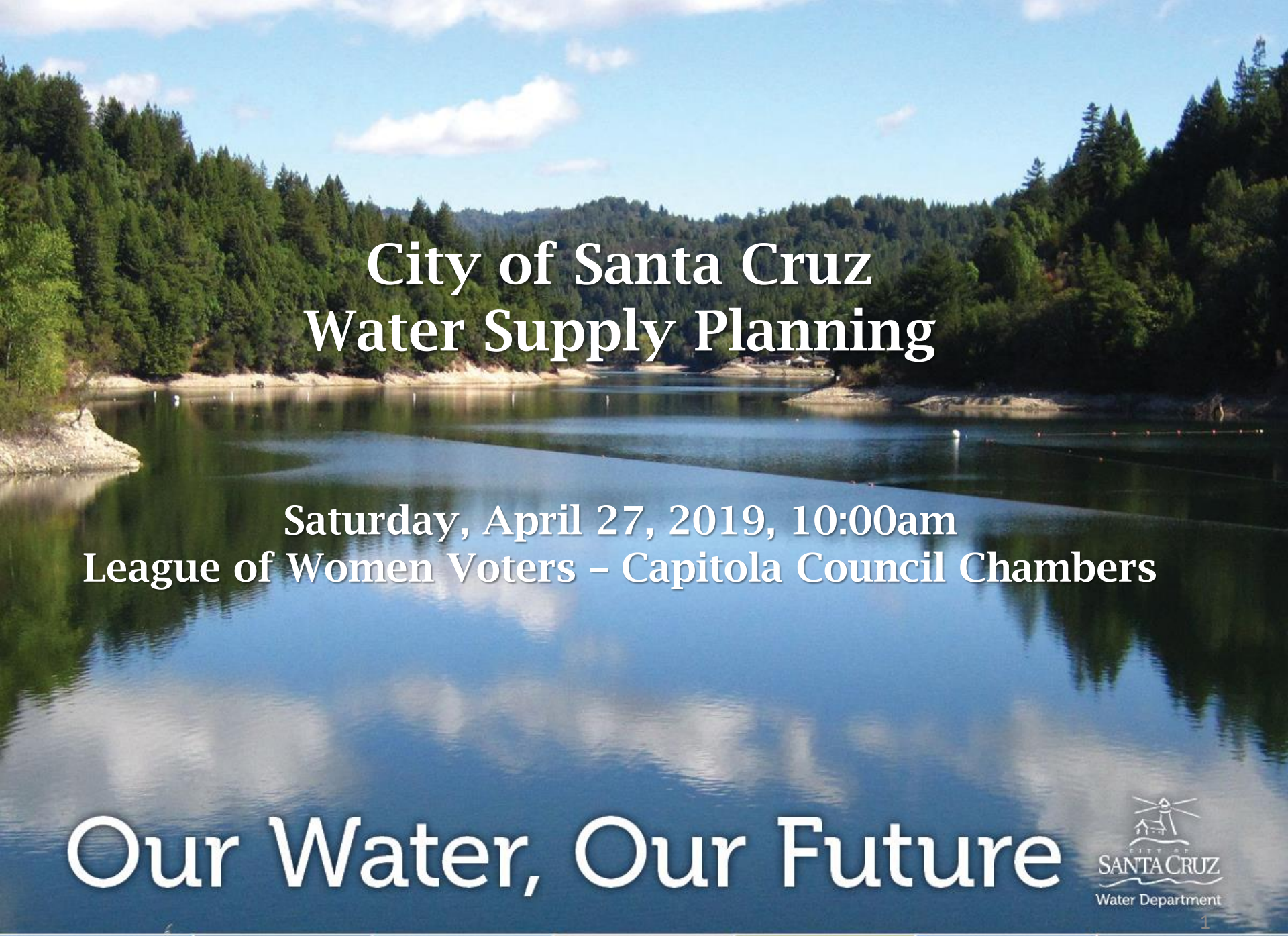

City of Santa Cruz
Water Supply Planning
Saturday, April 27, 2019, 10:00am
League of Women Voters – Capitola Council Chambers
Our Water, Our Future
SANTA CRUZ
Water Department

Presentation Objectives

- Introduction to the City of Santa Cruz Water Department
- Our Water Challenges
- Approaches to Addressing these Challenges

North Coast Sources - ~32%

Laguna Creek: 1890
Liddell Spring: 1913
Majors Creek: 1884
Reggiardo Creek: 1912

Loch Lomond Reservoir ~17%

Built 1960 (population was 31,000)
2.8 billion gallon capacity
577 feet above MSL

San Lorenzo River ~47%

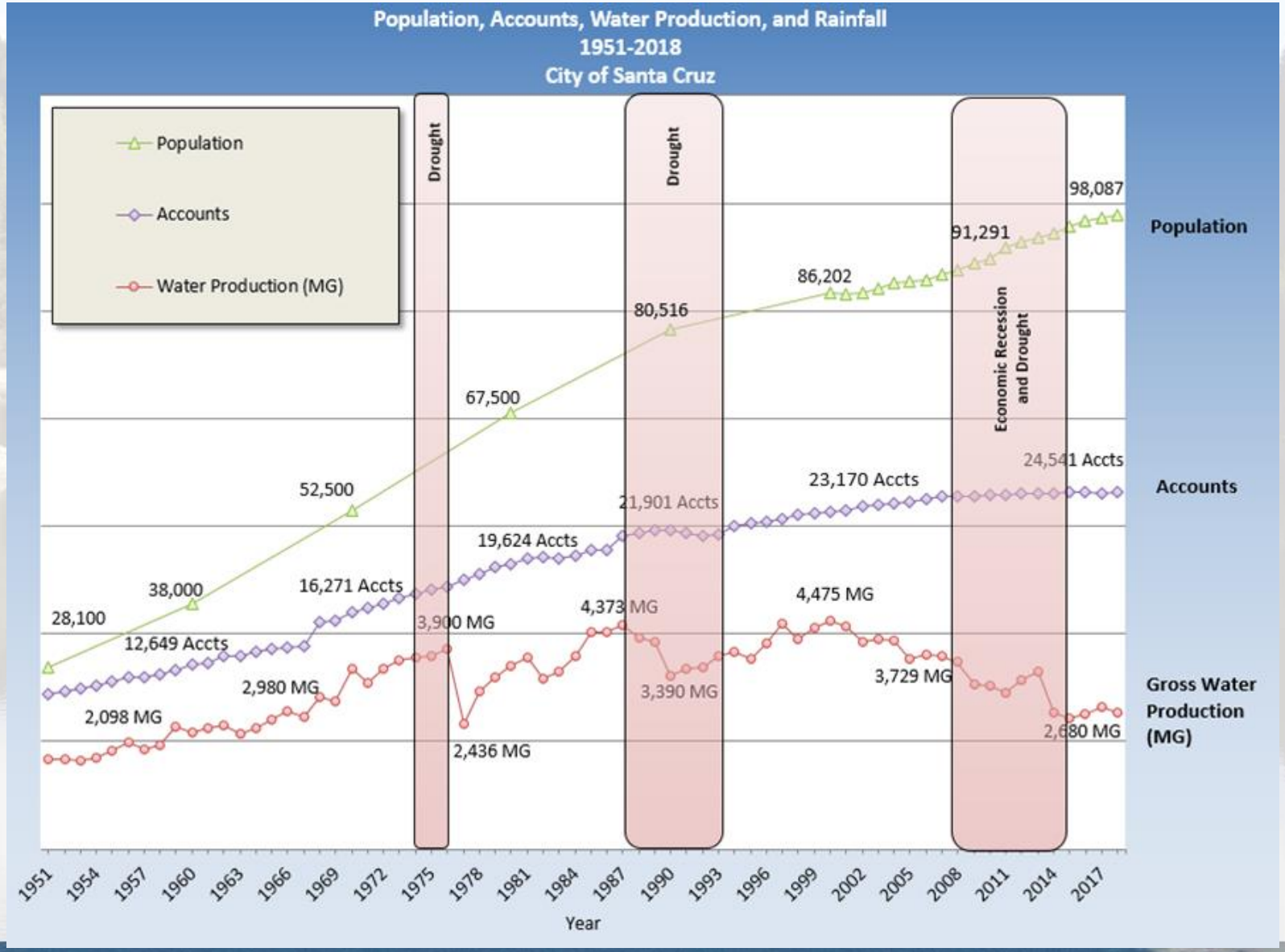
Tait St Intake: 1924
Felton Diversion: 1976

Groundwater Wells ~4%

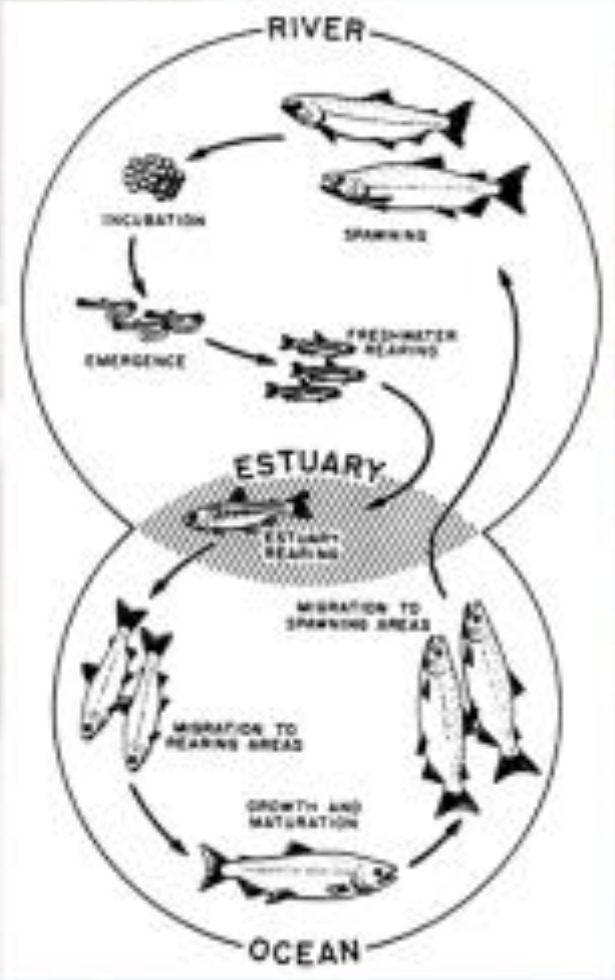
3 wells: 1964
Beltz 12: 2015

Our Challenges

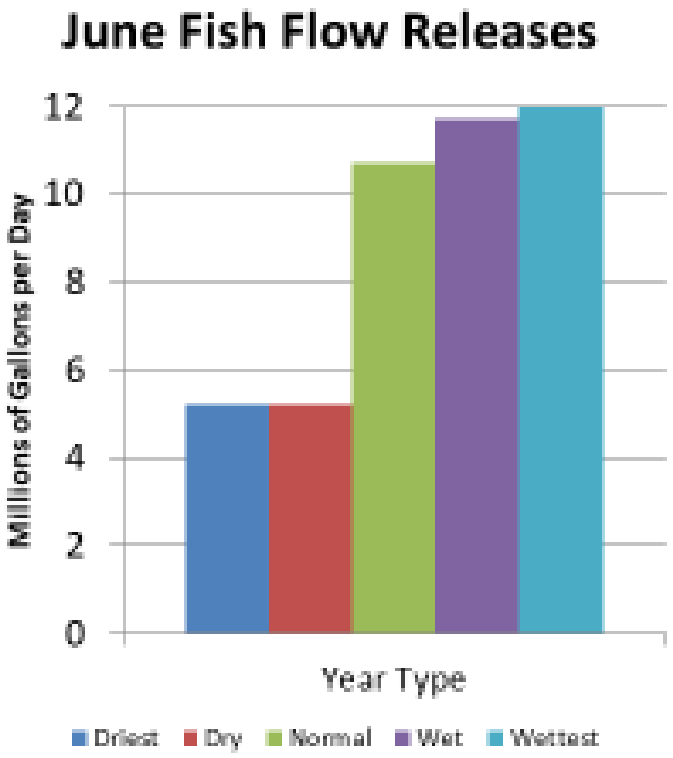
- Population
- Aging Infrastructure (1884 -)
- Unsustainable Groundwater Pumping
- Endangered Species/Environmental Needs
- Climate Change

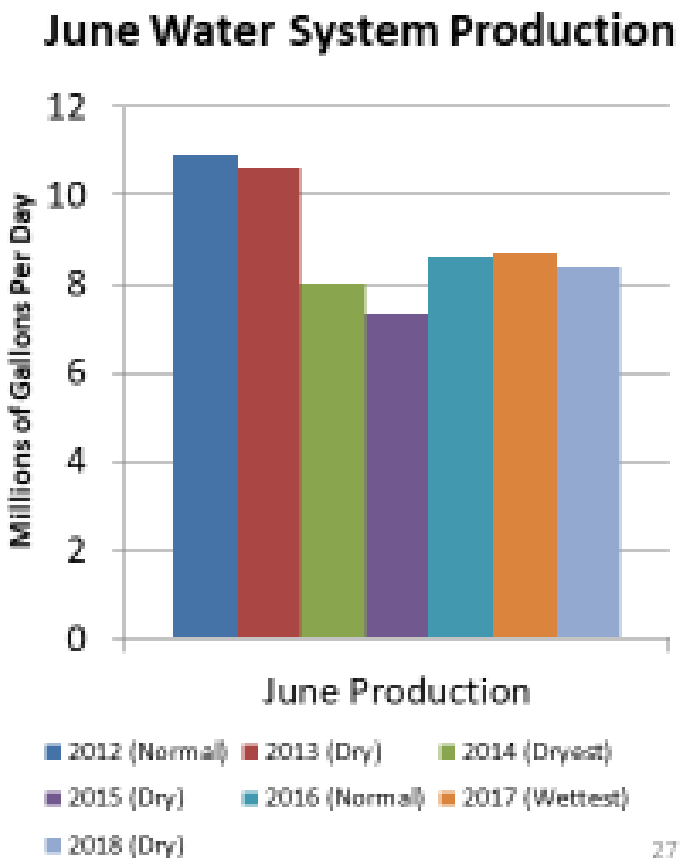

Population, Accounts, Water Production, and Rainfall
1951-2018
City of Santa Cruz
Population
Accounts
Water Production (MG)
Drought
Drought
Economic Recession and Drought
98,087
91,291
86,202
80,516
67,500
52,500
38,000
28,100
24,541 Accts
23,170 Accts
21,901 Accts
19,624 Accts
16,271 Accts
12,649 Accts
4,475 MG
4,373 MG
3,900 MG
3,729 MG
3,390 MG
2,980 MG
2,098 MG
2,436 MG
2,680 MG
Population
Accounts
Gross Water Production (MG)
1951
1954
1957
1960
1963
1966
1969
1972
1975
1978
1981
1984
1987
1990
1993
1996
1999
2002
2005
2008
2011
2014
2017
Year

Fish Flow Commitments



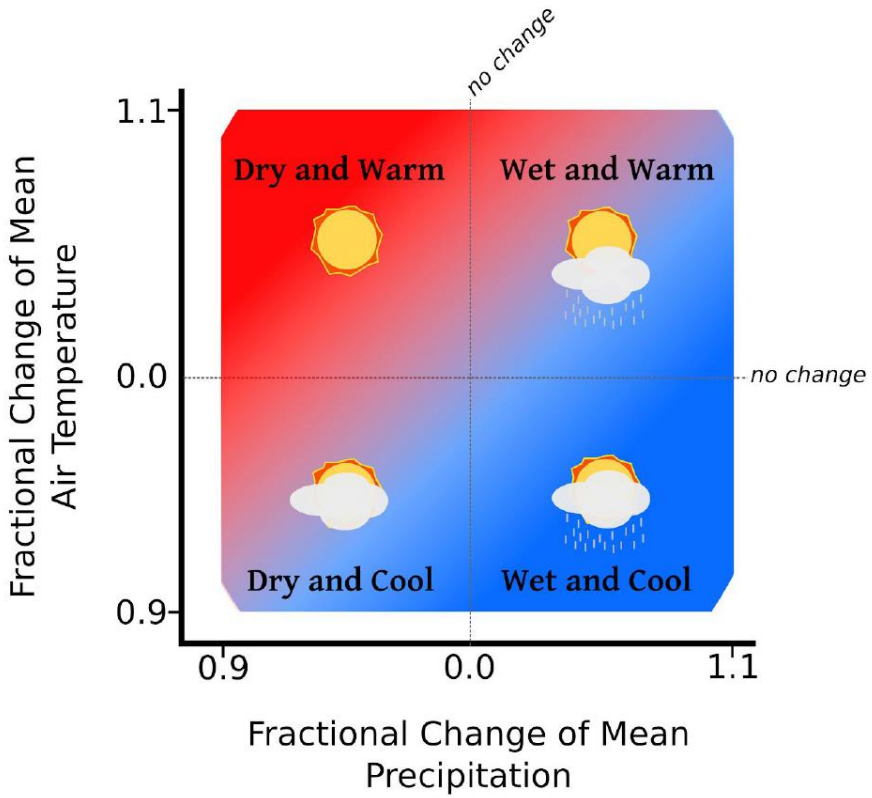
Putting the City's Summer Fish Flow Commitments in Context





Climate Change

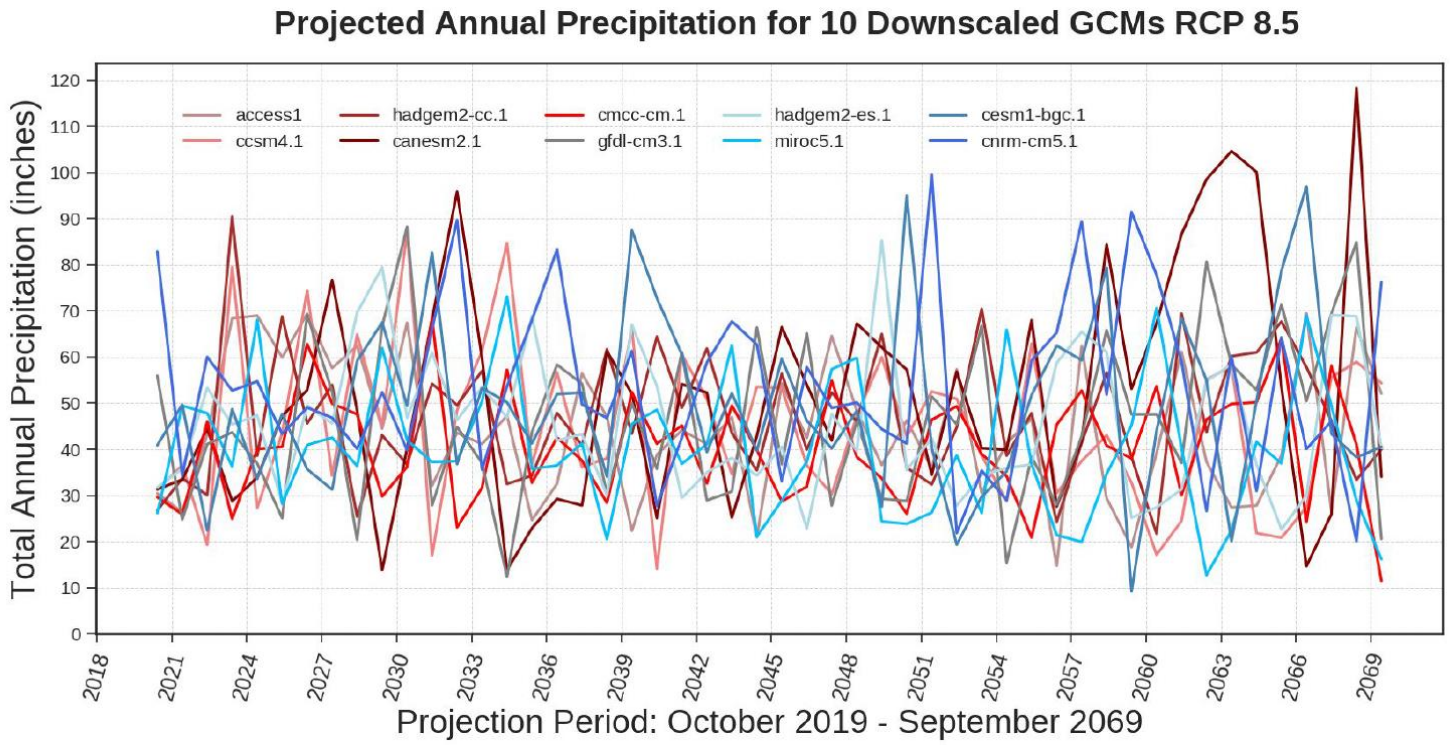
Where Are We Headed by the 22nd Century?



Balance Hydrologics, Inc.

PROJECTED CLIMATE

What do climate projections suggest in terms of the S.C. climate over next 50 years?

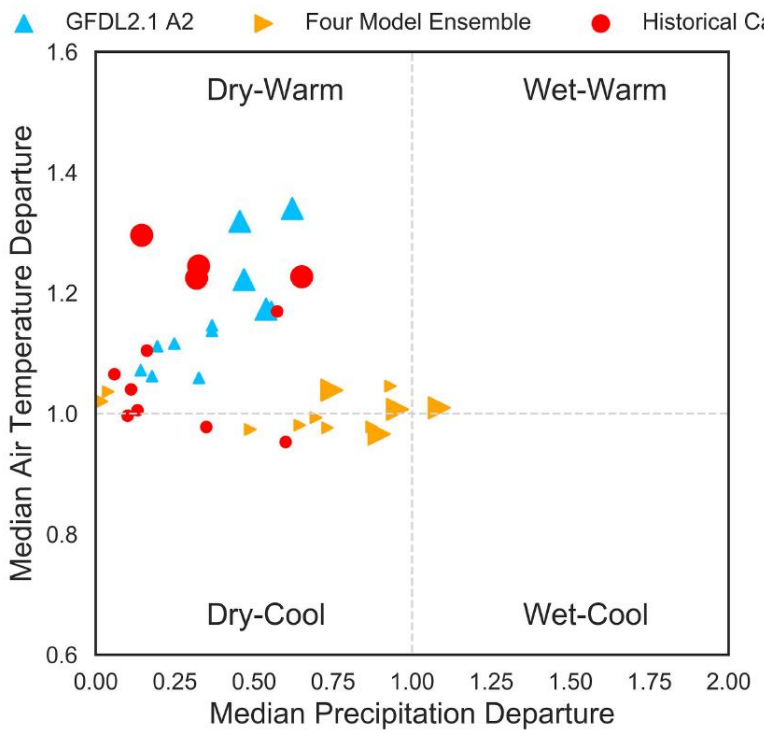


Balance Hydrologics, Inc.

PROJECTED CLIMATE

What do climate projections suggest in terms of the S.C. climate over next 50 years?

Monthly Departure for Climate Change Projections from Maurer et al. (2002) used for Santa Cruz Water Supply Planning



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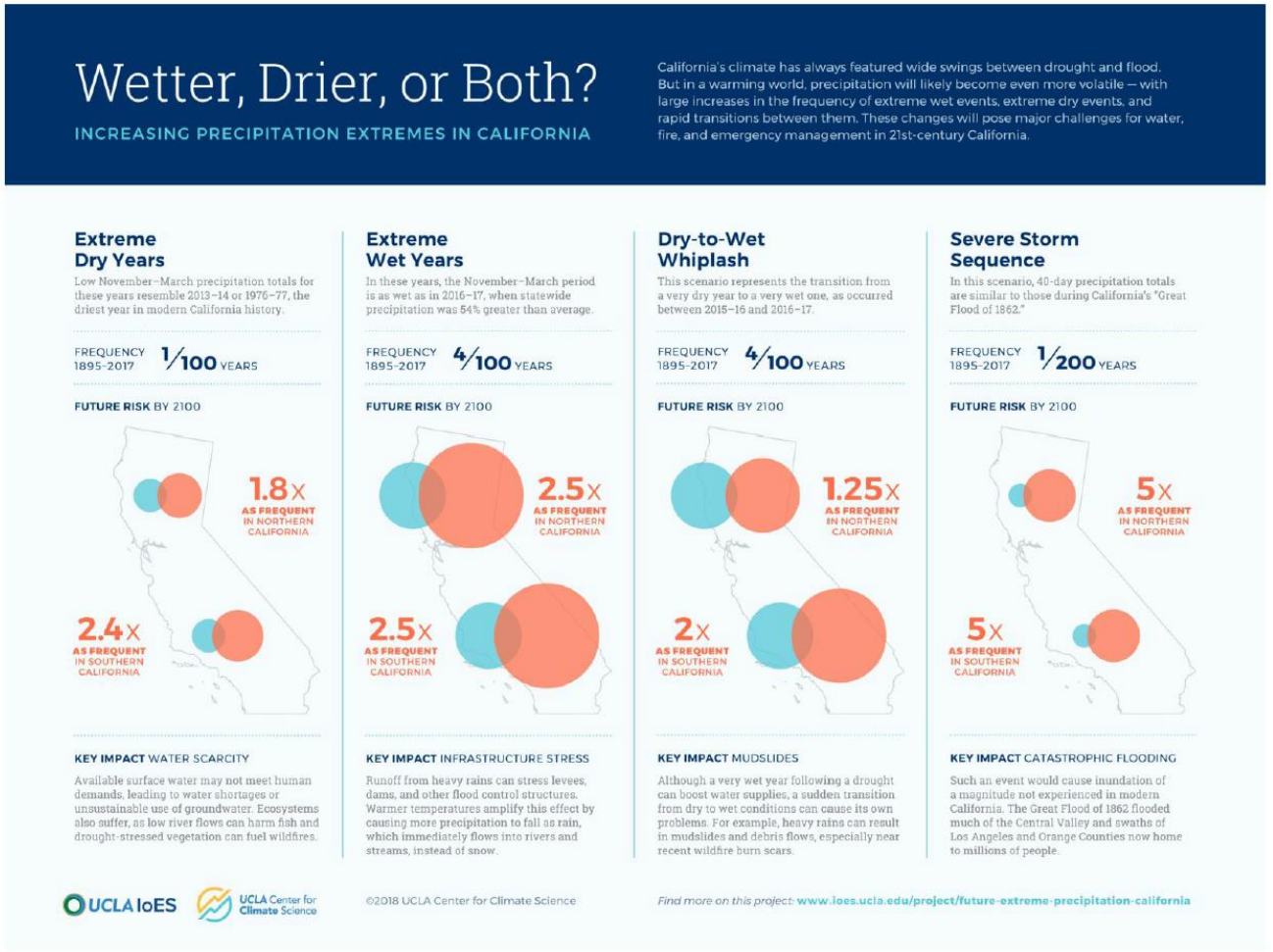
INTRODUCTION

What do climate science and scientists expect for California in the future?



Source: https://www.ioes.ucla.edu/article/study-forecasts-a-severe-climate-future-for-california/

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Our Approach to Water Supply Reliability

14 Citizens of Santa Cruz and Live Oak

Appointed by Council

Representing the Chamber, Desal Alts, Sierra Club, Surfrider, Sustainable Water Coalition, the Water Commission and 3 community-at-large members.

The Water Supply Advisory Committee 2014 - 2015

Not Pictured Peter Beckman and Charlie Keutmann

WSAC's Problem Statement July 2015

- Limited Storage
- Fish Flow Requirements & Potential climate change impacts
- Resulting peak-season gap: 1.2 billion gallons worst case
- Water conservation alone is not enough

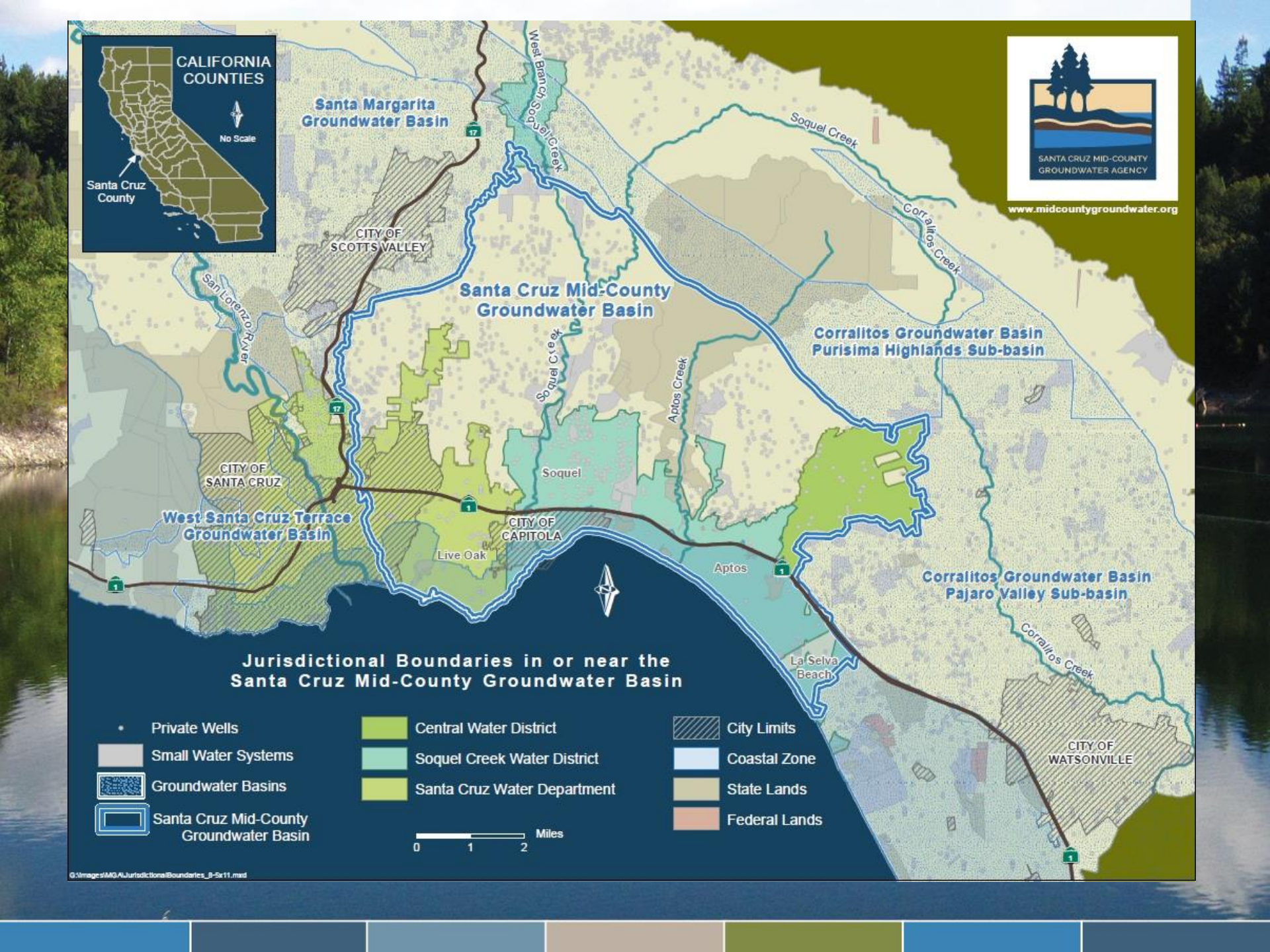
Our Approach To Water Reliability

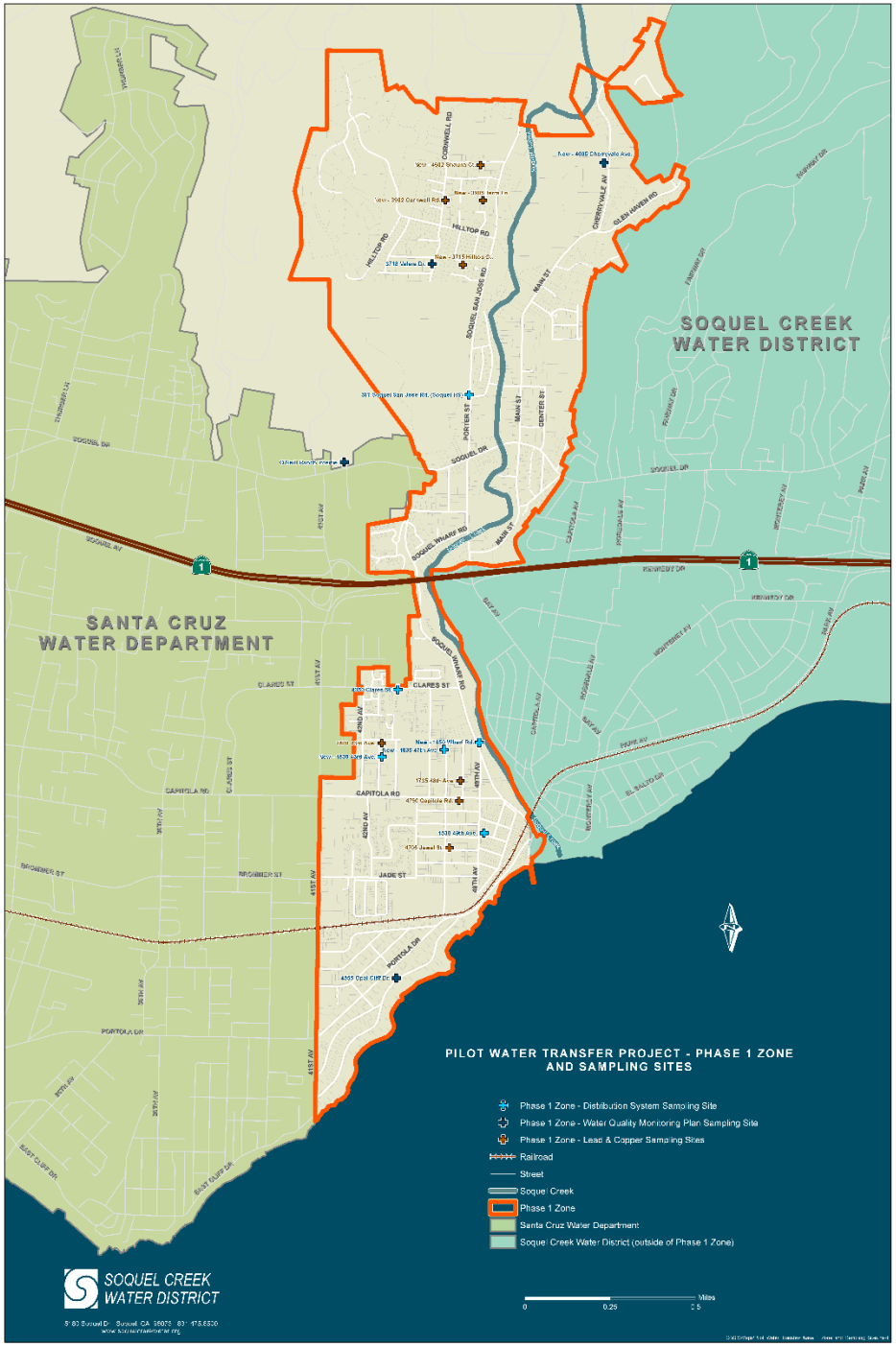
Conservation

Water Transfers

Aquifer Storage & Recovery

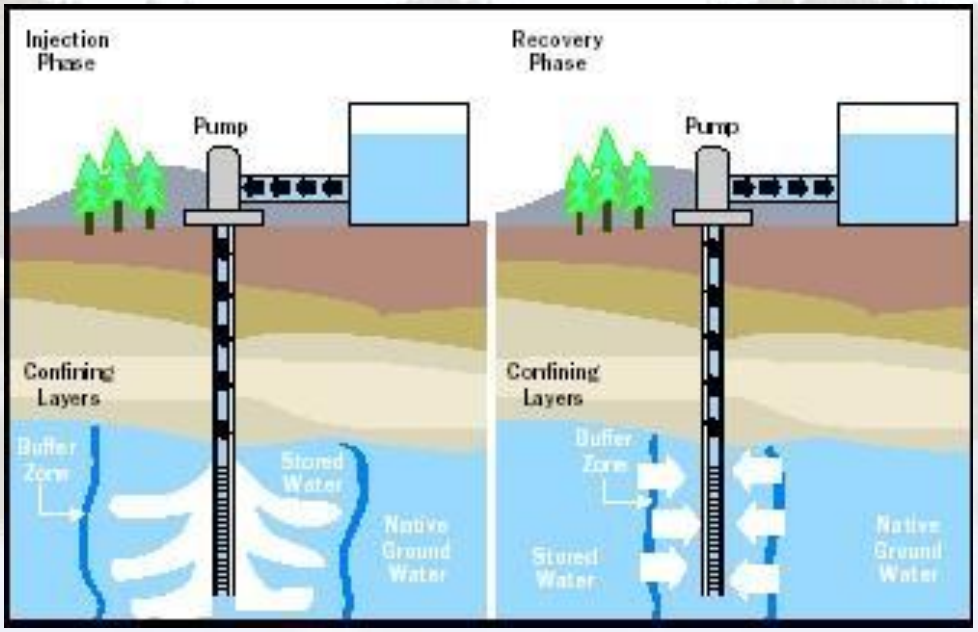
Recycled Water/Desalination


CALIFORNIA COUNTIES
No Scale
Santa Cruz County
SANTA CRUZ MID-COUNTY GROUNDWATER AGENCY
www.midcountygroundwater.org
Santa Margarita Groundwater Basin
West Branch Soquel Creek
Soquel Creek
Corralitos Creek
CITY OF SCOTTS VALLEY
San Lorenzo River
Santa Cruz Mid-County Groundwater Basin
Soquel Creek
Aptos Creek
Corralitos Groundwater Basin Purisima Highlands Sub-basin
CITY OF SANTA CRUZ
Soquel
West Santa Cruz Terrace Groundwater Basin
CITY OF CAPITOLA
Live Oak
Aptos
Corralitos Groundwater Basin Pajaro Valley Sub-basin
Corralitos Creek
La Selva Beach
CITY OF WATSONVILLE
Jurisdictional Boundaries in or near the Santa Cruz Mid-County Groundwater Basin
Private Wells
Small Water Systems
Groundwater Basins
Santa Cruz Mid-County Groundwater Basin
Central Water District
Soquel Creek Water District
Santa Cruz Water Department
City Limits
Coastal Zone
State Lands
Federal Lands
Miles
0
1
2
G:\Images\MGA\JurisdictionalBoundaries_8-5x11.mxd



Water Transfers Pilot Phase 1

Aquifer Storage and Recovery



Evaluate the feasibility of storing water in regional aquifers for future use during drought.

Key Milestones

Implement Conservation Programs	Ongoing
Pilot Test Water Transfers with Neighboring Agencies	2015 - 2020
Pilot Test Aquifer Storage & Recovery	2019 - 2021
Develop Full Scale Project(s)	2021 - 2023

Thank You!

Heidi Luckenbach
Deputy Director/Engineering Manager
Hluckenbach@cityofsantacruz.com
831/420-5214

Our Water, Our Future

City of Santa Cruz Water Department