



Our Integrated Water Plan and the scwd² Desalination Program

scwd² Community Informational Meeting

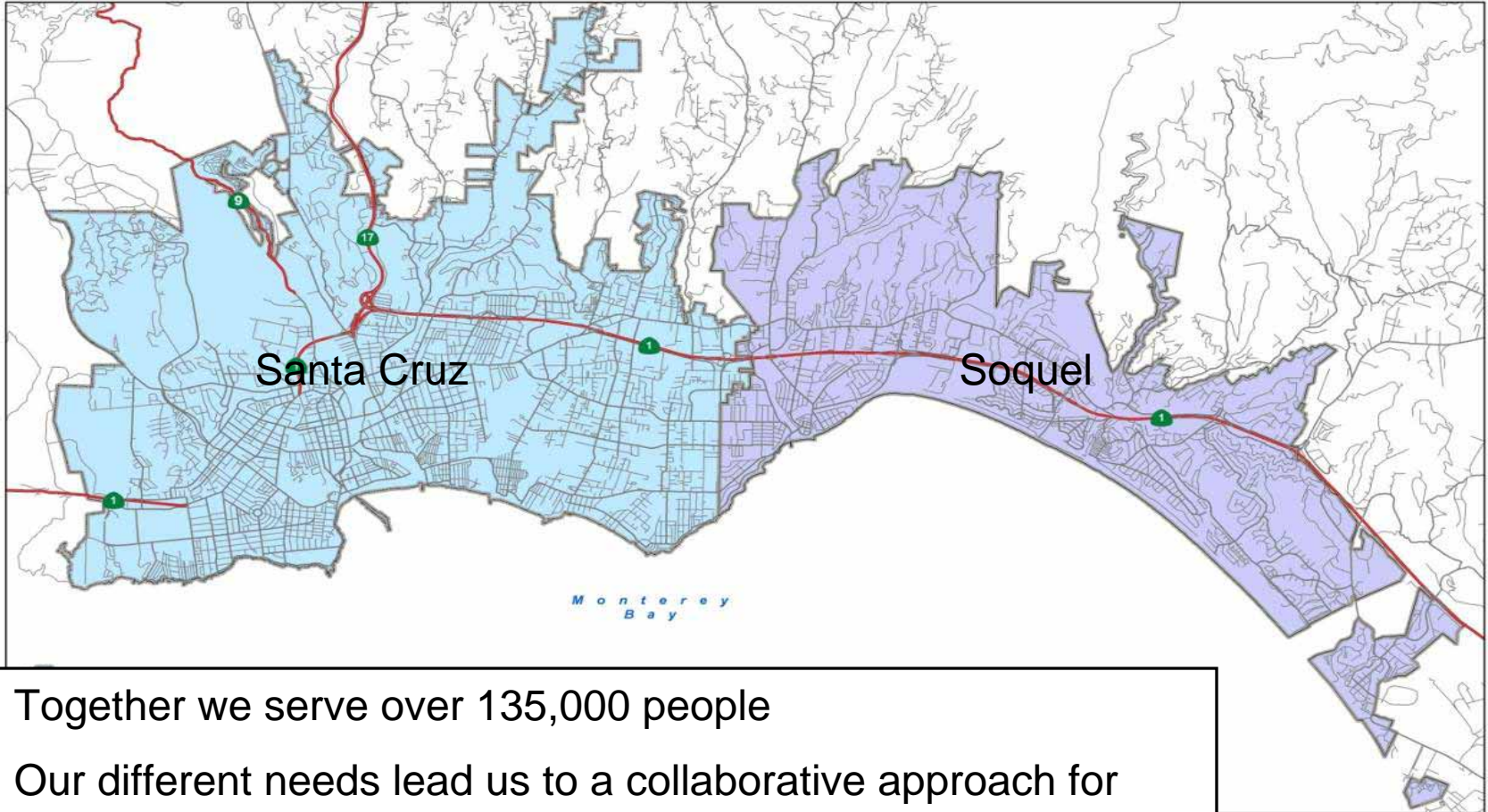
September 23, 2010



Presentation Outline

- 💧 Water Shortage Issues for the City of Santa Cruz and Soquel Creek Water District
- 💧 Our Integrated Water Plan – diversifying our water supply portfolios with sustainable water resources
- 💧 **scwd²** Desalination Program

scwd² is a collaboration between the Santa Cruz Water Dept. & Soquel Creek Water Dist.



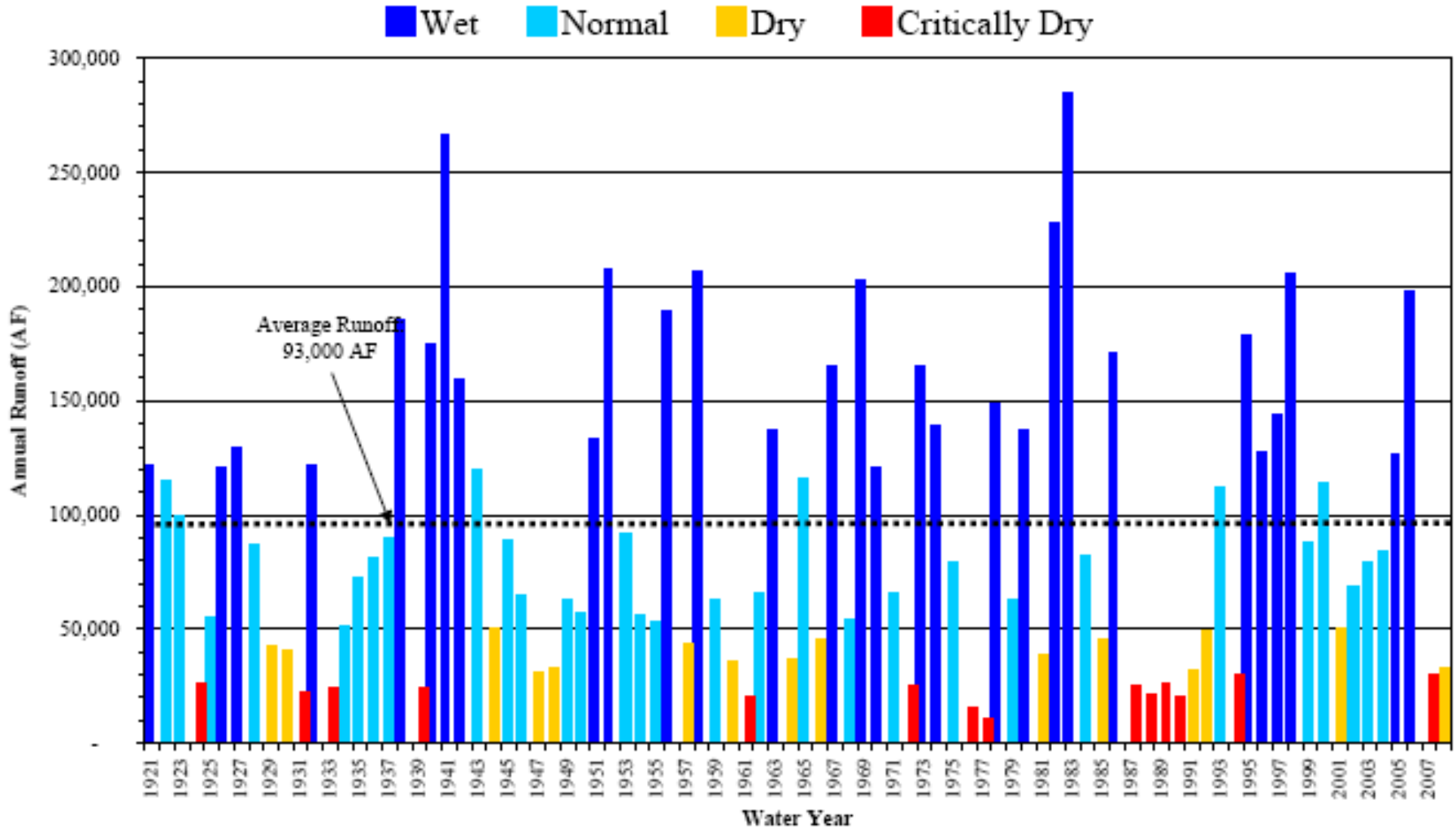
- 💧 Together we serve over 135,000 people
- 💧 Our different needs lead us to a collaborative approach for sustainable water resources

Santa Cruz's water primarily comes from rainfall into local streams and reservoirs





The City's Water Shortage Problem: Lack of Water in a Drought



A drought similar to 1976-77 now, would mean water shortage could approach 45%



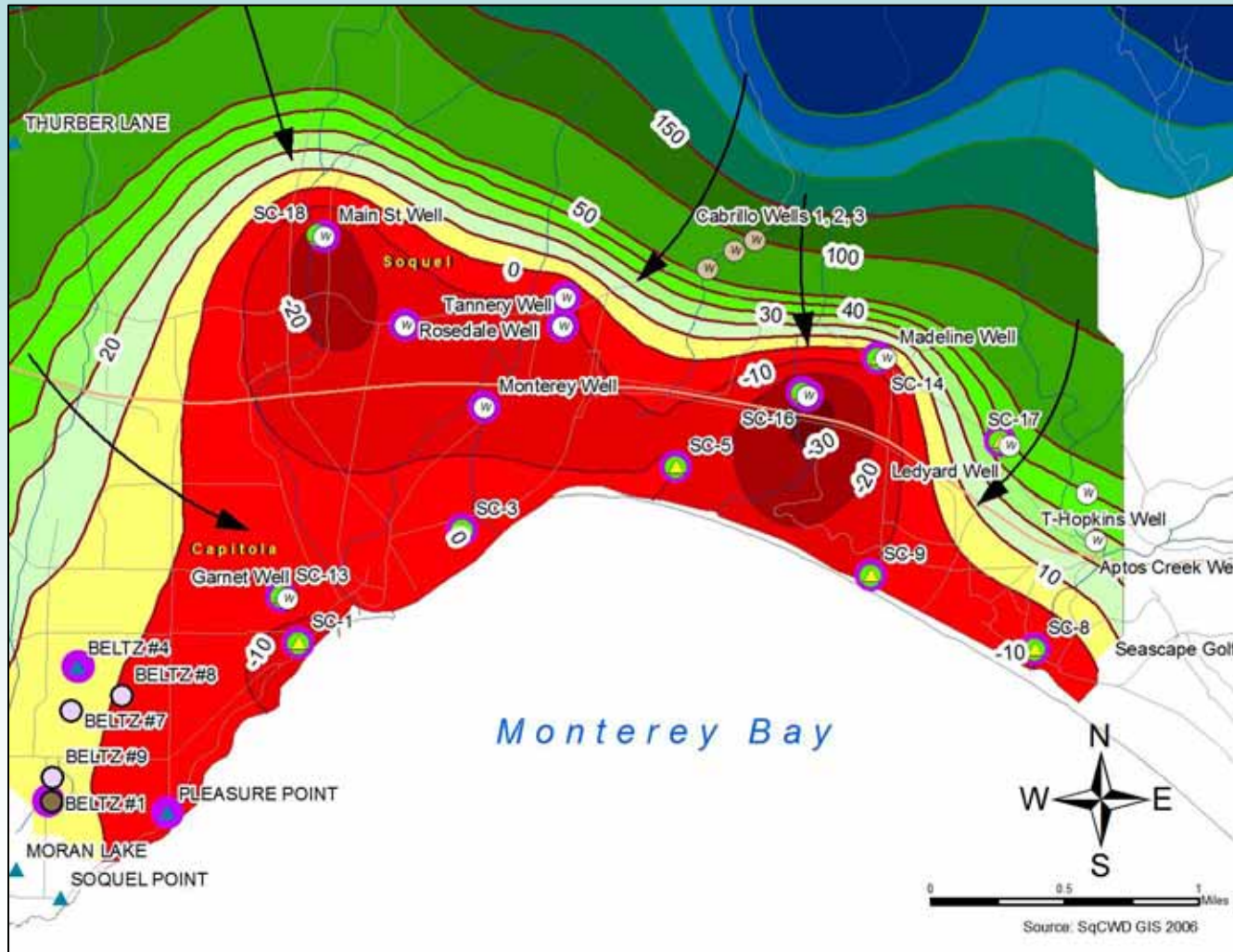
- ◆ Severe water rationing, with penalties for overuse
- ◆ Extreme limits on outdoor use
- ◆ Water rationing for businesses and industry
- ◆ Recreation facilities (parks, pools, sports fields) reduced or shut down

Soquel Creek relies on well-water from local groundwater basins

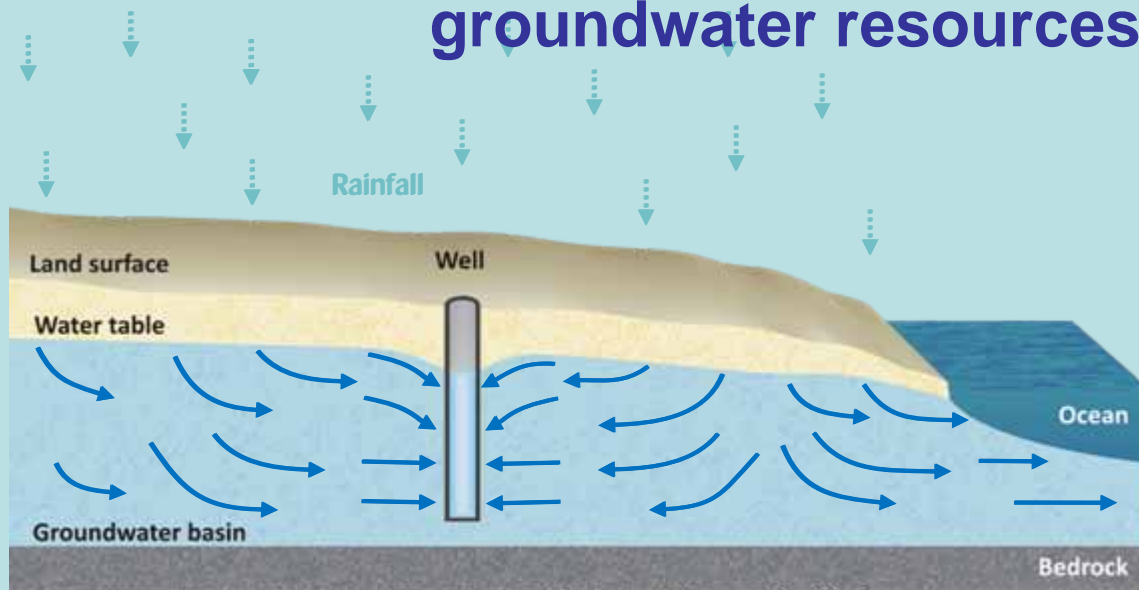


- ◆ Local groundwater (wells) is the only water source
- ◆ No State or regional water
- ◆ No water from creeks or rivers (surface water)

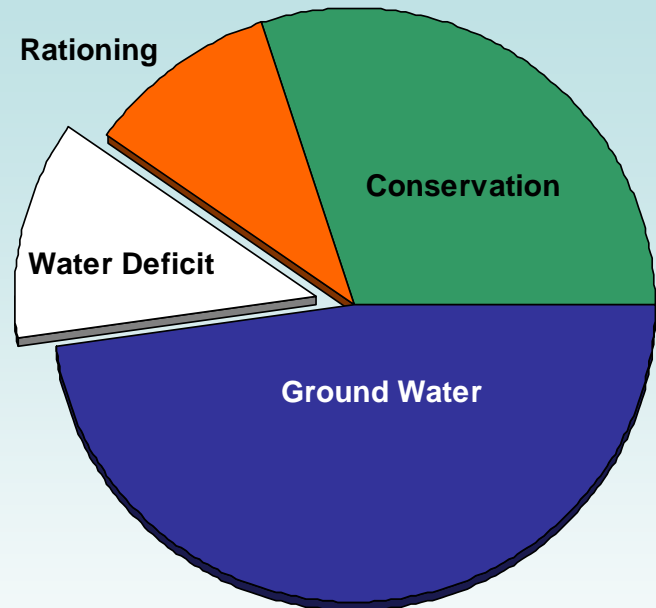
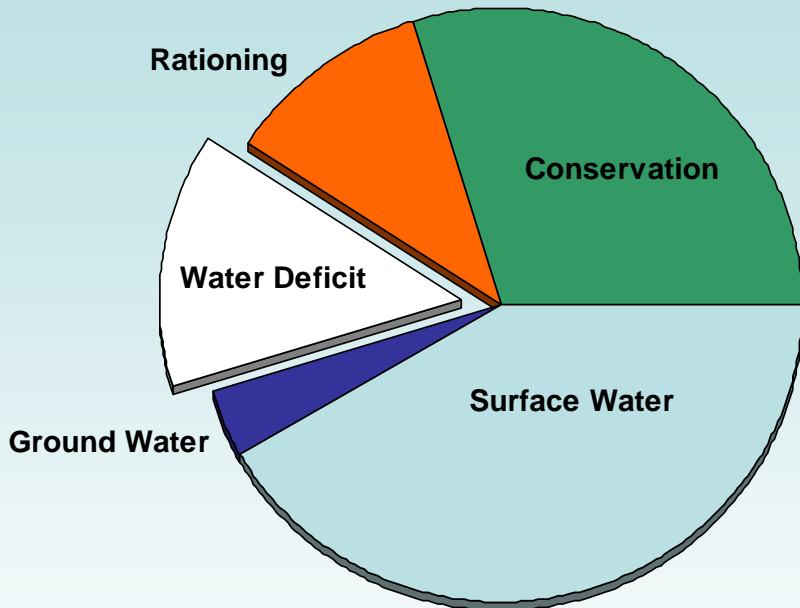
Soquel Creek Water District's Shortage Problem: Groundwater Basin is Overdrafted



Saltwater intrusion would contaminate groundwater resources.



Conservation and rationing alone, will not meet our water needs



Additional water is needed to preserve our current water resources and to sustain our communities

Our Integrated Water Plan

1. Conservation

Continue our active programs to reduce demand

2. Curtailment

Plan on an additional 15% temporary rationing during droughts

3. Recycled Water

Use recycled water for irrigation where feasible

4. Develop Supplemental Supply

Cooperative desalination facility to protect against drought and preserve groundwater resources



Conceptual Design of Proposed SWRO Desal Plant

Location

- Facility would be located in Santa Cruz

Size

- 2.5 million gallons per day (MGD)

Intake

- Open Ocean Intake or Subsurface Wells

Brine Disposal

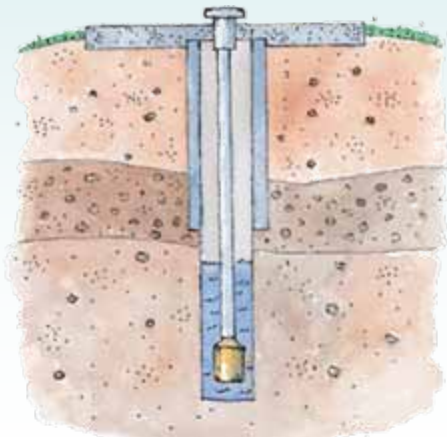
- Through existing wastewater outfall



Sharing Desalinated Water



- Would use 2.5 million gallons per day during drought conditions
- Priority User: May - Oct



- Would use ~1 million gallons per day
- Operate to augment groundwater supplies during non-drought conditions
- Priority User: Nov - Feb

scwd² Task Force is conducting numerous studies to evaluate Desalination

Concern

Study to Address

Water Quality

Pilot testing of technology

Intake

Evaluating screens and beach wells

Energy

Evaluating carbon neutral facility

Brine Discharge

Blend with wastewater plant



Our evaluation process will be careful and thorough.

Overall scwd² Project Schedule and Timeline



How to stay informed about the project

- ◆ E-mail Updates – sign up to receive email notices and project updates
- ◆ Visit our Website: www.scwd2desal.org
- ◆ For more info contact: Desalination Program Coordinator at (831) 420-5214

Questions?