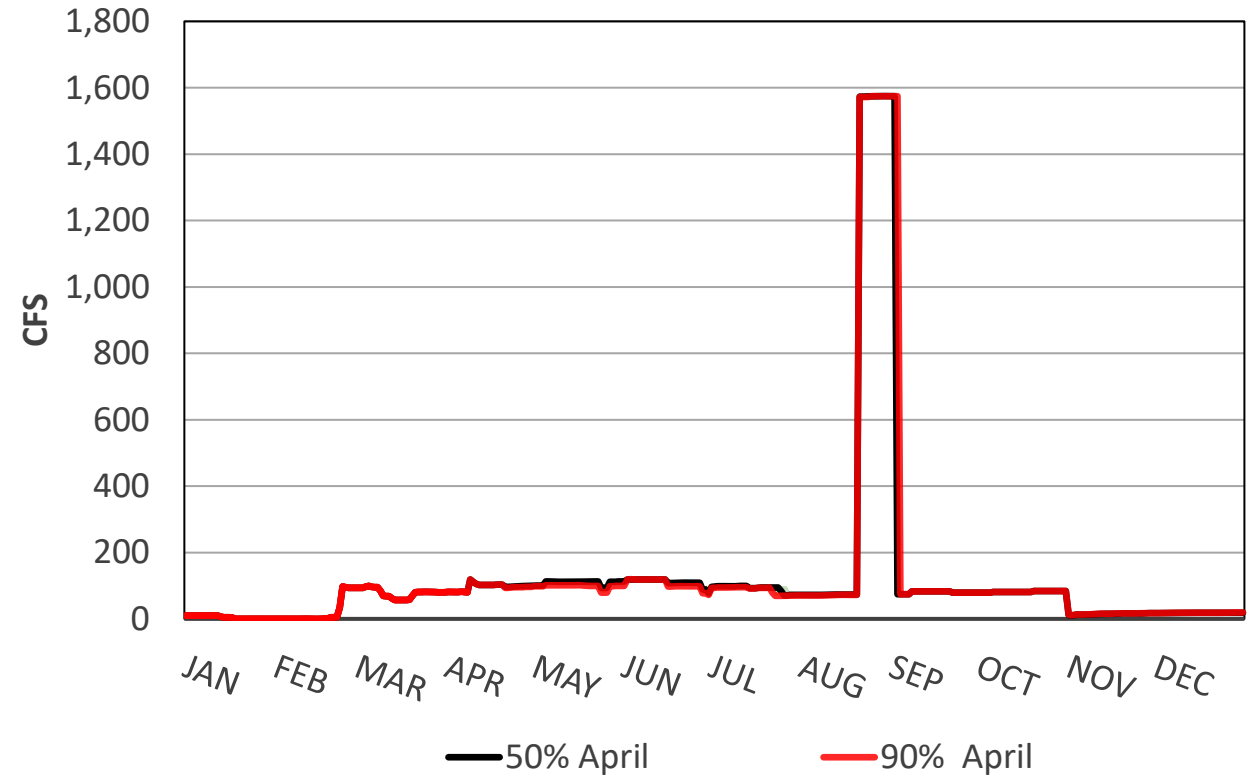


2025 Sumner Operations

Sumner Storage



Sumner Outflow

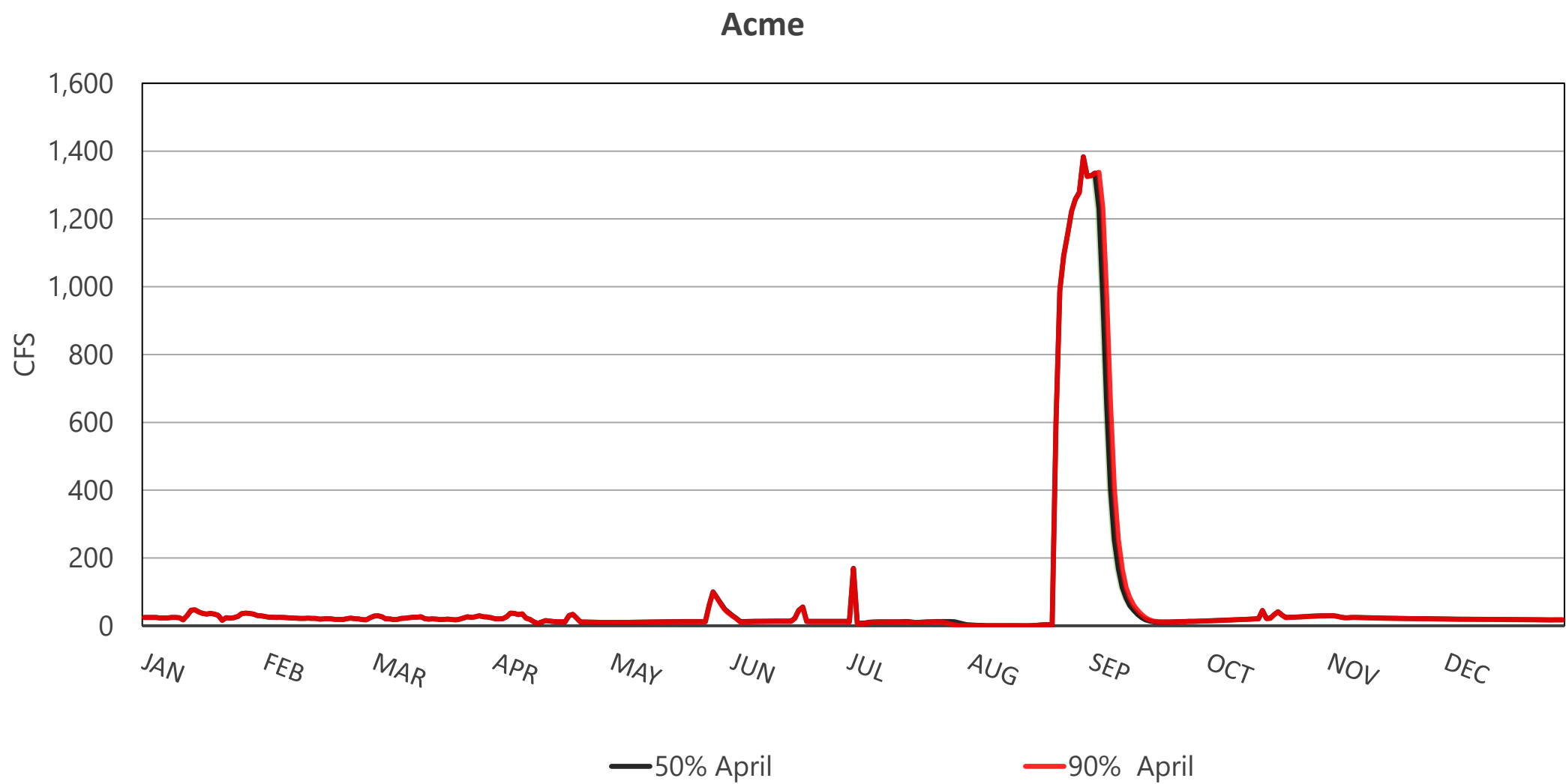


2025 Supplemental Water Use Plan

- Expect *Critically Dry* conditions under the Biological Opinion
- Supplemental water supply
 - Sumner storage: ~7,000 ac-ft
 - Bypass availability: early irrigation season based on runoff
 - Vaughan Conservation Pipeline: 3,974 ac-ft
- Target flows of 35 cfs, if bypass available Apr-Oct, at Taiban (downstream of Fort Sumner)
- Target flows greater than 5 cfs at Acme above Roswell (i.e., continuous river)

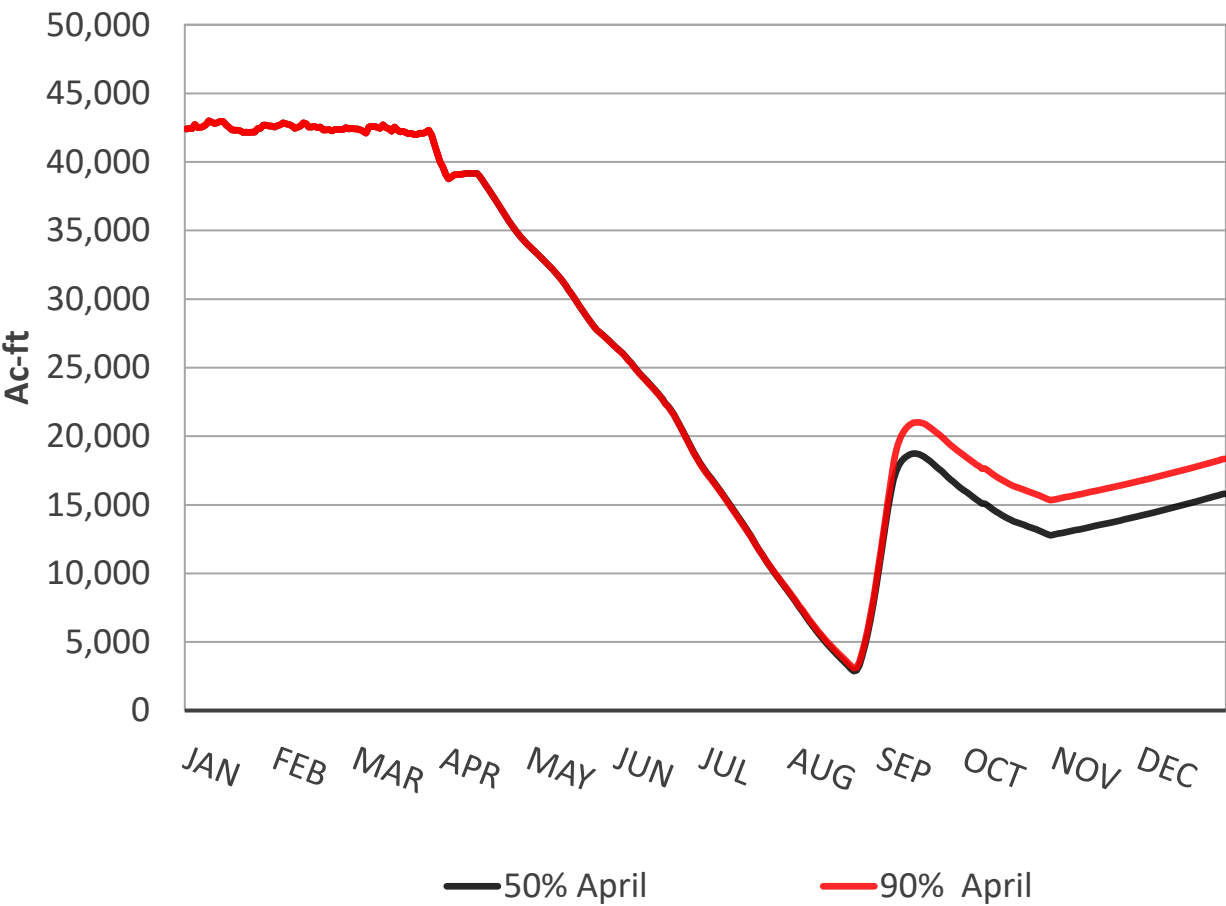


2025 Pecos River near Acme Flow

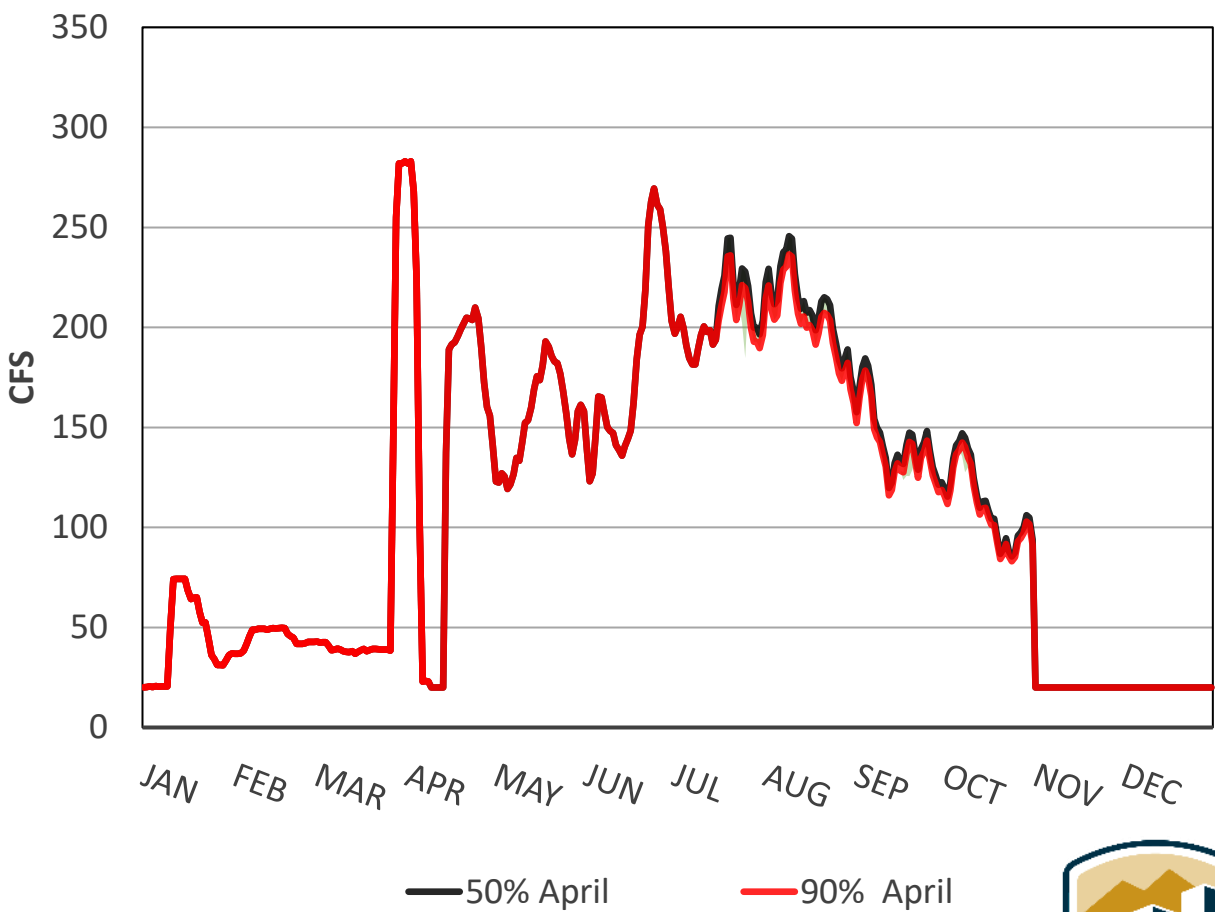


2025 Brantley Operations

Brantley Storage

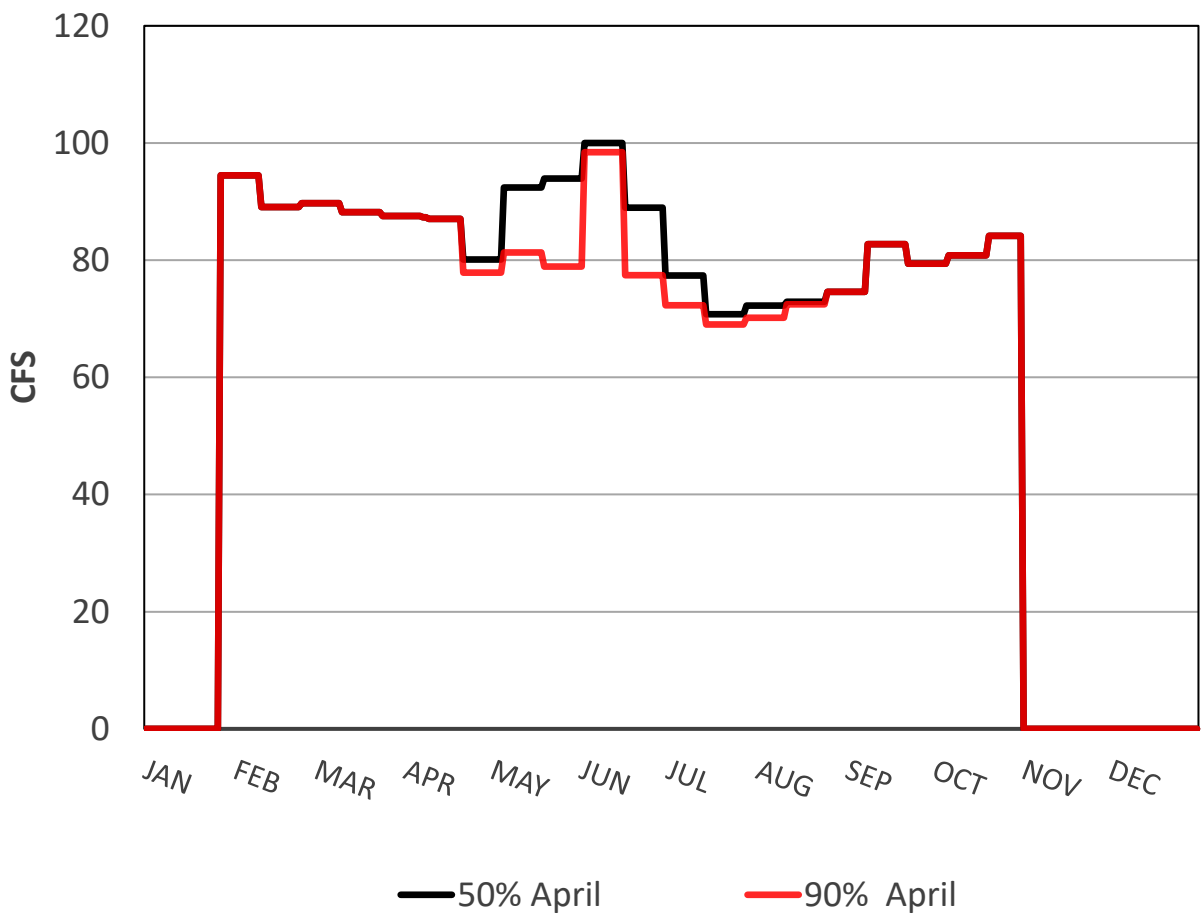


Brantley Outflow

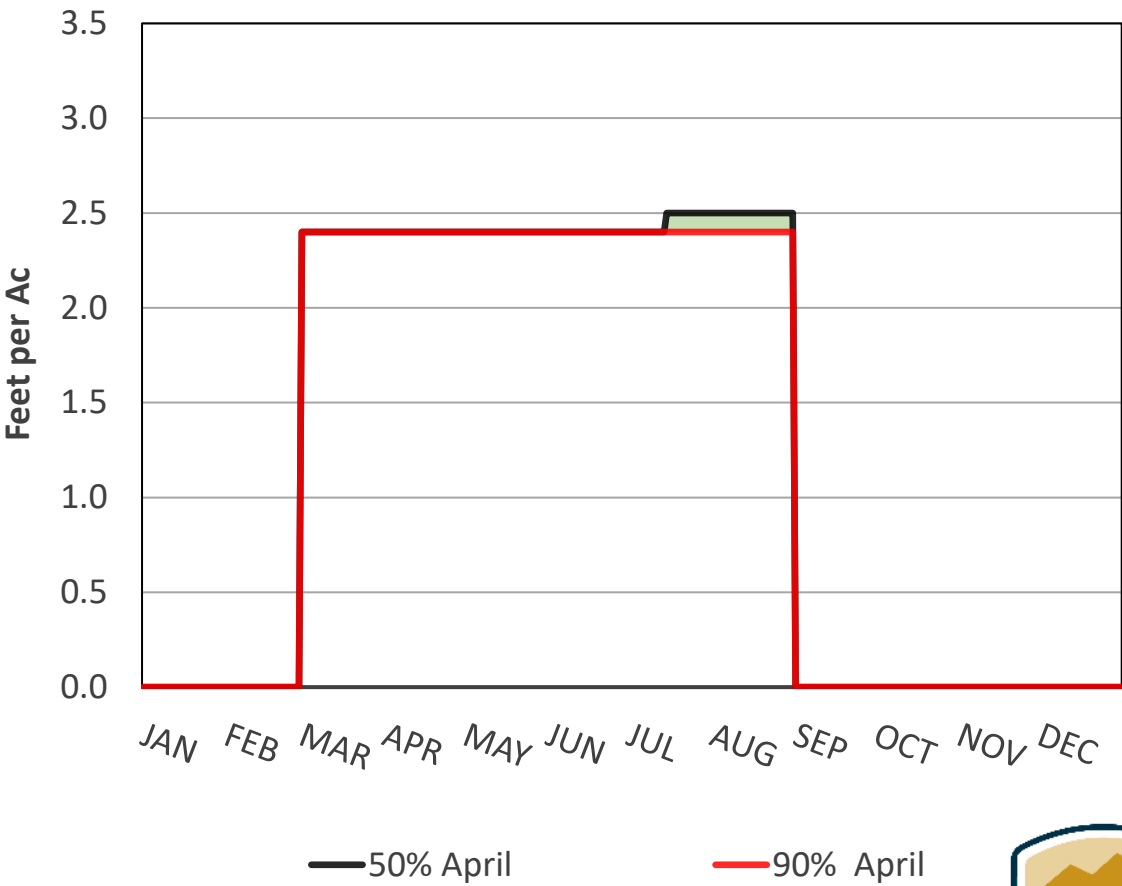


2025 Irrigation Supply

FSID Entitlement



CID Allotment



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