

Santa Barbara County Water Supply Update



Cachuma Reservoir, 2016

Santa Barbara County Water Agency
Board of Directors Meeting
March 8, 2022

Purpose

1. General update on current conditions
2. Status of water supply portfolio
3. Water Agency role and drought response



Cachuma Reservoir, 2021

Water Year 2022 to date

- One of the wettest Decembers on record
- No meaningful rainfall in January or February



Santa Barbara County - Flood Control District

130 East Victoria Street, Santa Barbara CA 93101 - 805.568.3440 - www.countyofsb.org/pwd

Rainfall and Reservoir Summary

Updated 8am: 2/28/2022 Water Year: 2022 Storm Number: NA

Notes: Daily rainfall amounts are recorded as of 8am for the previous 24 hours. Rainfall units are expressed in inches. All data on this page are from automated sensors, are preliminary, and subject to verification.

*Each Water Year (WY) runs from Sept 1 through Aug 31 and is designated by the calendar year in which it ends

County Real-Time Rainfall and Reservoir Website link: <http://www.countyofsb.org/hydrology>

Rainfall	ID	24 hrs	Storm 0day(s)	Month	Year*	% to Date	% of Year*	AI
Buellton (Fire Stn)	233	0.00	0.00	0.10	7.45	62%	45%	
Cachuma Dam (USBR)	332	0.00	0.00	0.06	10.53	74%	53%	
Carpinteria (Fire Stn)	208	0.00	0.00	0.00	8.37	67%	48%	
Cuyama (Fire Stn)	436	0.00	0.00	0.07	3.52	67%	46%	
Figueroa Mtn. (USFS Stn)	421	0.00	0.00	0.15	11.05	74%	52%	7.5
Gibraltar Dam (City Facility)	230	0.00	0.00	0.05	15.38	81%	59%	6.4
Goleta (Fire Stn-Los Carneros)	440	0.00	0.00	0.01	10.29	77%	56%	
Lompoc (City Hall)	439	0.00	0.00	0.21	8.37	80%	57%	7.5
Los Alamos (Fire Stn)	204	0.00	0.00	0.07	7.20	67%	47%	
San Marcos Pass (USFS Stn)	212	0.00	0.00	0.04	23.86	95%	70%	
Santa Barbara (County Bldg)	234	0.00	0.00	0.05	11.33	85%	62%	
Santa Maria (City Pub.Works)	380	0.00	0.00	0.10	6.66	70%	50%	
Santa Ynez (Fire Stn /Airport)	218	0.00	0.00	0.06	8.48	75%	54%	
Sisquoc (Fire Stn)	256	0.00	0.00	0.09	6.53	62%	43%	

County-wide percentage of "Normal-to-Date" rainfall : 74%

County-wide percentage of "Normal Water-Year" rainfall : 53%

County-wide percentage of "Normal Water-Year" rainfall calculated assuming no more rain through Aug. 31, 2022 (End of WY2022).

AI(Antecedent Index / Soil Wetness)

6.0 and below = Wet (min. = 2.5)
6.1 - 9.0 = Moderate
9.1 and above = Dry (max. = 12.5)

Reservoirs

Reservoir Elevations referenced to NGVD-29.

**Cachuma is full and subject to spilling at elevation 750 ft.

However, the lake is surcharged to 753 ft. for fish release water.

(Cachuma water storage is based on Dec 2013 capacity revision)

	Spillway Elev. (ft)	Current Elev. (ft)	Max. Storage (ac-ft)	Current Storage (ac-ft)	Current Capacity (%)	Storage Change Mo.(ac-ft)	Storage Change Year*(ac-ft)
Gibraltar Reservoir	1,400.00	1,390.51	4,693	2,748	58.6%	234	2,474
Cachuma Reservoir	753.**	711.32	192,978	90,607	47.0%	-2,476	-8,663
Jameson Reservoir	2,224.00	2,210.40	4,848	3,303	68.1%	14	218
Twitchell Reservoir	651.50	NA	194,971	NA		NA	NA

[Previous Rainfall and Reservoir Summaries](#)

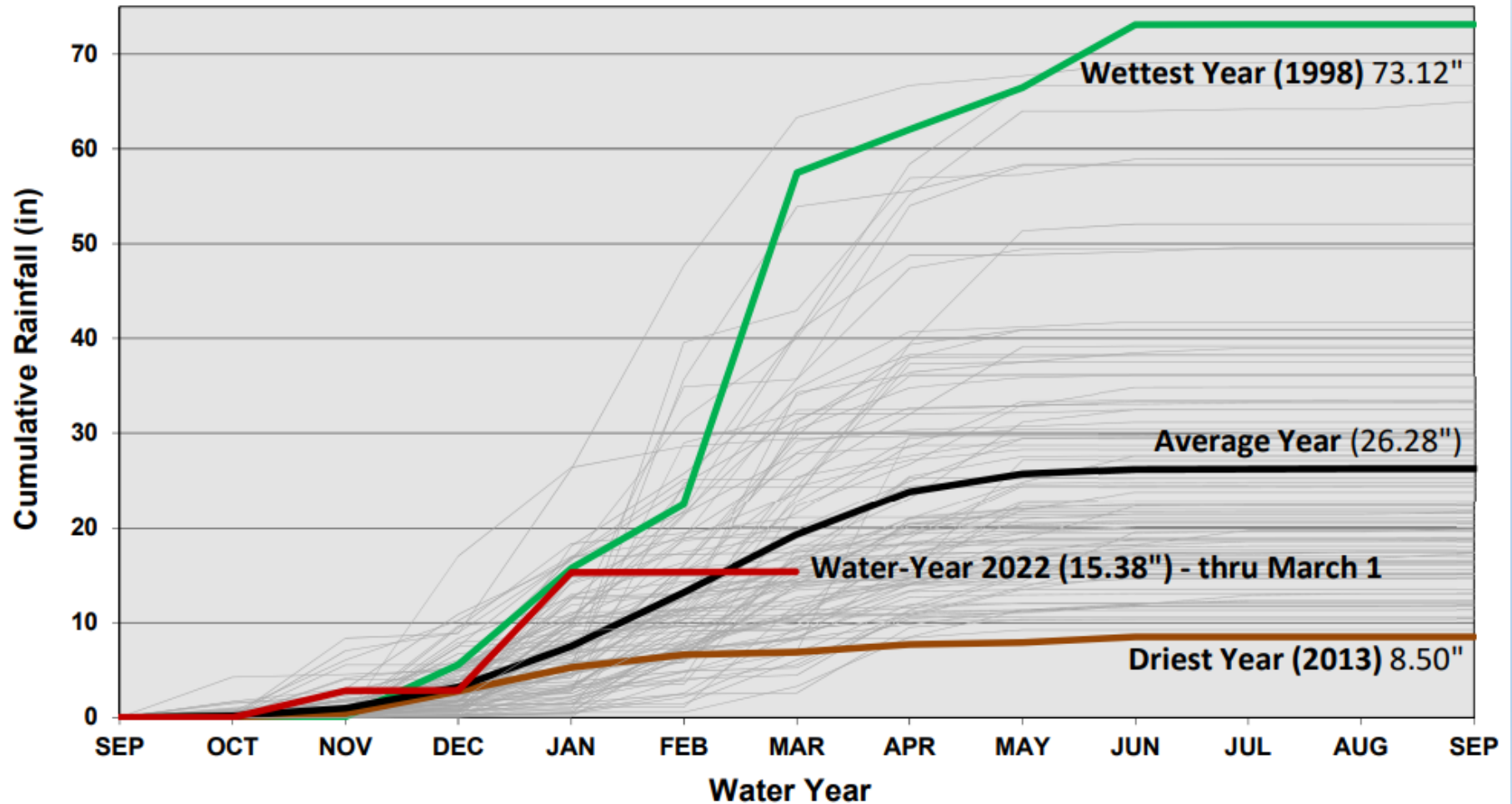
Water Year 2022



102 Years of Rainfall - Gibraltar Dam

Water Years 1920 - 2022

(WY2022 through March 1, 2022)



Climate

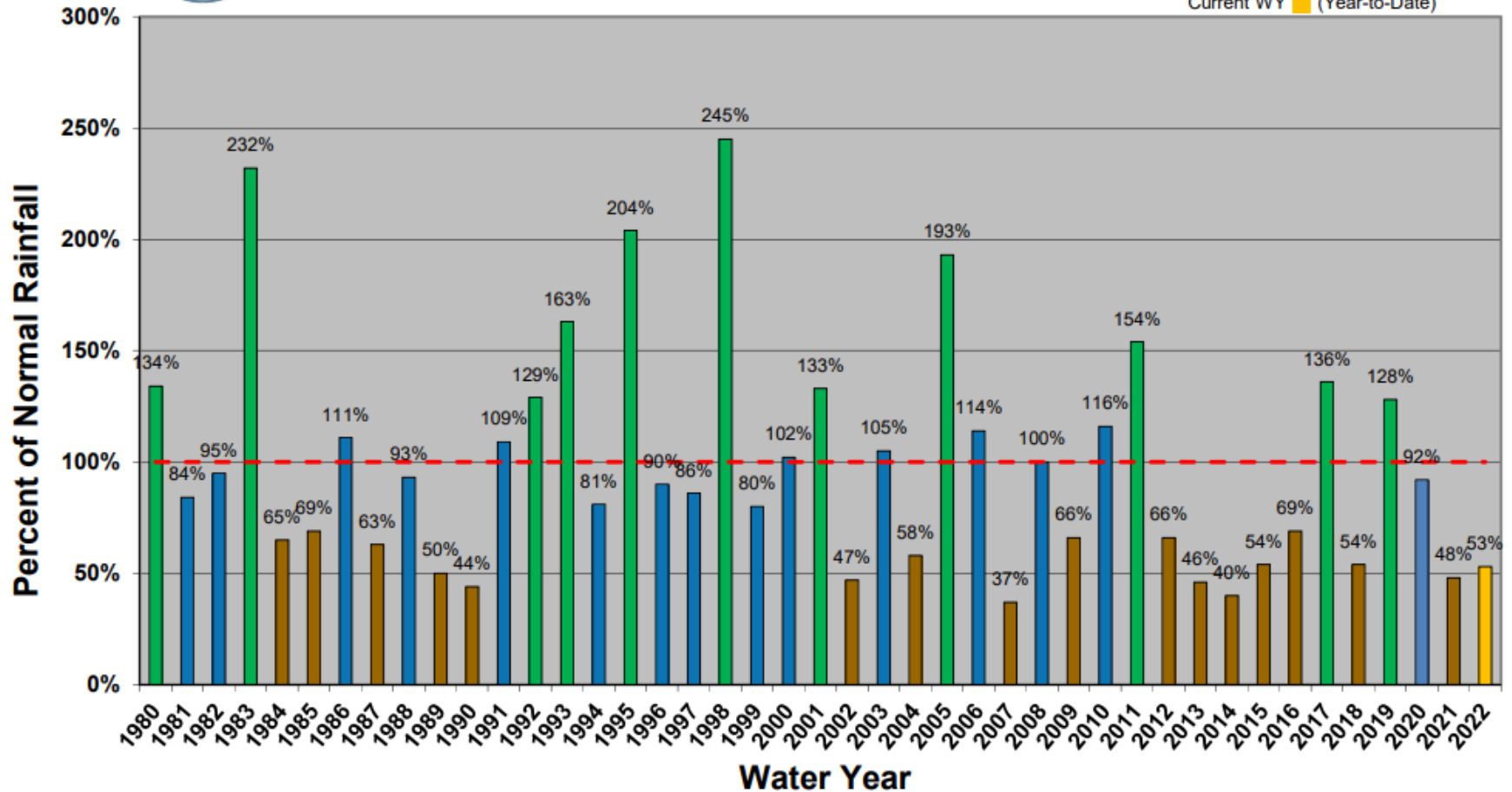
- High interannual variability, persistent trends



Countywide Percent-of-Normal Water-Year Rainfall

Updated through March 1, 2022
(Rainfall as a percentage of an entire average water-year)

Wet Years (>120% Normal Rain)
Dry Years (< 80% Normal Rain)
Avg Years (within $\pm 20\%$ Normal)
Current WY (Year-to-Date)

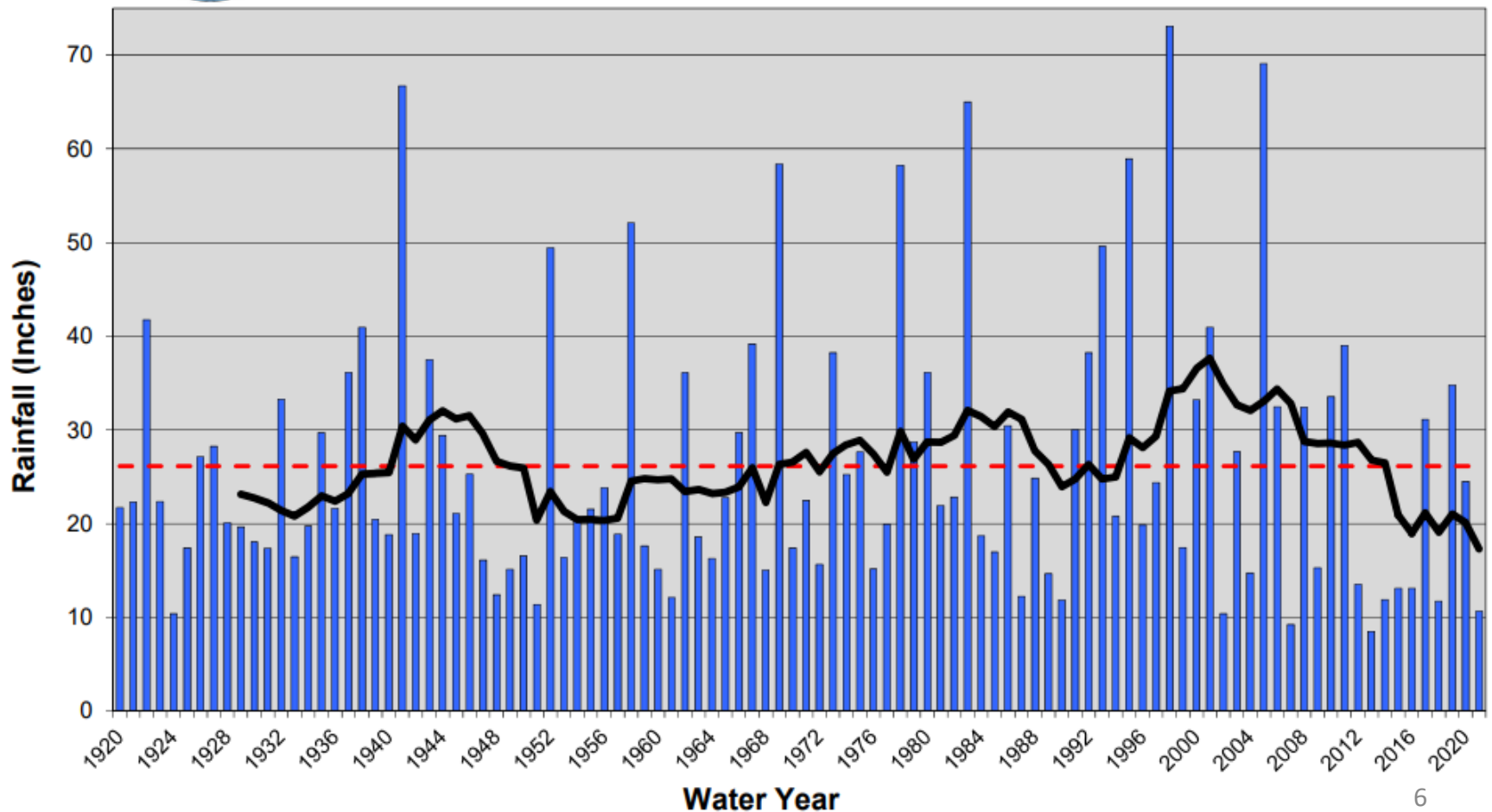


Climate

- Driest 10-year average rainfall on record

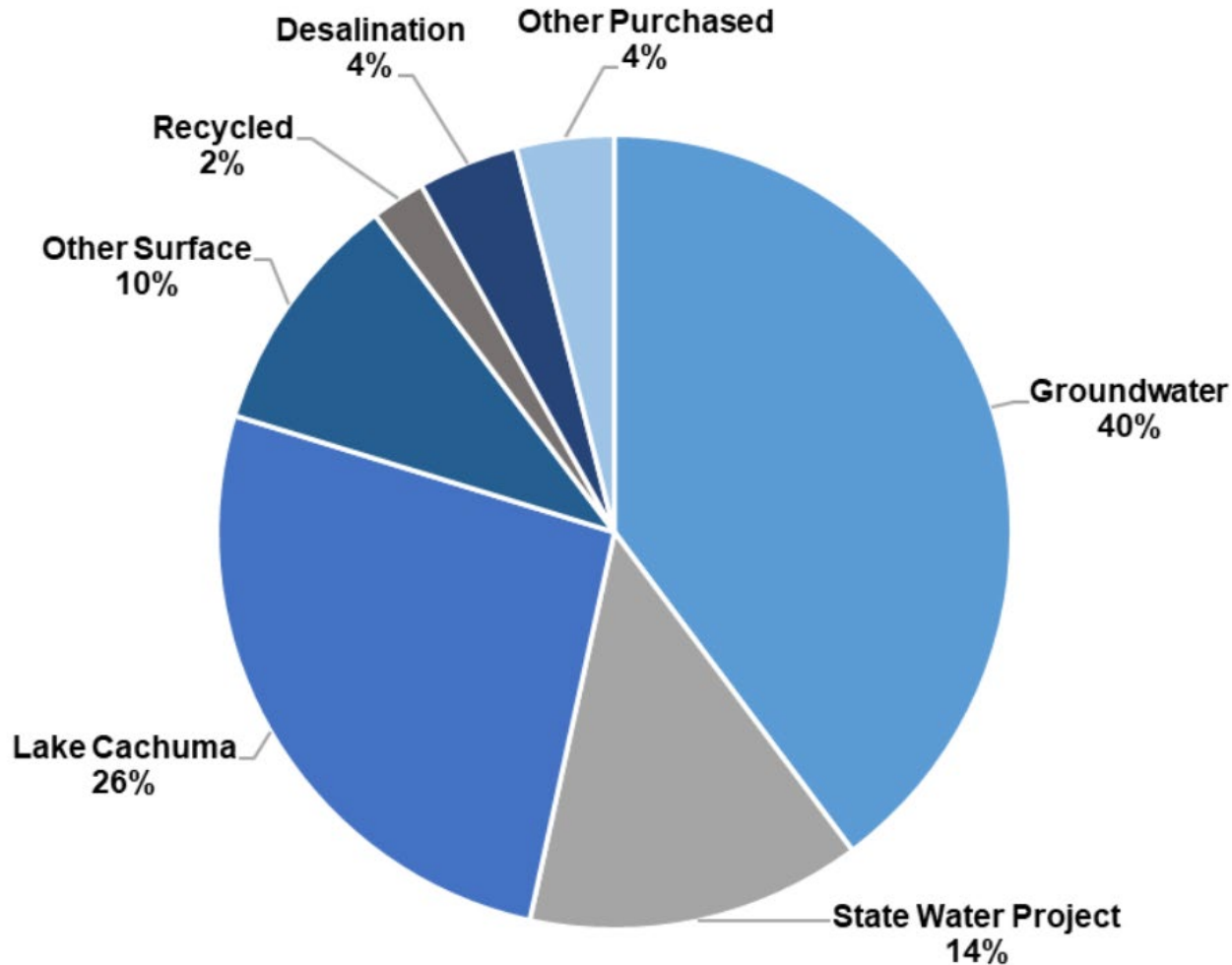


Gibraltar Dam - Rainfall
1920 - 2021 (101 years)
Annual, Mean, and 10 Year Moving Average
(Mean = 26.13", through Aug 31, 2021)

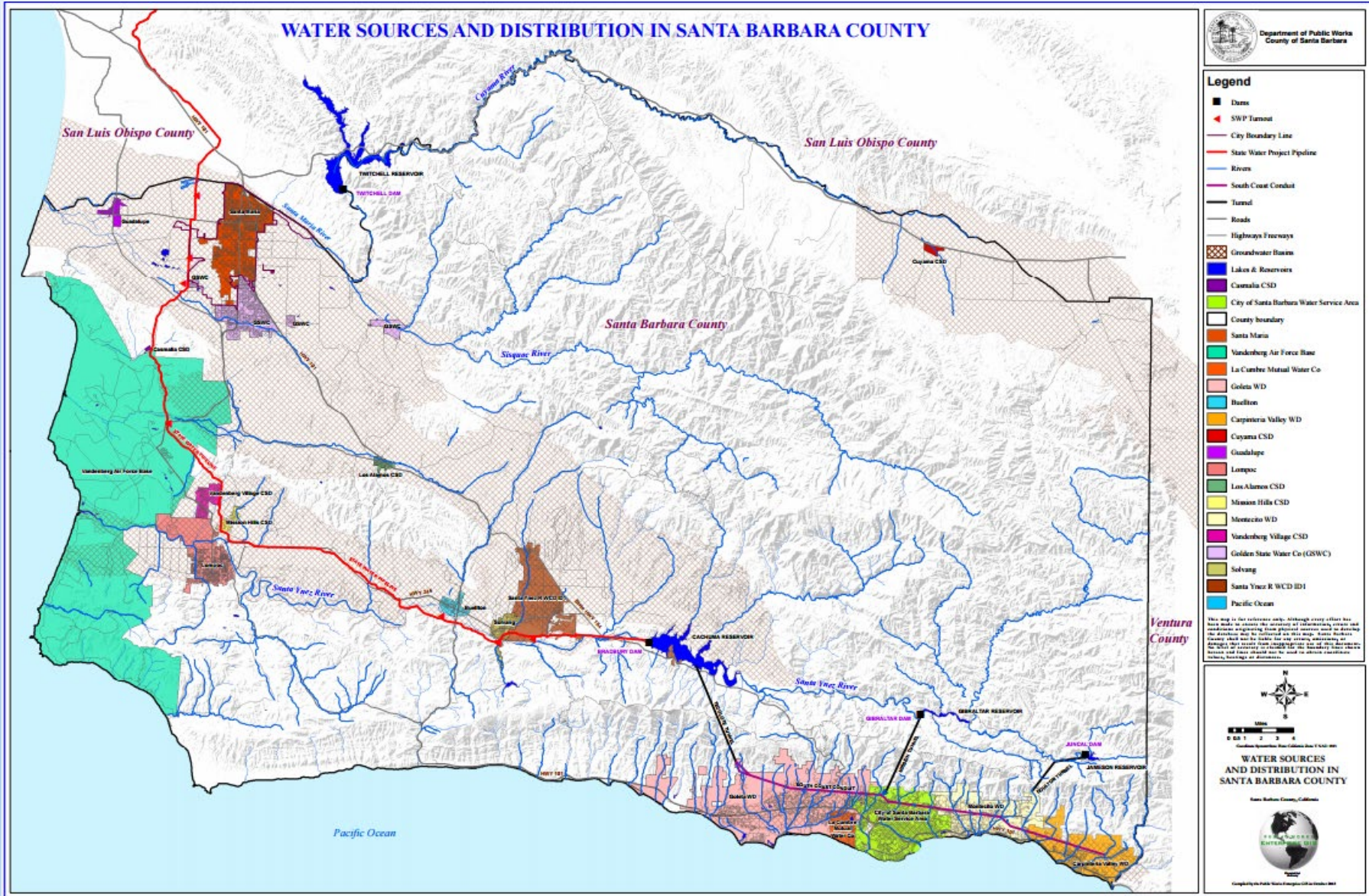


County Water Supply Portfolio

2020 County of Santa Barbara Water Production



Patchwork of Purveyors



Groundwater

- Majority of agriculture, small water systems, domestic wells, and north County purveyors rely on groundwater
- Typically a smaller portion of South County purveyors portfolio
- Sustainable Groundwater Management Act (SGMA)
 - GSAs beginning to actively manage groundwater
 - Well metering assistance program
- Portions of most basins at or near historical lows

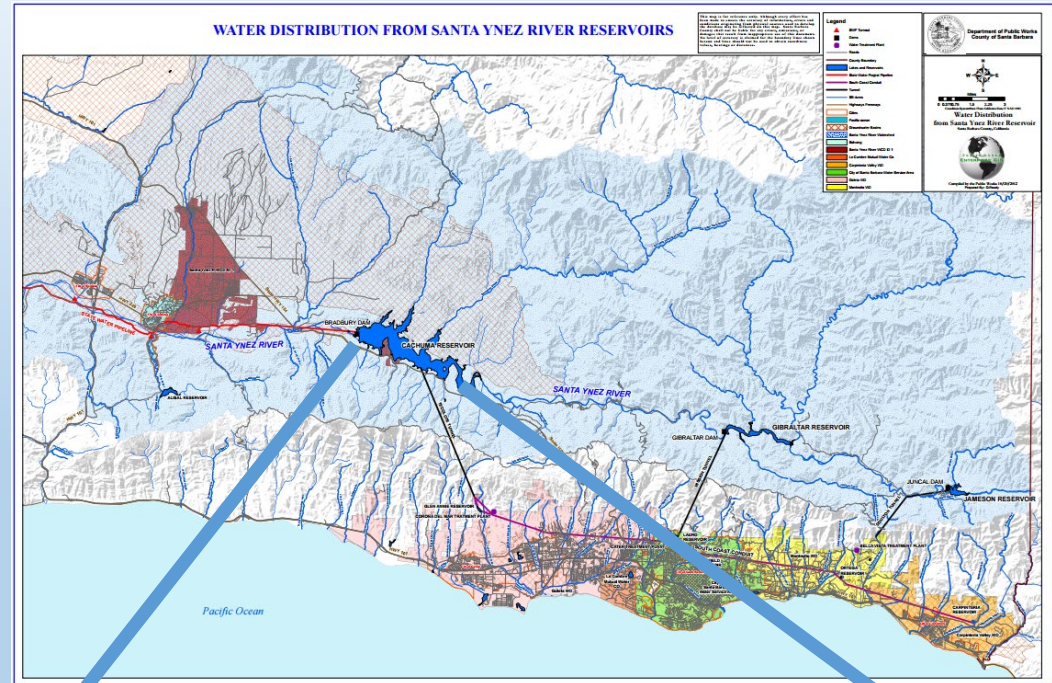


Groundwater



Cachuma Reservoir (47% full)

- Built by USBR in 1954, currently 192,978 AF storage
- Originally intended to supply 32,000 AF/yr, recent contract reduced to 25,714 AF/yr
- Negotiations of new long-term contract have begun
 - Yield
 - Carryover Storage

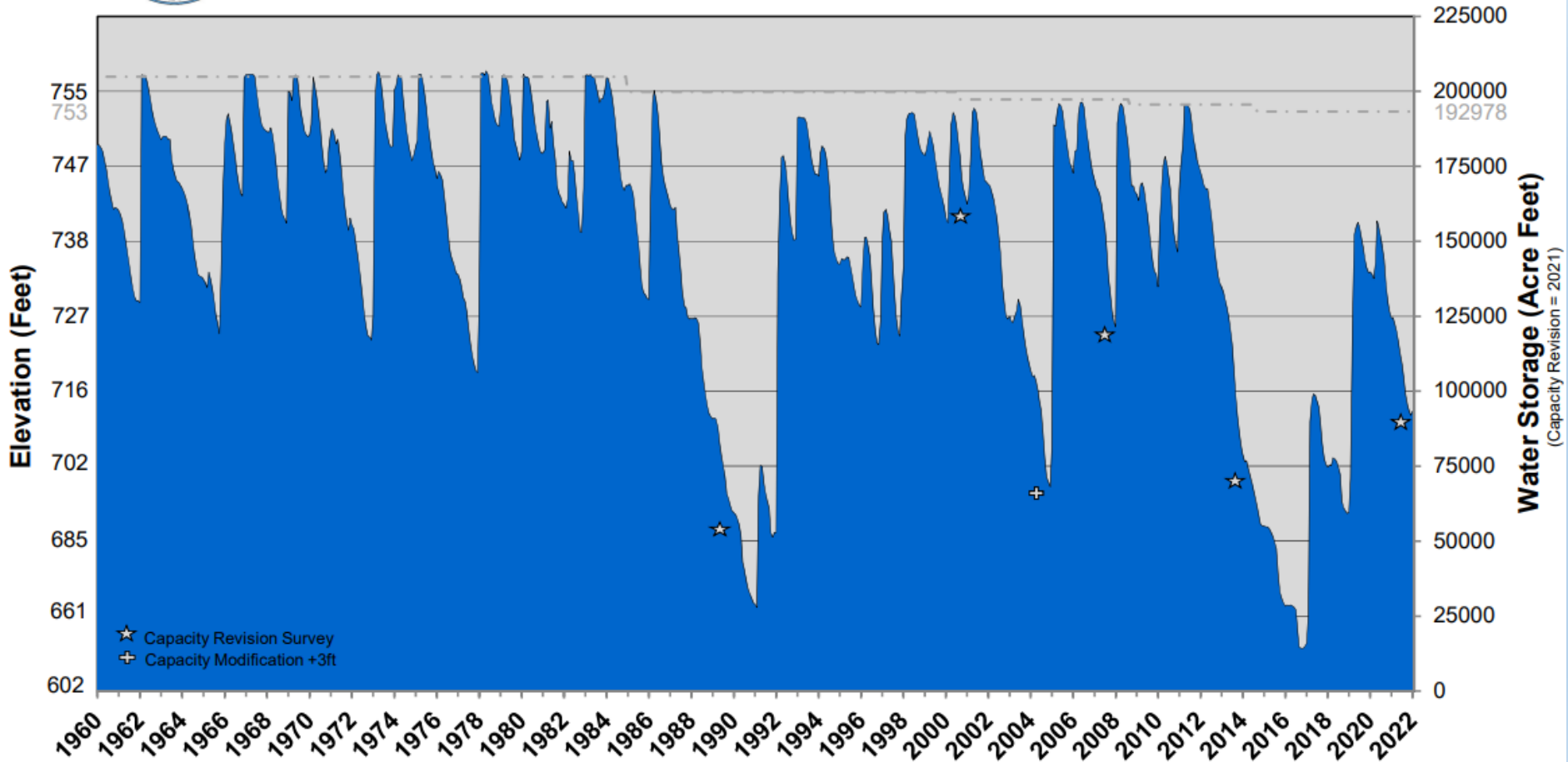


Cachuma Reservoir, 2011

Cachuma Reservoir

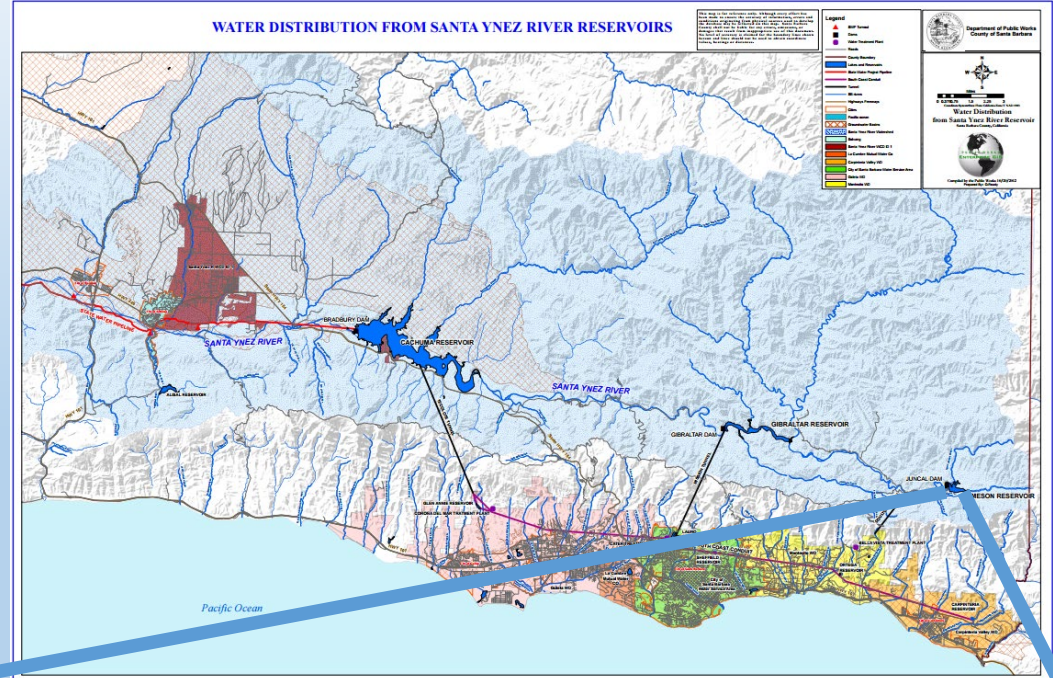


Cachuma Reservoir - Historical Water Storage Levels 62 Years - 1960 to 2022 (through February 1, 2022)



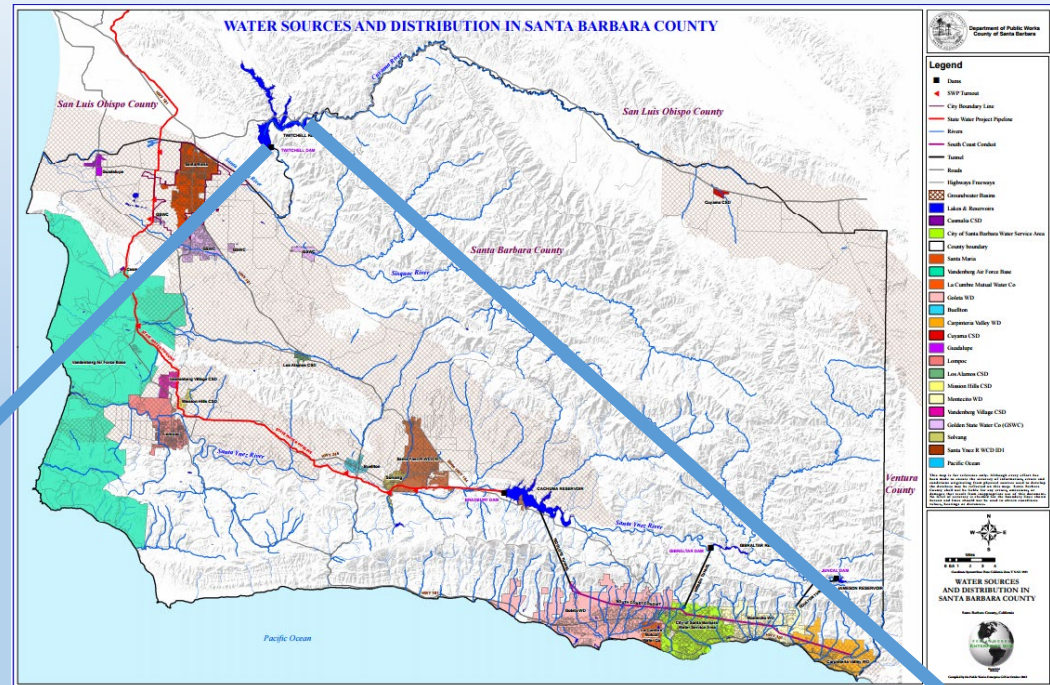
Jameson Reservoir (68% Full)

- Constructed 1930
- Owned By Montecito Water District, 4,848 AF storage
- Small Watershed



Twitchell Reservoir (0% full)

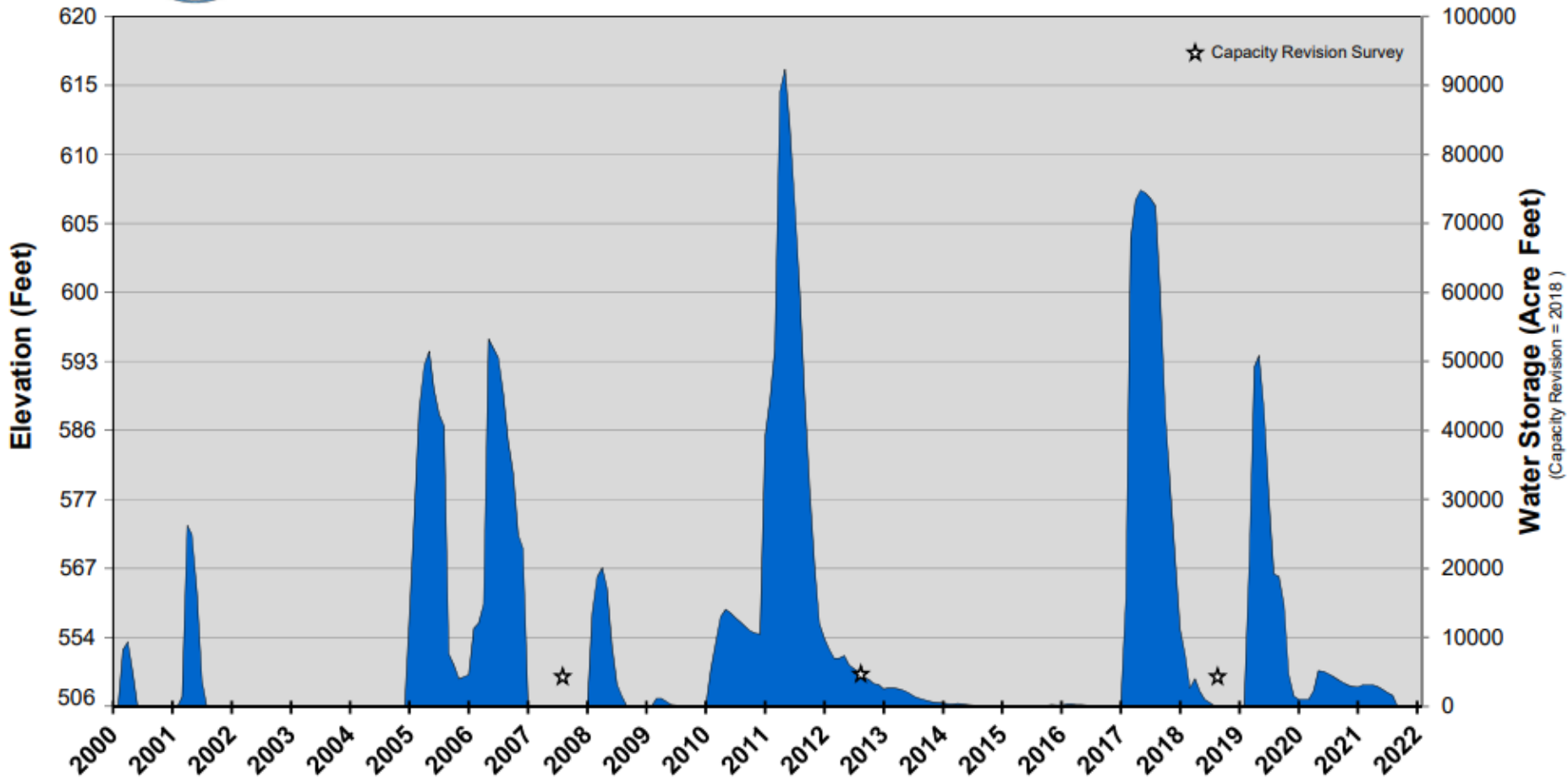
- Constructed by USBR late 1950's
- Water conservation releases recharge SM Groundwater Basin
- No direct service
- Flood Control



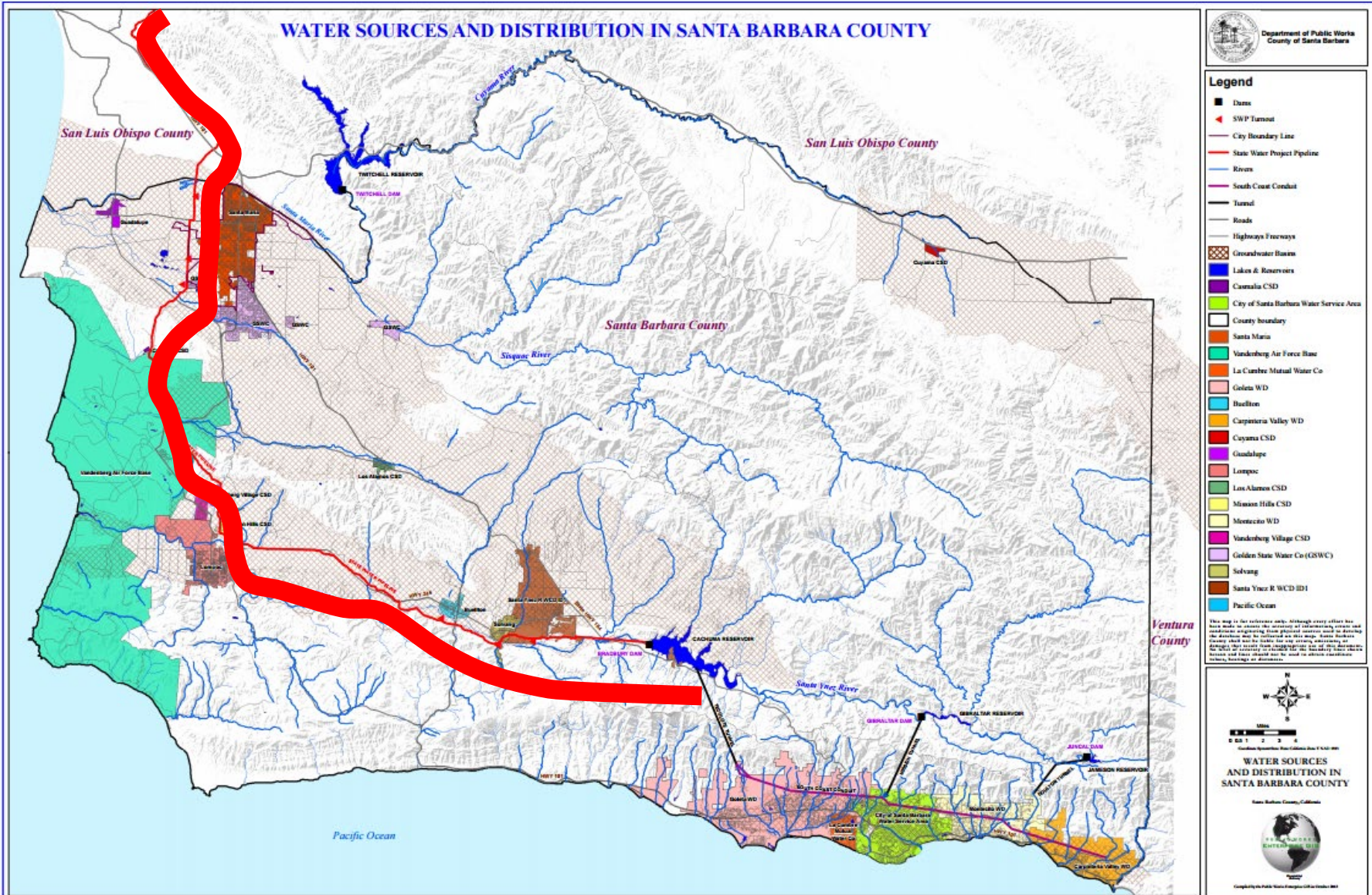
Twitchell Reservoir



Twitchell Reservoir - Historical Water Storage Levels
22 Years - 2000 to 2022
(through February 1, 2022)



State Water Project



State Water Project (15% current allocation)

- Passed By vote 1991, 45,000 AFY, variable
- Valuable supplement in 2011-2018 drought
- Amendment 21 approved in 2021 allows purchases and sales from other contractors, subject to conditions
- Some purveyors already making outside purchases through CCWA to supplement supplies



Desalination

- City of Santa Barbara's Desal Plant opened in 1991, subsequently decommissioned
- Reactivated October 2016
- Drought-resistant, local supply of 3,125 AFY
- 50-year agreement to supply Montecito Water District
- Permitted for up to 10,000 AFY



Recycled Water

- Recycled water forms
 - Direct non-potable (landscape / parks)
 - Indirect (GW Injection)
 - Direct potable (direct distribution of treated wastewater)
- Direct non-potable currently produced by purveyors
- Carpinteria Advanced Purification Project in progress (Indirect reuse)



**Drought-Friendly
Recycled
Water
In Use**

*Recycled***WATER**
More water for the Goleta Valley!
Goleta Water District

AGUA*reciclada*
El agua reciclada traerá más agua a Valle de Goleta!



**This landscape uses
RECYCLED WATER**

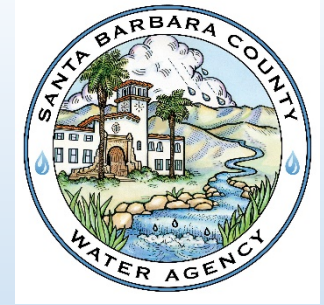
Recycled water saves drinking water
helping us to conserve during the drought.

SantaBarbaraCA.gov/Water



City of Santa Barbara

Water Agency: Partnership and Collaboration



- Coordinate regional programs
 - Integrated Regional Water Management Planning (IRWMP)
 - Regional Water Efficiency Partnership (RWEF)
 - Sustainable Groundwater Management
- Research and planning
 - Groundwater monitoring and studies (Cuyama, San Antonio, Santa Ynez)
 - Stormwater and water supply planning
- Water Supply Enhancement
 - Precipitation enhancement
 - Potential VSFB and SLO County desalination projects
- Drought Task Force

IRWMP

- Water Agency leads collaboration between **28 agencies** to coordinate IRWM planning and grant applications
- **\$37.5 million** in State grants to date awarded to SB County agencies through Props. 50, 84, and 1
- Forum for regional cooperation and communication beyond grant funding



Regional Water Efficiency Program

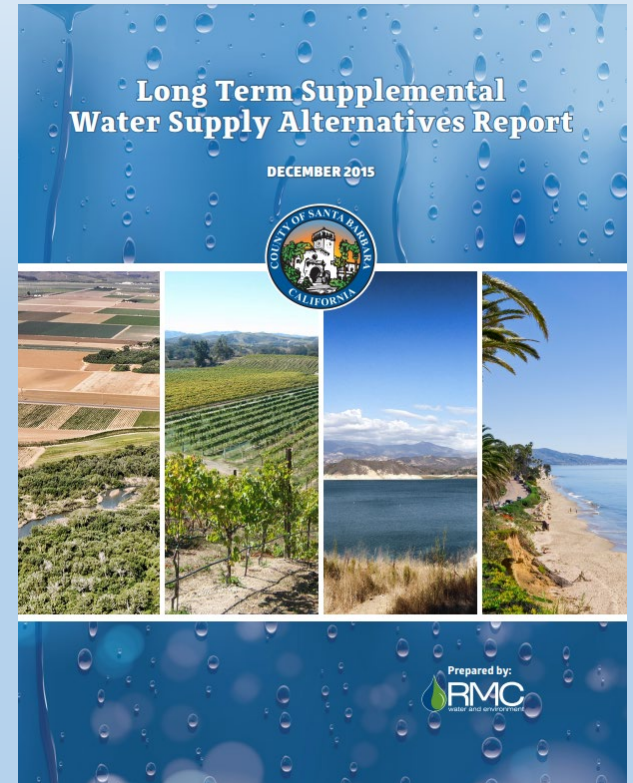
- Water Agency coordinates regional conservation and drought planning in partnership with **15 water purveyors**
- Public information:
 - WaterWiseSB website and social media, media campaigns, and Garden Wise TV Show
- Landscape:
 - Green Gardener classes, large landscape evaluations, guidebooks for greywater and sustainable landscape maintenance, etc.
- Youth education:
 - High School Video Contest, teacher grants, school assemblies, and Science Fair awards
- Commercial/institutional programs:
 - Water audits for Green Business Certification Program
- Annual water use and rates reports



For countywide water conservation information and resources:
WaterWiseSB.org

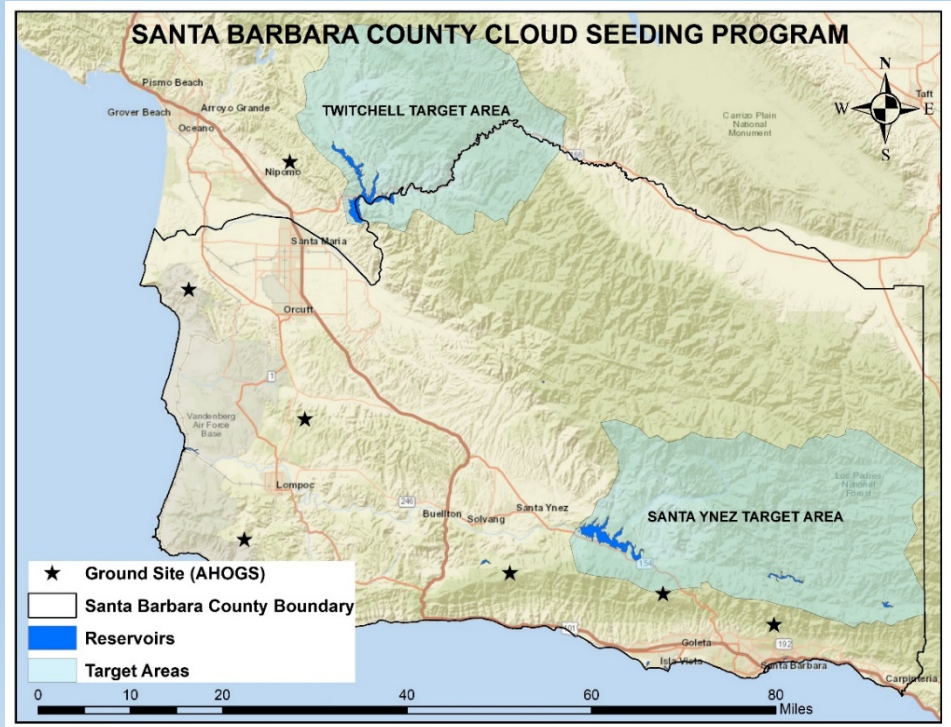
Research

- Groundwater level and water quality monitoring used by numerous agencies
- Reservoir Capacity studies
- Groundwater studies with local and Federal partners in Cuyama (2016), San Antonio (2022), Santa Ynez (2022)
- County-wide Integrated Stormwater Resource Plan (2021)
- Long Term Supplemental Water Supply Alternatives Report (2015)



Water Supply Enhancement

- Vandenberg Space Force Base offshore desalination pilot project
 - Potential for regionalization
- SLO/SB County regional desalination concept
- Precipitation Enhancement program in partnership with 9 other agencies
- Groundwater recharge/stormwater infiltration



Drought Task Force

- Led by Water Agency, Office of Emergency Management, Environmental Health Services
- Required pursuant to SB 552
- Drought response planning and coordination with all purveyors in the County
- Focus on domestic wells and small water systems

Questions

“And it never failed that during the dry years the people forgot about the rich years, and during the wet years they lost all memory of the dry years. It was always that way.”

John Steinbeck, East of Eden

