

Santa Cruz County Water Commission

February 2, 2022

Presented by: Heidi Luckenbach

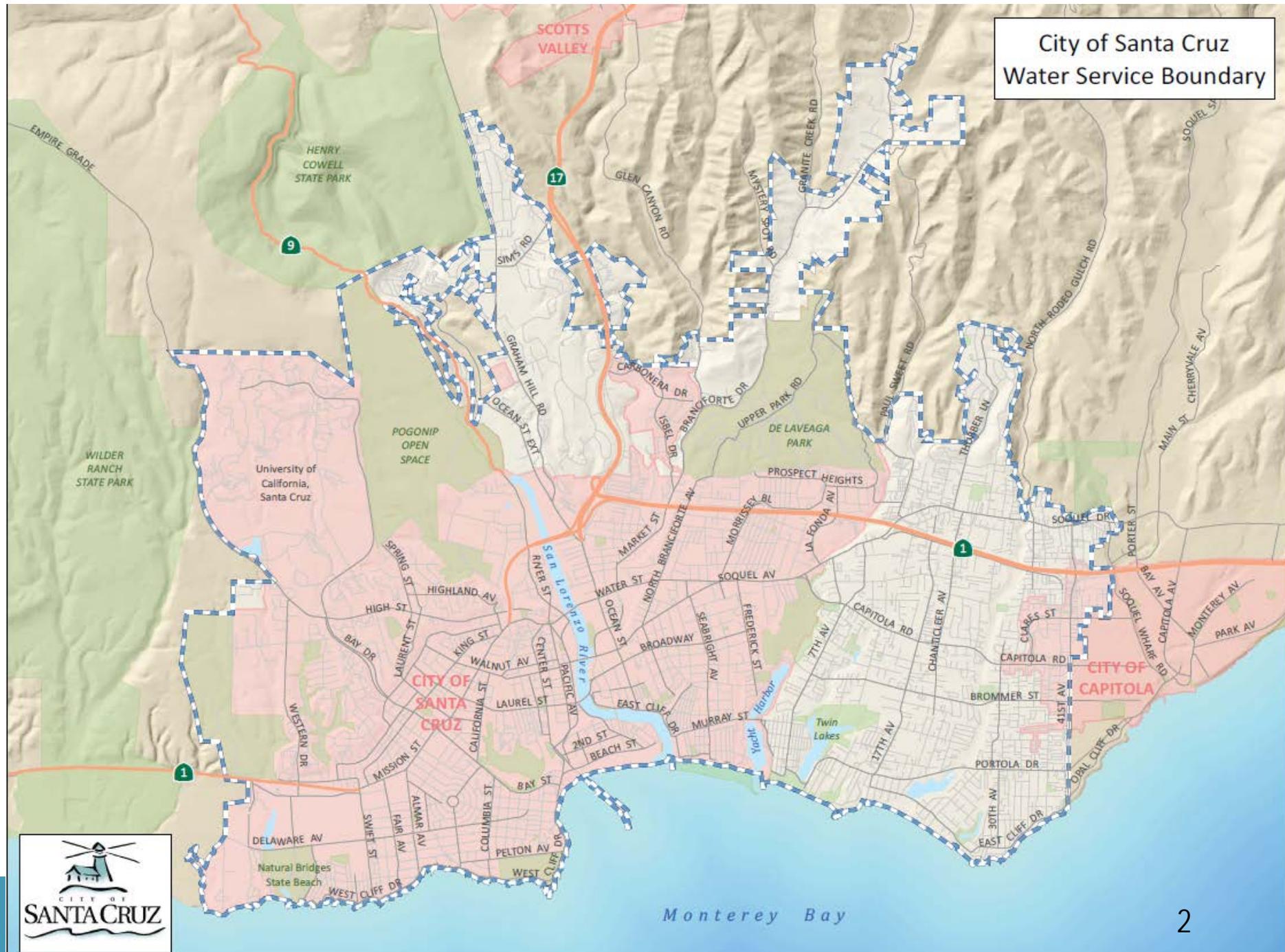
Our Water, Our Future



Jurisdictions Served:

- City
- County
- Capitola
- University of California

Population: 98,000



Santa Cruz Water Department At A Glance



2.68
Billion gallons
produced
per year



98K
Population
served

**48
GPCD**
Average daily
residential
water use

2K
Students served
through education
programs

264
Miles of
water mains



0
Violations of
drinking water
standards

114
Employees

45K
calls answered annually
by customer
service staff

14%
Solar power
generated and
used onsite



Building a
21st Century
Water System

 [cityofsantacruz.com/water](https://www.cityofsantacruz.com/water)



**Our
Water,
Our
Future**

City of Santa Cruz Sources of Supply



Beltz Wells
(1964, 2013)



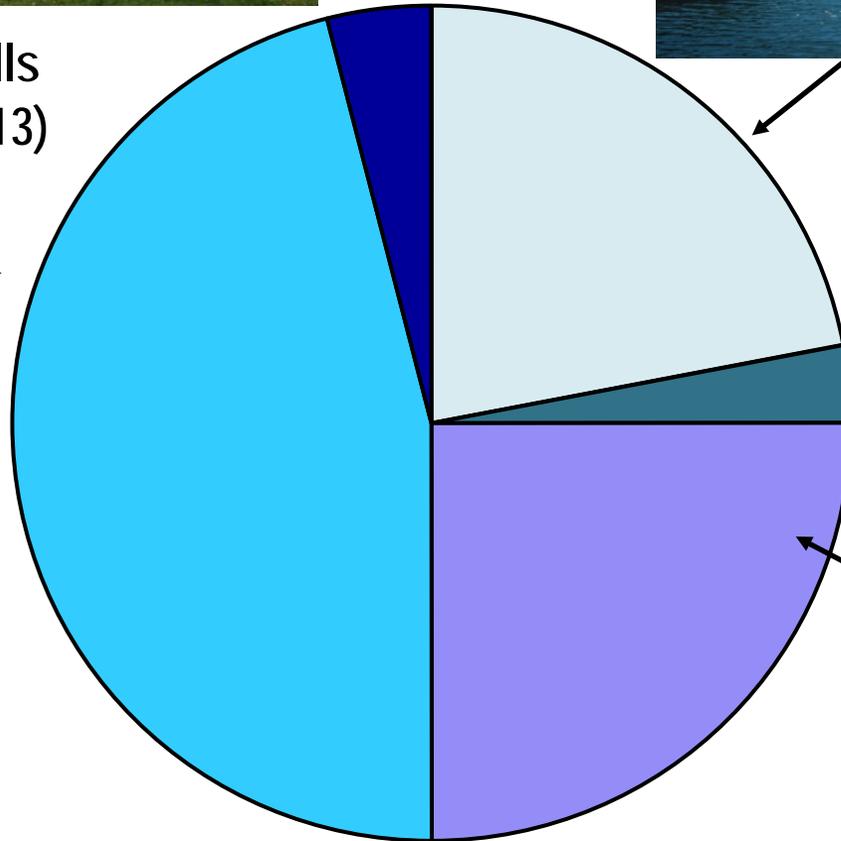
Loch Lomond Reservoir
(1960)



San Lorenzo River
(1924)



North Coast Streams
(1880)

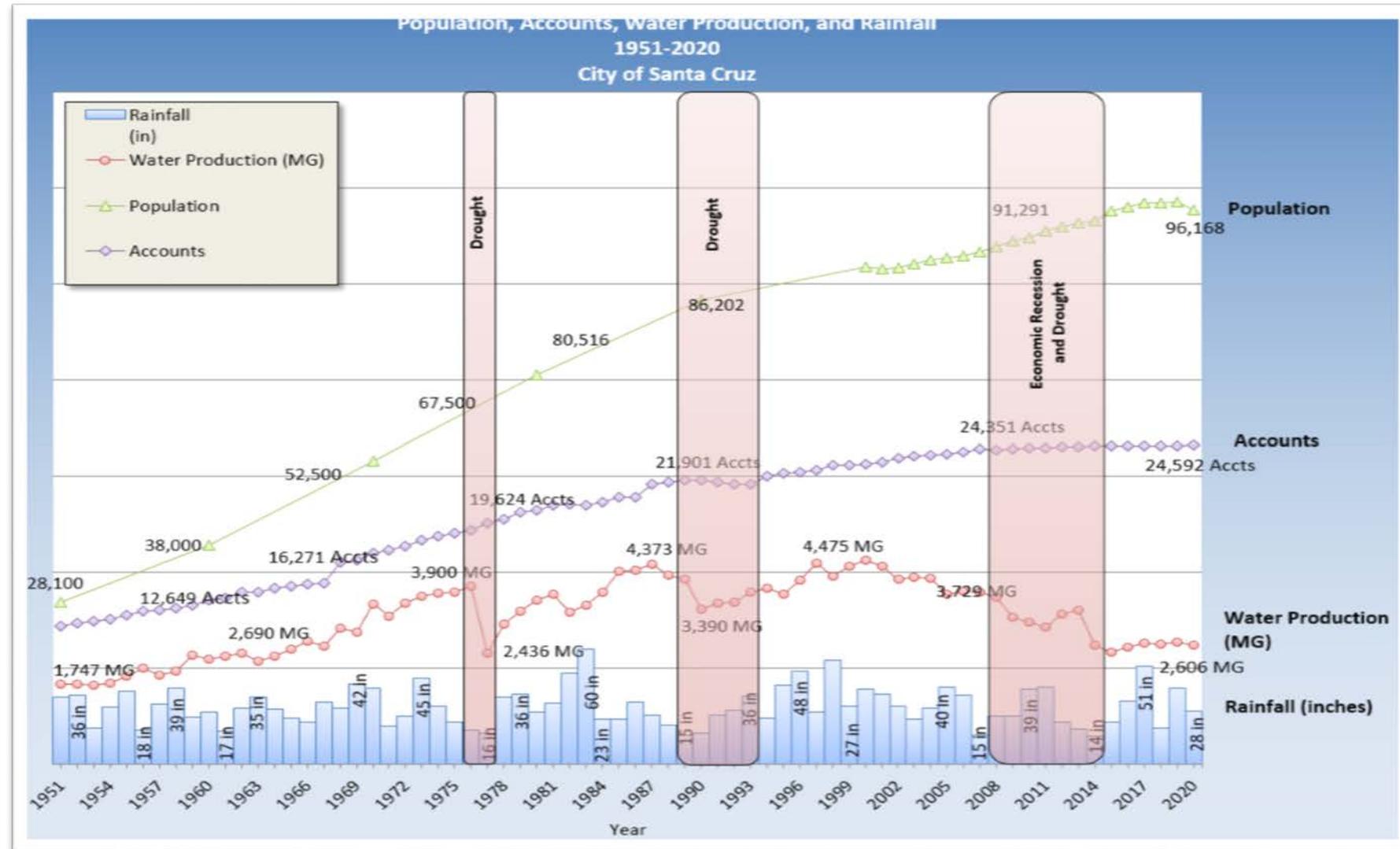


□ Loch Lomond 22% ■ Tait Wells 3% ■ North Coast Streams 25% ■ San Lorenzo River 46% ■ Beltz Wells 4%

System Water Use and Water Demand

Historic Trends

- Population and water production trends diverged in early 2000s when water use peaked



2021 Demand Projections (M-Cubed)

YEAR		2015	2020	2025	2030	2035	2040	2045
		Actual	Actual	Forecast	Forecast	Forecast	Forecast	Forecast
Annual Demand	Units							
SFR	MG	835	952	954	952	958	966	974
MFR	MG	538	588	601	600	596	601	606
BUS	MG	484	388	499	481	458	452	456
IND	MG	43	39	37	37	37	37	37
MUN	MG	35	66	54	51	47	47	47
IRR	MG	46	77	77	69	59	58	59
GOLF	MG	87	39	44	40	36	35	35
UC	MG	160	110	156	201	247	292	292
Total Demand	MG	2,228	2,257	2,421	2,433	2,437	2,487	2,505
MISC/LOSS	MG	181	183	196	197	198	202	203
Coastal Irrigation	MG	34	6	12	12	12	12	12
Total Production	MG	2,442	2,446	2,630	2,642	2,647	2,701	2,720
Rounded	MG	2,400	2,400	2,600	2,600	2,600	2,700	2,700
2015 UWMP		2015	2020	2025	2030	2035		
		Actual	Forecast	Forecast	Forecast	Forecast		
Total Production	MG	2,442	3,385	3,350	3,389	3,442		
Rounded	MG	2,400	3,400	3,400	3,400	3,400		
% Difference from UWMP		0%	-28%	-22%	-22%	-23%		

(from February 2021 Water Commission Meeting)

Vulnerability to shortages

- Limited storage
- Fish flow requirements
- Highly variable supply
- Climate change



Habitat Conservation Planning

LOW-EFFECT HABITAT CONSERVATION PLAN

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

for the
FEDERALLY ENDANGERED MOUNT HERMON JUNE BEETLE ZAVANTE
BAND WINGED GRASSHOPPER AND BEN LOMOND SPINEFLOWER

for the
CITY OF SANTA CRUZ
GRAHAM HILL WATER TREATMENT PLANT
OPERATIONS, MAINTENANCE, AND CONSTRUCTION ACTIVITIES

June 2013

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Prepared for:

City of Santa Cruz
Chris Berry – Project Manager

FINAL CITY OF SANTA CRUZ OPERATIONS AND MAINTENANCE 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



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Biotic Resources Group

January 25, 2021

DRAFT

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

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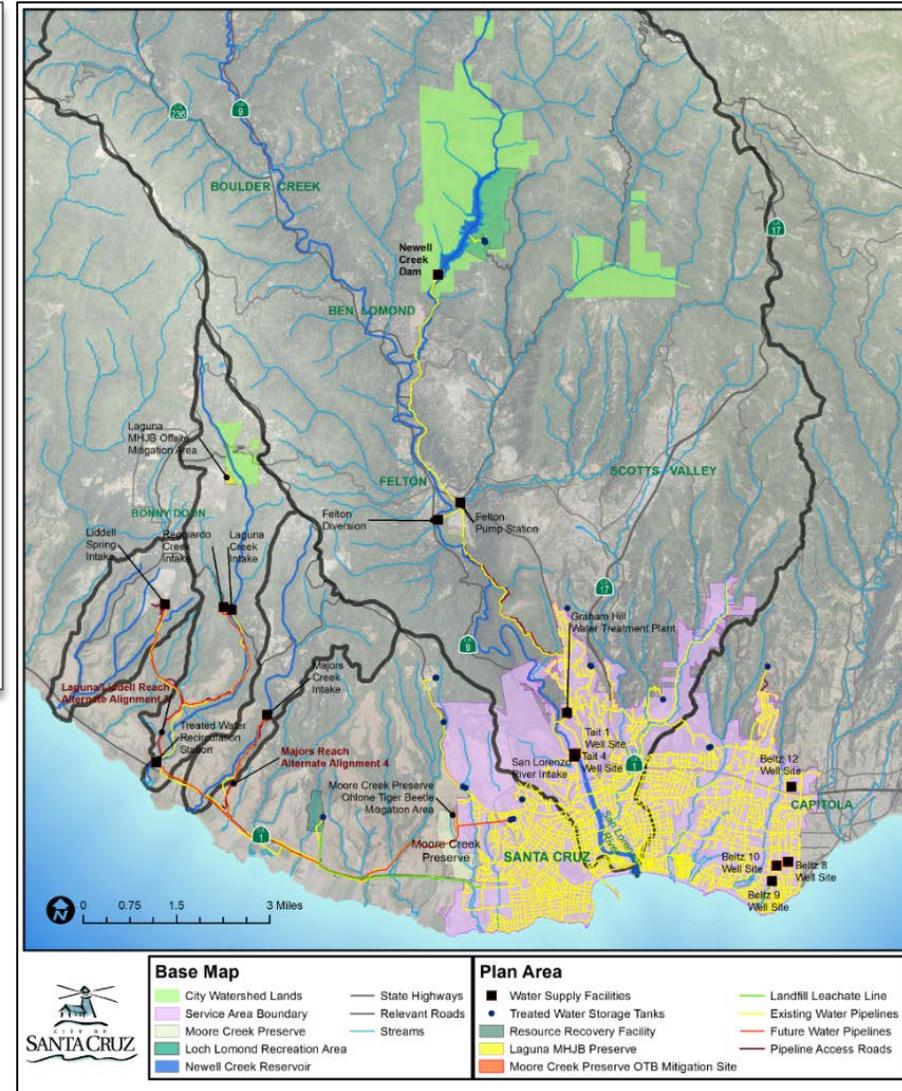
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Base Map

- City Watershed Lands
- Service Area Boundary
- Moore Creek Preserve
- Loch Lomond Recreation Area
- Newell Creek Reservoir
- State Highways
- Relevant Roads
- Streams

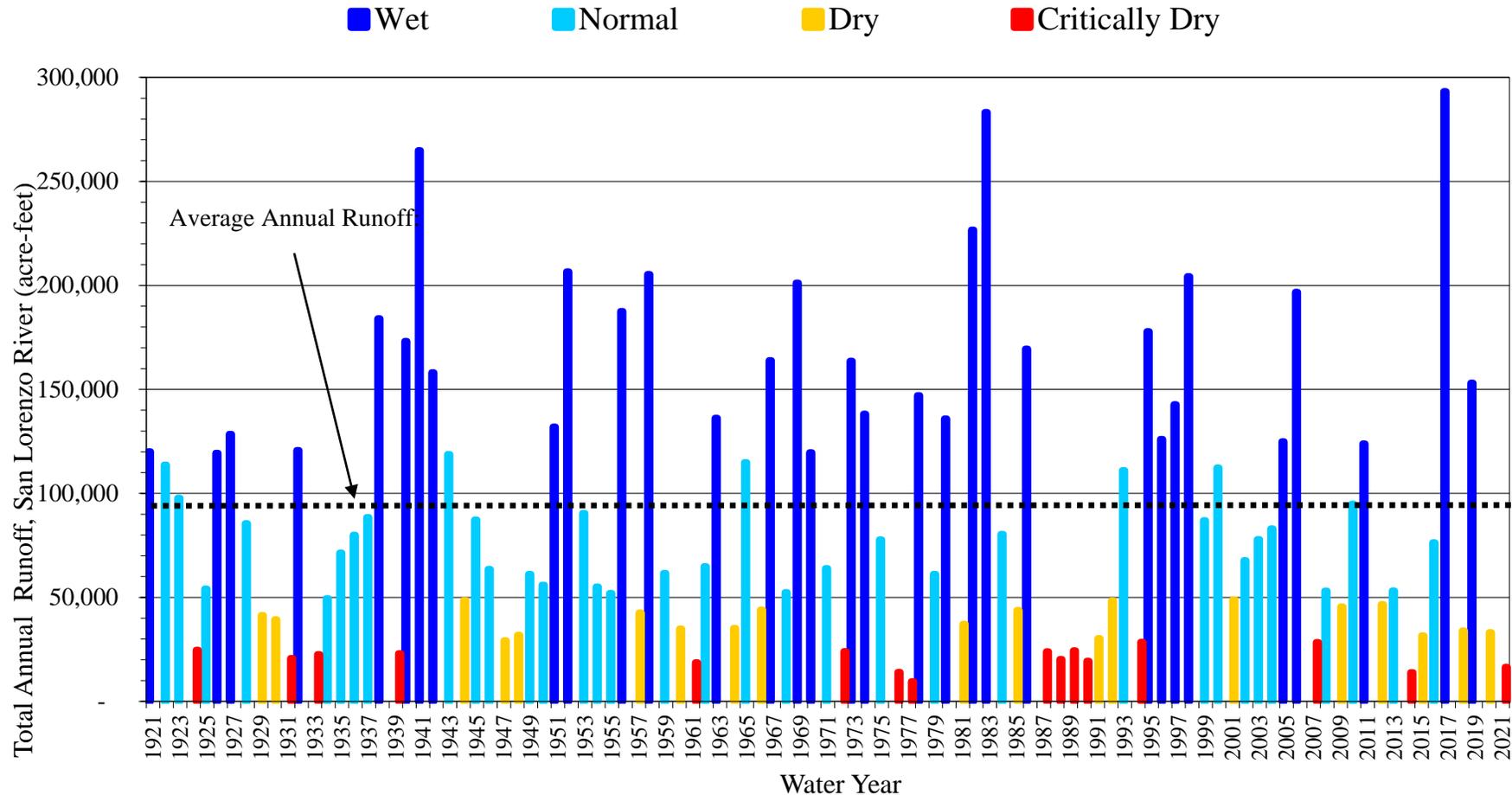
Plan Area

- Water Supply Facilities
- Treated Water Storage Tanks
- Resource Recovery Facility
- Laguna MHJB Preserve
- Moore Creek Preserve OTB Mitigation Site
- Landfill Leachate Line
- Existing Water Pipelines
- Future Water Pipelines
- Pipeline Access Roads



The Santa Cruz Water System Serves ~100,000 People Using Highly Variable Surface Water Resources

Water Year Classification System



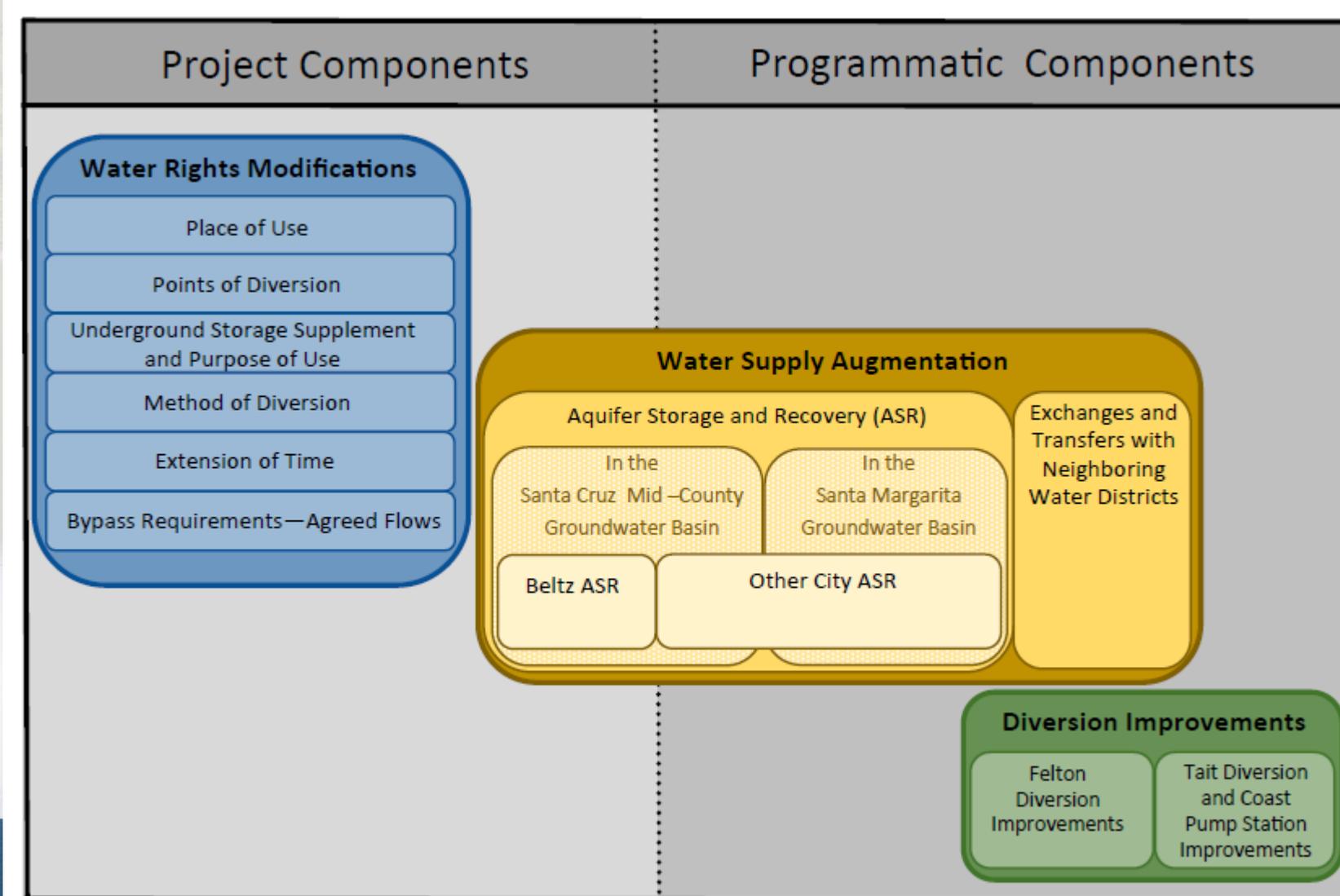
One Extreme of Whiplash Weather

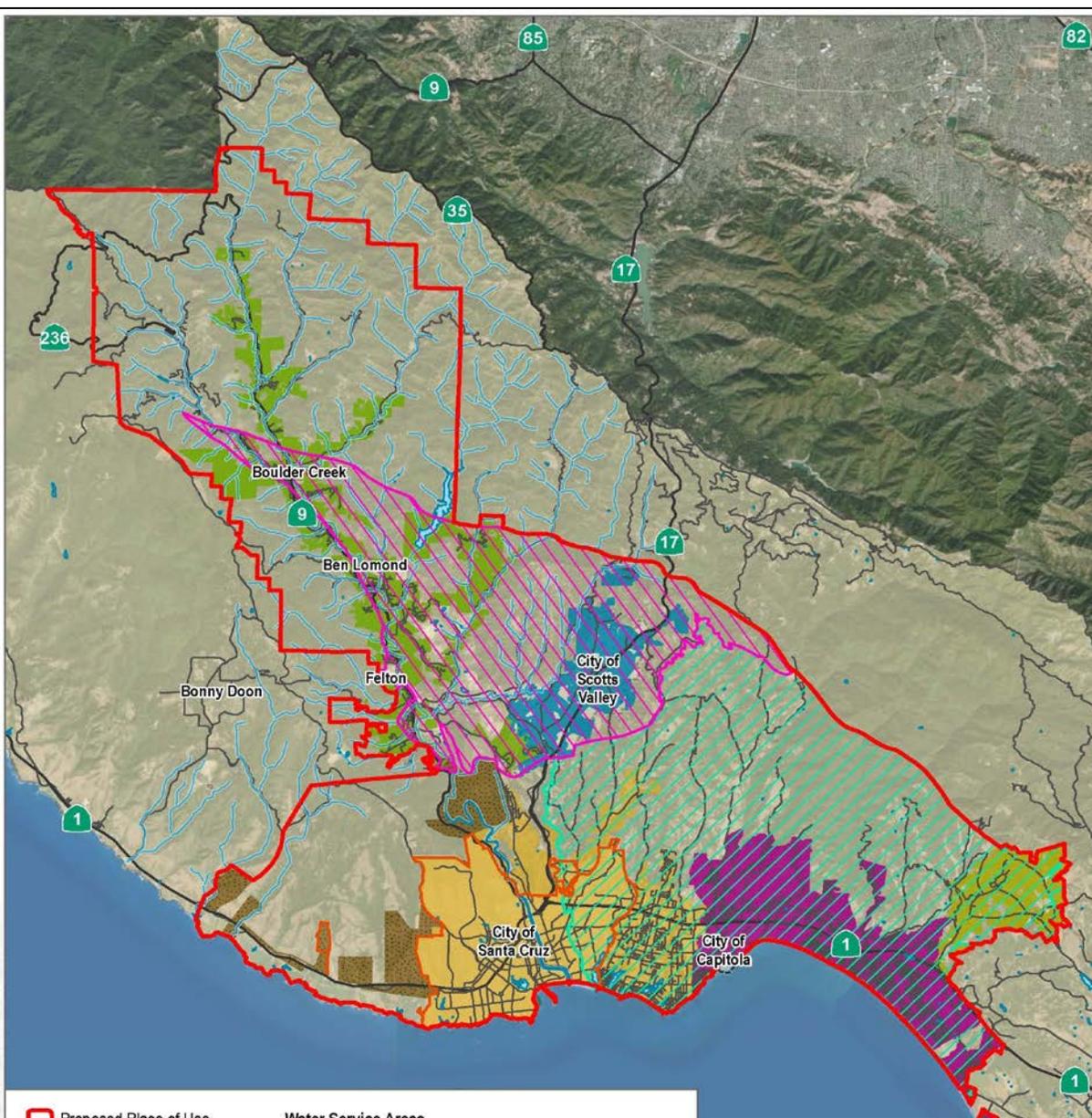


...And the other Extreme. Drought Risk Is Increasing with Climate Change



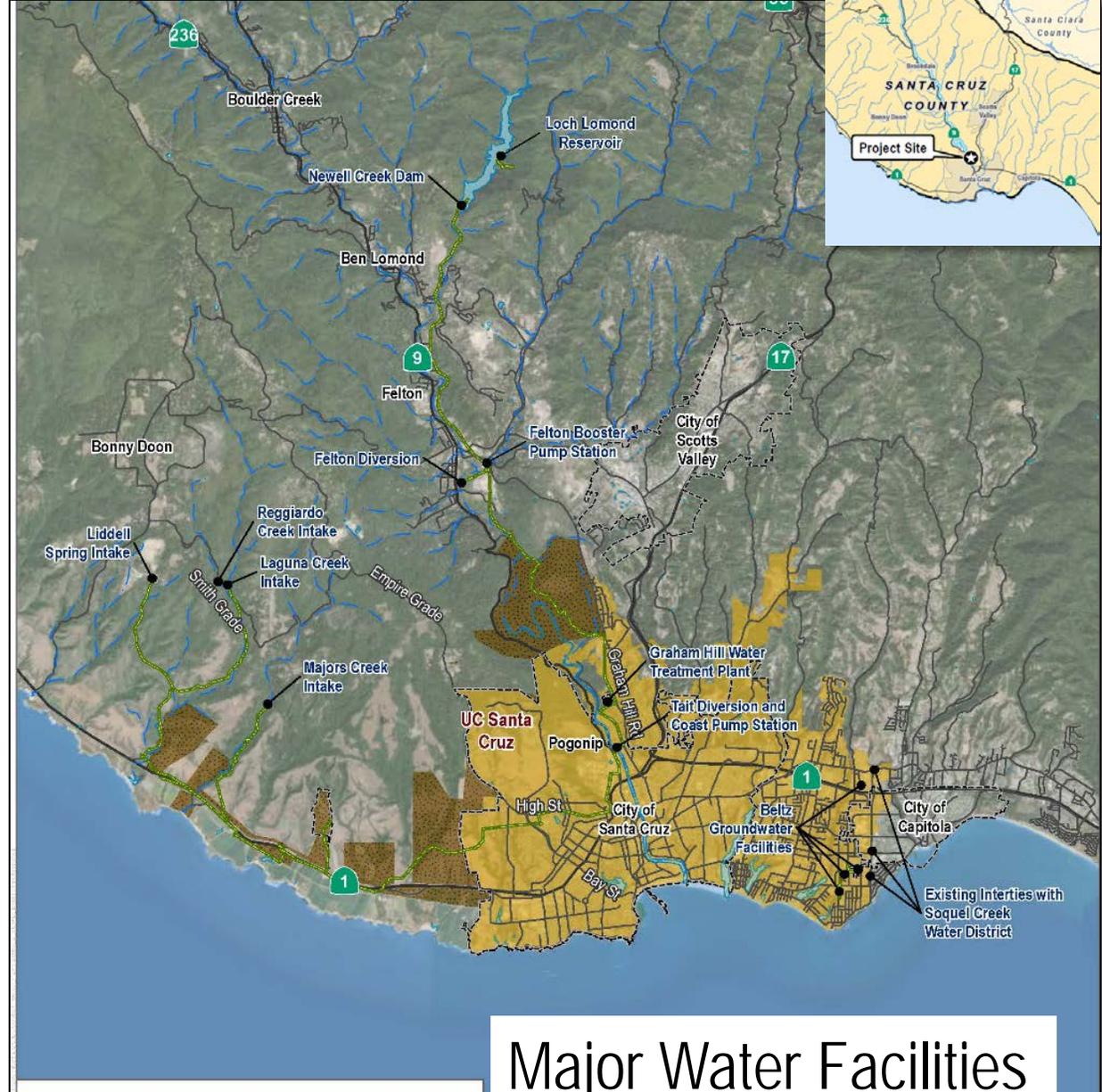
Elements of the Santa Cruz Water Rights Project





- Proposed Place of Use
- Santa Cruz County
- City of Santa Cruz
- ~ City of Santa Cruz Source Waters
- Major Roads
- Groundwater Basins**
- Santa Cruz Mid-County
- Santa Margarita
- Water Service Areas**
- Central Water District
- San Lorenzo Valley Water District
- Scotts Valley Water District
- Soquel Creek Water District
- City of Santa Cruz Areas Served
- City of Santa Cruz Areas Served - Limited Service Only

Future "Place of Use"

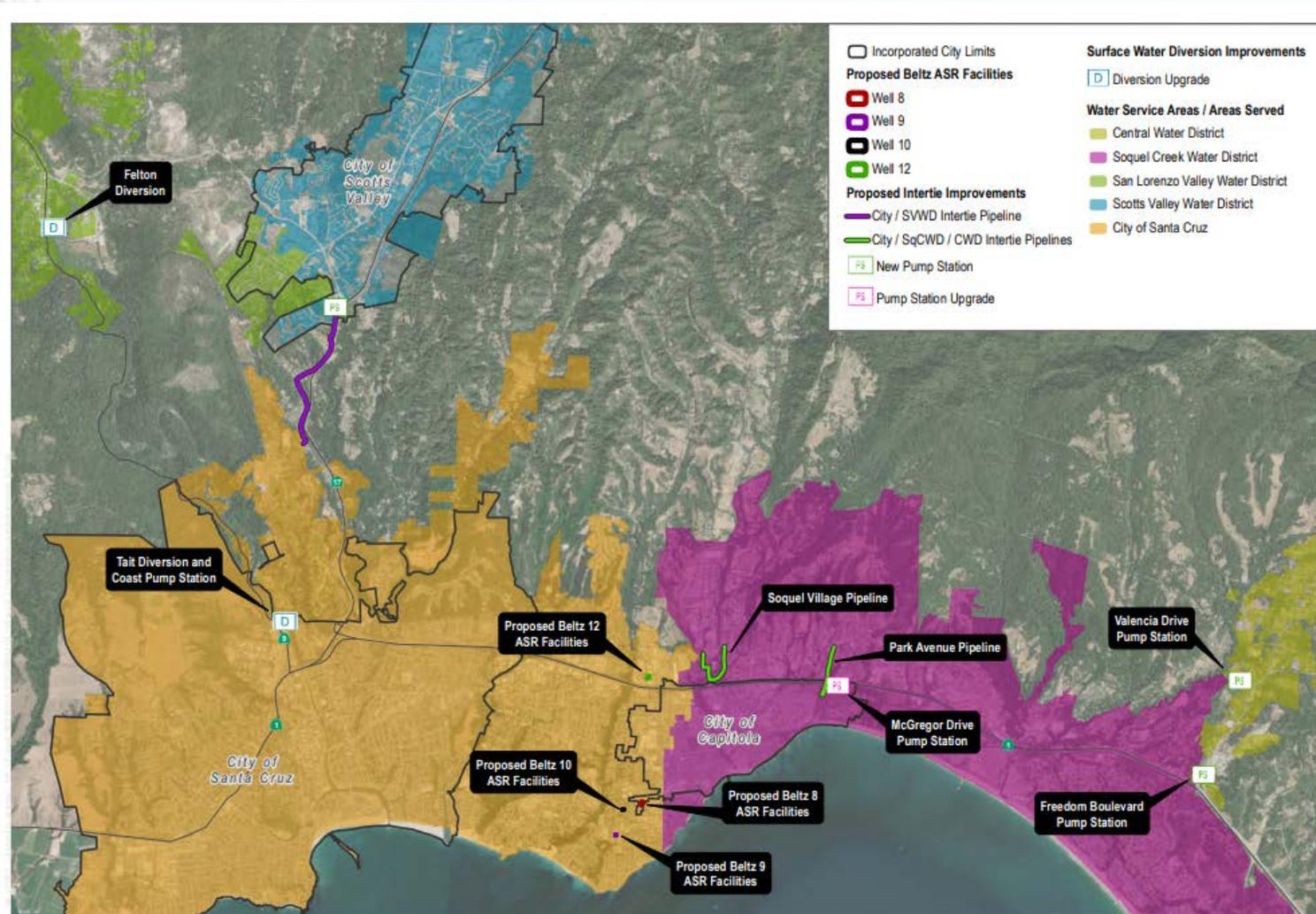


- City Limits
- City of Santa Cruz Areas Served
- City of Santa Cruz Areas Served - Limited Service Only
- ~ City of Santa Cruz Source Waters
- Raw Water Pipelines
- Major Roads

Major Water Facilities and Current Service Area



Infrastructure Improvements



SOURCE: Bing Maps Accessed 2020, Kennedy/Jenks Consultants 2012 and 2014, URS 2013, County of Santa Cruz 2020



Proposed New and Upgraded Infrastructure Components

FIGURE 3-4

Santa Cruz Water Rights Project

Aquifer Storage & Recovery (ASR)

July 2017
Project No. 15-0111

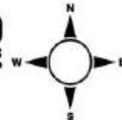
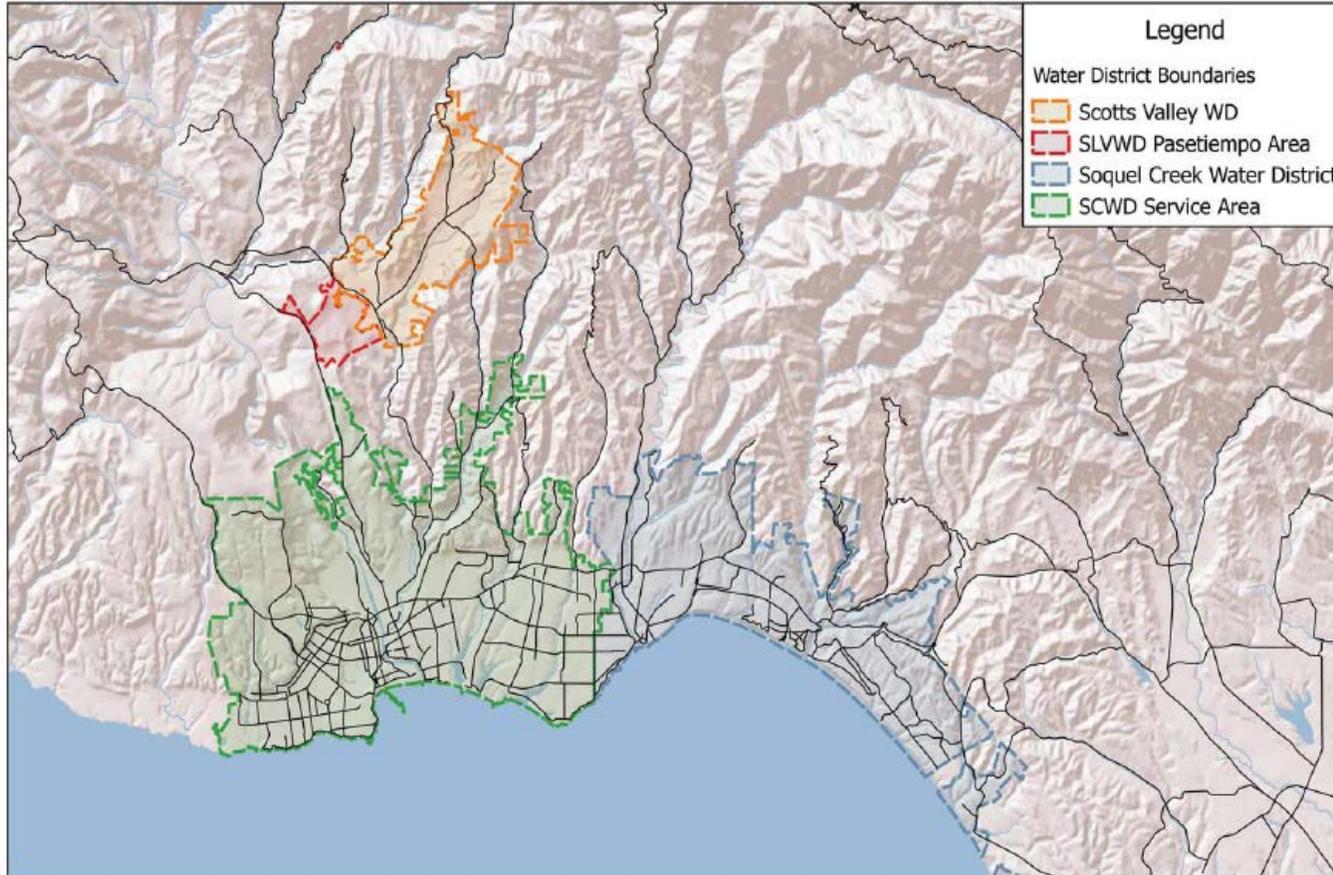


FIGURE 1 - WATER SERVICE AREA BOUNDARIES
Santa Cruz ASR Project - Phase 1 - Well Siting Study
City of Santa Cruz Water Department

ASR in the Santa Cruz Mid-County Groundwater Basin

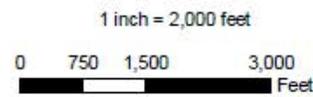
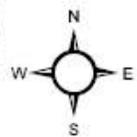
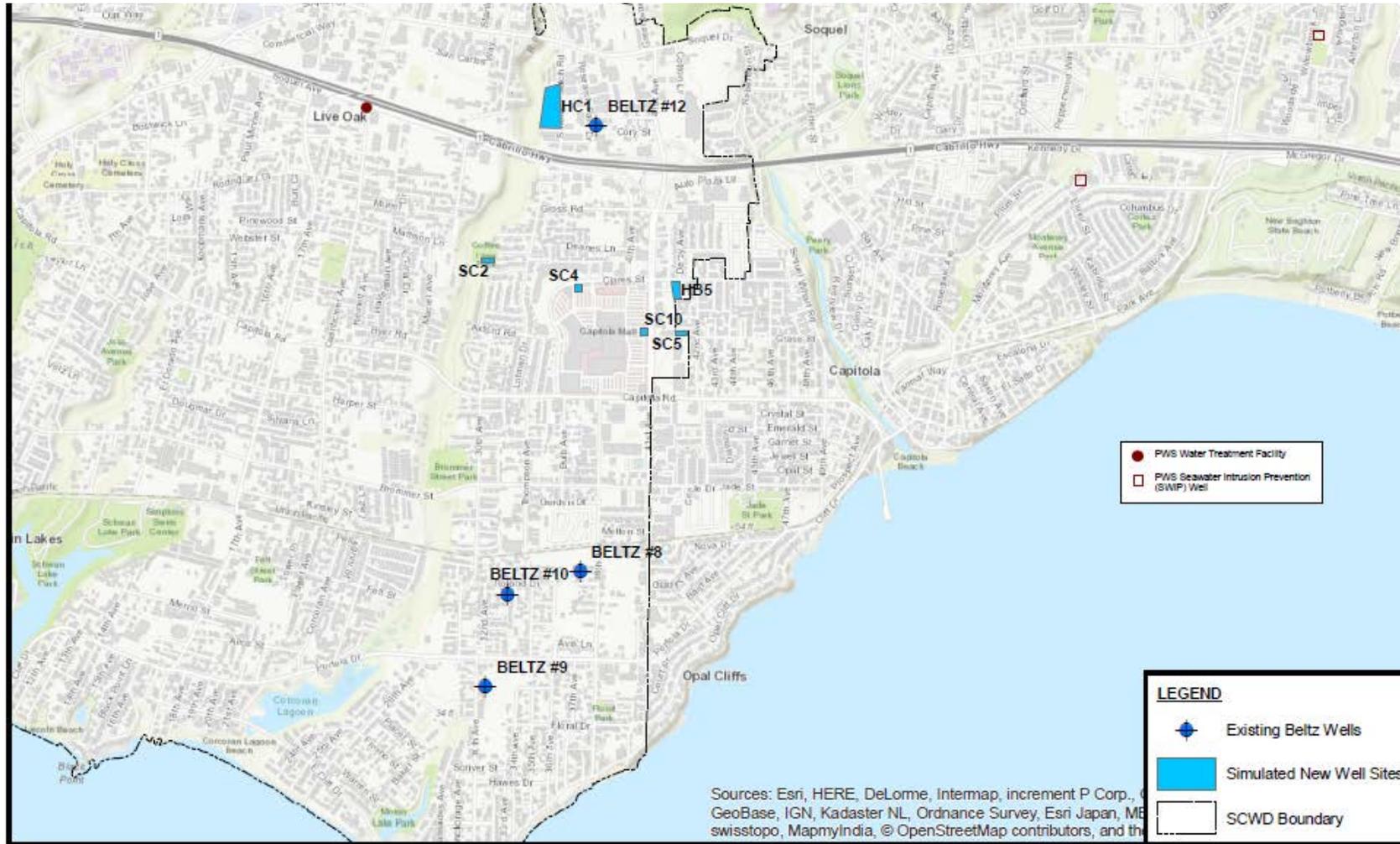


FIGURE 1. SIMULATED ASR WELL LOCATIONS - SCENARIO 11.2/8.6
 Santa Cruz ASR Project - Phase 1 Feasibility Investigation
 City of Santa Cruz

Next Steps

- Plan for ASR expansion in the Mid County Groundwater Basin (MCGB)
- Evaluate the opportunities for ASR in the Santa Margarita Groundwater Basin (SMGWB)
- Continue developing projects in both basins that may also include water transfers and exchanges
- Maintain regional partnership opportunities
- Continue to evaluate the opportunities of recycled water either through groundwater replenishment in the MCGB or the SMGWB or long-term feasibility of direct potable reuse



Thank you!

Our Water, Our Future

