Upper Santa Clara River Salt and Nutrient Management Plan Update

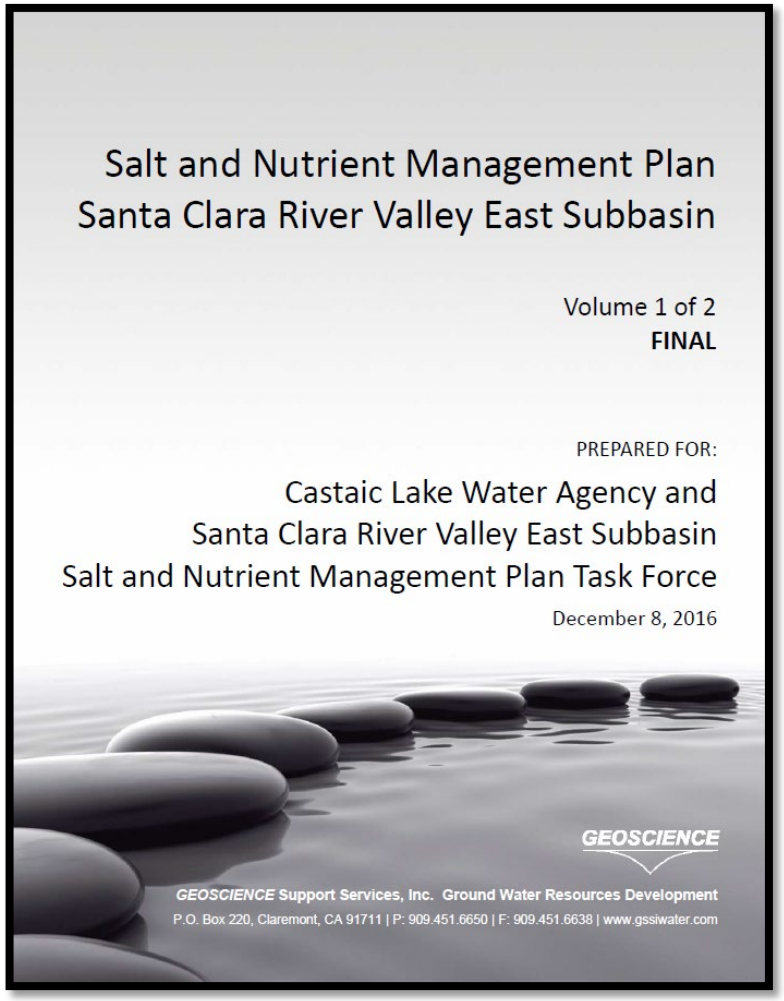
January 9, 2023

Agenda

- Background Information
  - Regulations
  - Purpose
  - Methodology
- SNMP Report Update
  - Approach
  - Findings
  - Closing Comments

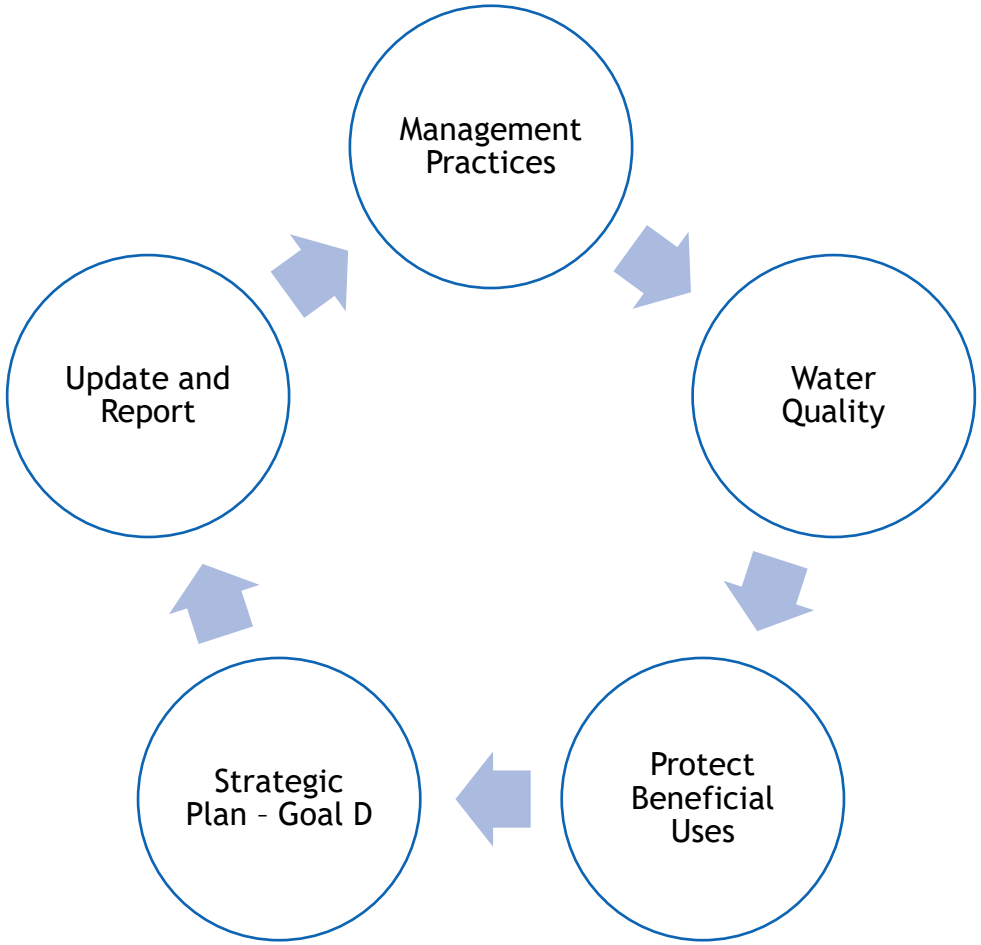
SNMP Background

- **State Recycled Water Policy**
  - Set goals for production & use of RW
  - Set requirements for salt & nutrient management planning
  - Goal to streamline permitting of recycled water projects
- **SNMP Purpose**
  - Provides a framework for management practices
  - Determine WQ of our basin through monitoring and modeling
  - Protect beneficial uses and allow for the long-term sustainability of GW resources consistent with Basin Plan objectives



How Does It Work Locally?

- Provides a framework so that water management practices are consistent with basin management objectives.
- Provides flexibility in allowing adjustments to management practices to make sure we can adapt to changing conditions and future policies



2022 SNMP Report Update

- **Approach**
  - Data Collection and QA/QC
  - Data Interpretation and Development of Groundwater Conditions
  - SNMP Model Update
- **Modeling**
  - Update water balances for each zone
  - Update salt and nutrient balance for each zone
  - Calculate current ambient water quality and projected water quality to 2035.

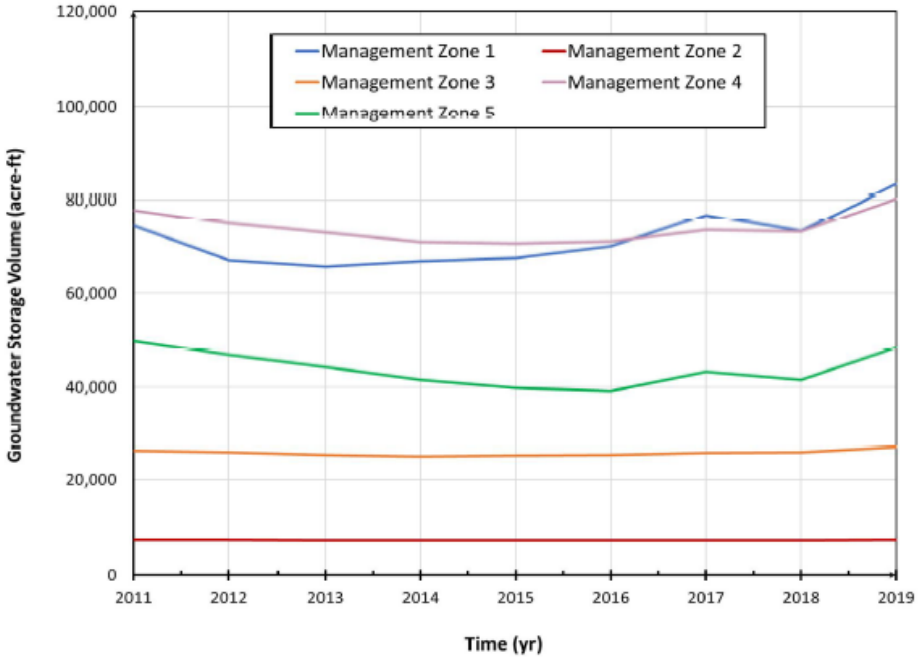


Figure 3-1: Groundwater in Storage – East Subbasin Alluvial Aquifer Management Zones (2011 through 2019)

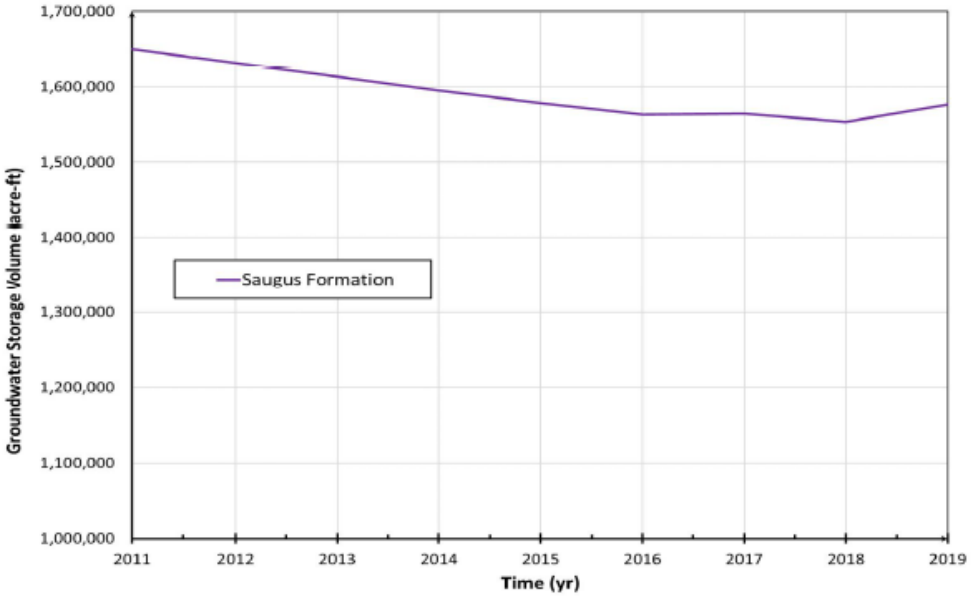
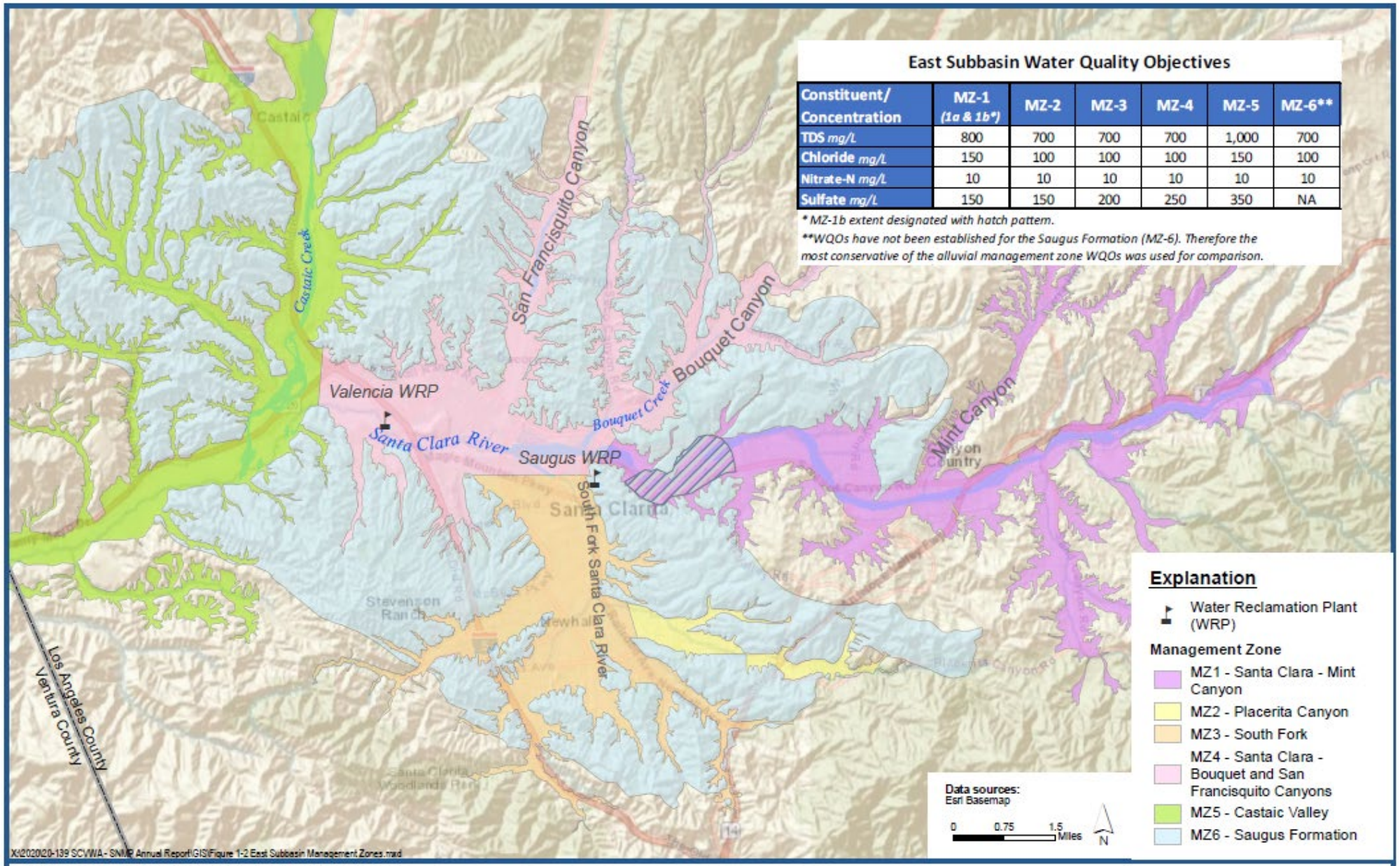


Figure 3-3: Groundwater in Storage – East Subbasin Saugus Formation (2011 through 2019)

Managing Resources

- 6 management zones established
- Samples collected to determine ambient WQ
- Collected info is used to develop WQ projections



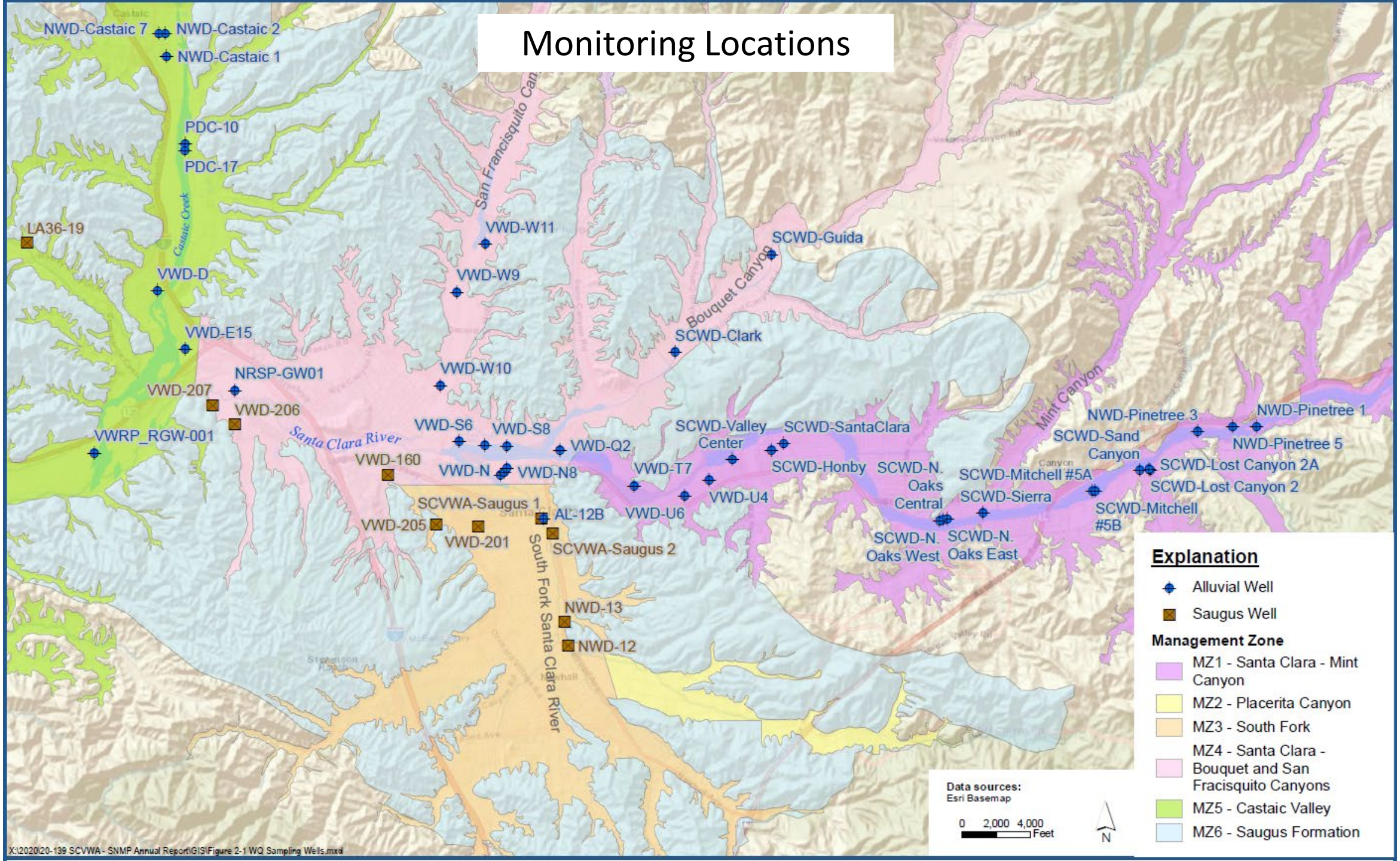
Luhdorff & Scalmanini Consulting Engineers

East Subbasin Management Zones and Basin Objectives

Salt and Nutrient Management Plan Monitoring Report
Santa Clarita Valley Water Agency

Figure 1-2

Monitoring Locations



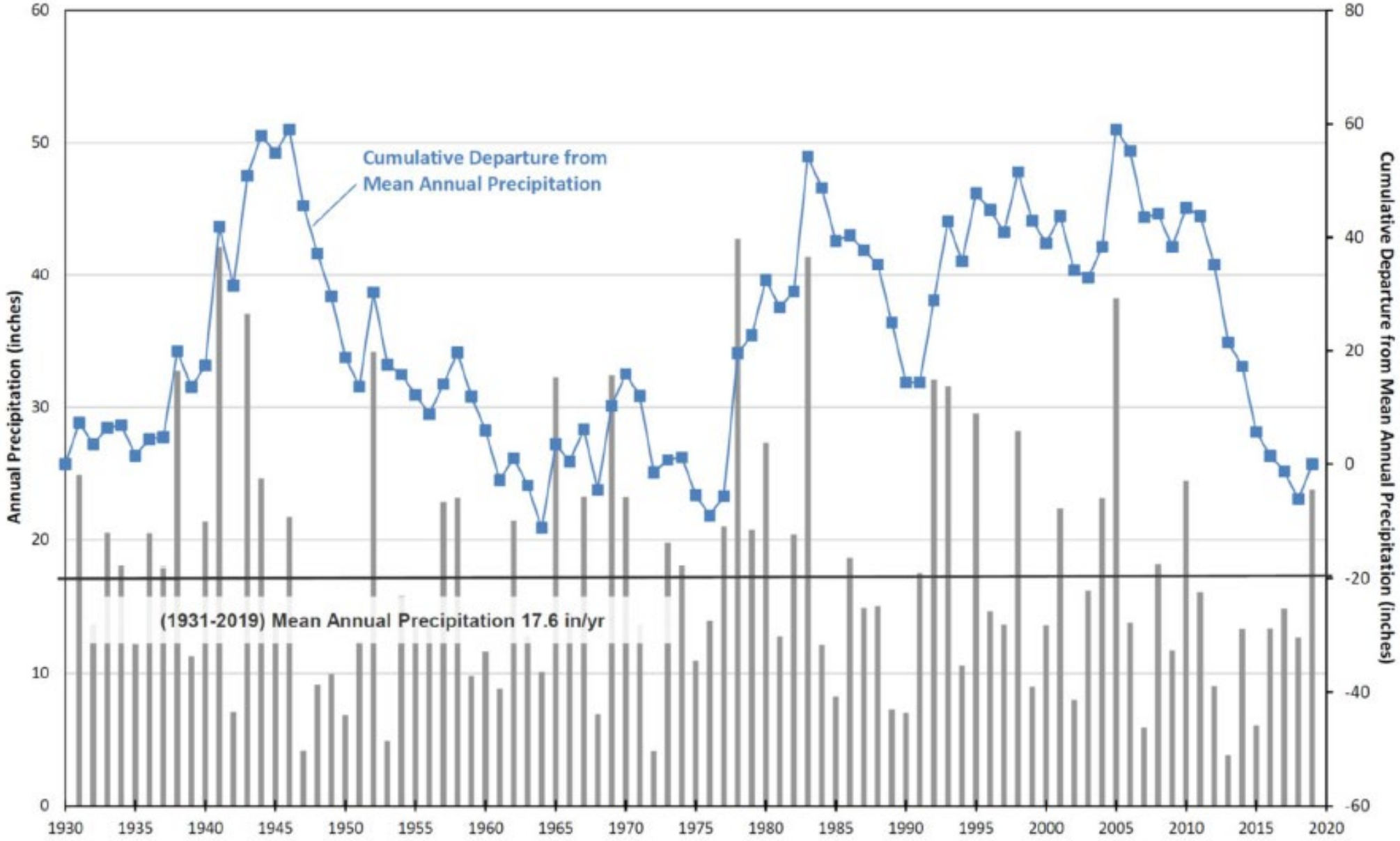


Figure 1-3: Annual Precipitation and Cumulative Departure from Mean Annual Precipitation at Newhall Fire Station #73 Gage

Current and Projected Water Quality

MZ	Groundwater Subunit	Water Quality Status Comparison	TDS [mg/L]	Chloride [mg/L]	Nitrate as N [mg/L]	Sulfate [mg/L]
1a	Santa Clara-Mint Canyon	Water Quality Objective	800	150	10	150
		2011-2019 Ambient Water Quality	753	109	4.3	132
		2020-2035 Projected Average Concentration	722	90	4.3	141
		Projected Assimilative Capacity	78	60	5.7	9
1b	Santa Clara-Mint Canyon	Water Quality Objective	800	150	10	150
		2011-2019 Ambient Water Quality	906	98	4.1	286
		2020-2035 Projected Average Concentration	783	85	4.5	213
		Projected Assimilative Capacity	17	65	5.5	-63
4	Santa Clara-Bouquet and San Francisquito Canyons	Water Quality Objective	700	100	10	250
		2011-2019 Ambient Water Quality	753	93	5	194
		2020-2035 Projected Average Concentration	702	102	4.5	178
		Projected Assimilative Capacity	-2	-2	5.5	72
5	Castaic Valley	Water Quality Objective	1000	150	10	350
		2011-2019 Ambient Water Quality	704	94	1.2	215
		2020-2035 Projected Average Concentration	779	105	2.4	250
		Projected Assimilative Capacity	221	45	7.6	100
6[b]	Saugus Formation	Water Quality Objective	700	100	10	NA[c]
		2011-2019 Ambient Water Quality	671	38	4	247
		2020-2035 Projected Average Concentration	662	57	4.2	221
		Projected Assimilative Capacity	38	43	5.8	NA

[a] Insufficient data to establish ambient groundwater quality.

[b] WQOs are not established for the Saugus Formation; most conservative of alluvial MZ WQOs was used for comparison. [c] No recommendation has been made regarding sulfate for MZ6 due to lack of historical data.

Note: A positive value indicates an increase in assimilative capacity, and a negative value indicates a decrease.

Red = Exceedance of Basin WQO

Findings

2016 SNMP Report–

- Implementation of the projects will provide a net benefit by providing additional water supply and conservation activities while mitigating and/or minimizing water quality impacts.

2022 SNMP Report Update

- 2016 Conclusion remains valid
- Increases of constituent concentrations in their respective zones due to below average rainfall during the majority of the study period.
- Modeling indicated projected concentrations will be lower than the WQO with the exception of minor exceedances in some areas

Closing Comments

- Two new wells were added to monitoring network in MZ-3
- Evaluating transition of SNMP database
- Begin engaging stakeholders in preparation for 10-year SNMP Update (2026)