

Local Efforts to Improve Stream Flows and Aquatic Ecosystems

Santa Margarita Groundwater Agency
Water Education Series – Workshop #2

February 9, 2019



Main Messages

- Surface water and groundwater are interconnected;
- The City is dedicating more water to benefit threatened and endangered species – and is the process of formalizing those agreements;
- Water, alone, will not be sufficient;
- Regional collaboration among surface and groundwater agencies would facilitate streamflow improvements and basin recovery;
- Increased flexibility with use of existing water rights is necessary to meet long-term environmental and public water supply goals;
- Informed involvement is critical to achieving goals.



Statewide Perspective



Bay Delta plan

The California Water Board's final Bay Delta plan, released in early July, proposes that dams release 40 percent of the natural flows in the Stanislaus, Tuolumne and Merced rivers to benefit the Sacramento-San Joaquin River Delta. There have been strong opinions supporting and opposing the plans.



Potential detriments:

- **Economy:** \$5.6 billion in annual economic losses
- **Agriculture:** 210,000 acres of land fallowed
- **Employment:** 6,500 job losses
- **Public services:** Lost revenue from declining land values

Potential benefits:

- **Delta:** Better water quality
- **Fish:** Restored salmon, steelhead trout fisheries
- **Farming:** Flush harmful salts that threaten Delta growers

Sources: Stanislaus County Agricultural Commissioner's Office; State Water Resources Control Board

LAURIE MCADAM THE MODESTO BEE



Background on City of Santa Cruz Water System

- ◆ Drinking water sources are primarily local surface water;
- ◆ System serves approximately 95,000 people;
- ◆ Water sources are extremely variable and provide habitat for several “special-status” species;
- ◆ Per capita water use among the lowest in the state;
- ◆ Supply deficit in worst case, peak season shortage is approximately 1.2 billion gallons;

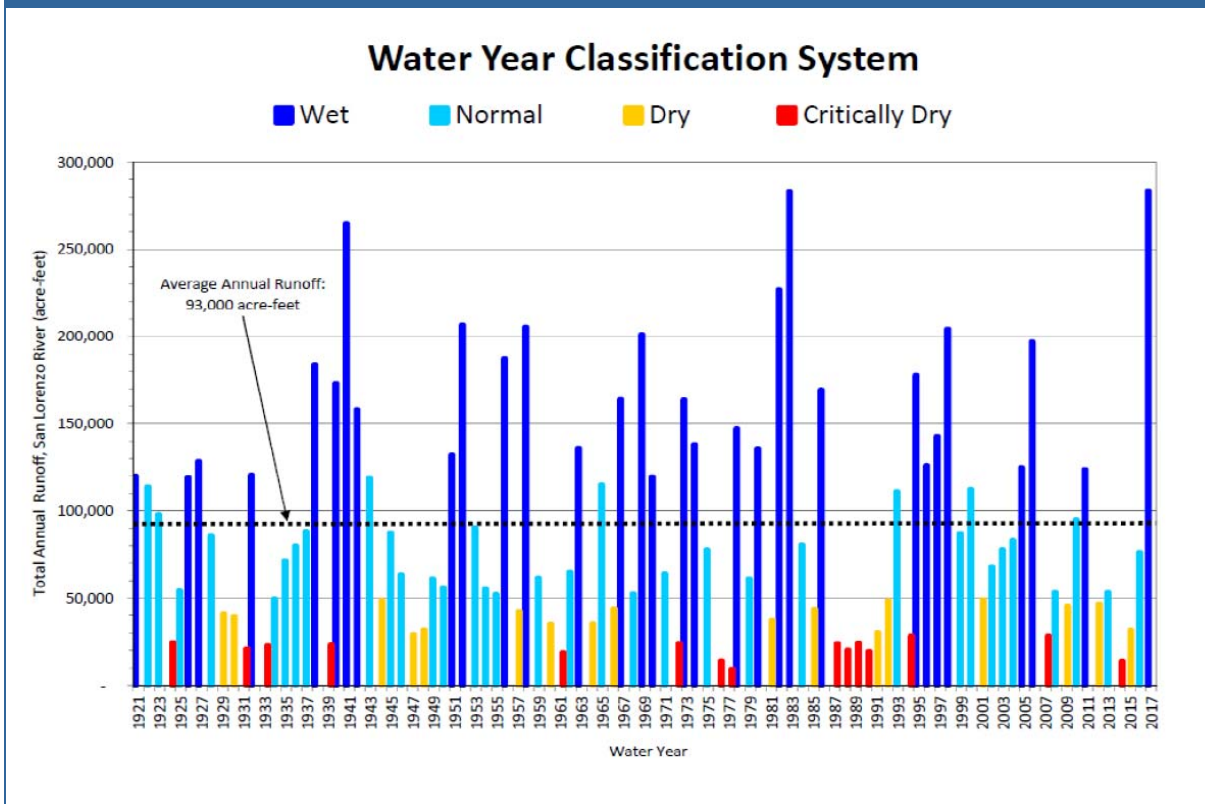


Existing City of Santa Cruz Water Facilities



Santa Cruz' Water Supply Variability

- 💧 Limited storage
- 💧 Fish flow requirements
- 💧 Highly variable supply
- 💧 Potential for seawater intrusion into local groundwater
- 💧 Climate change

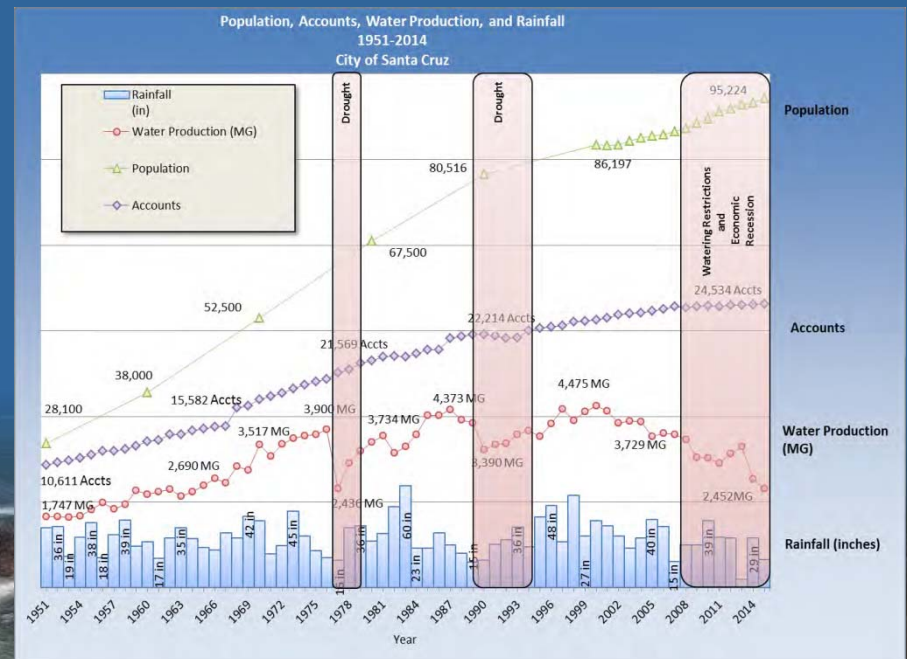
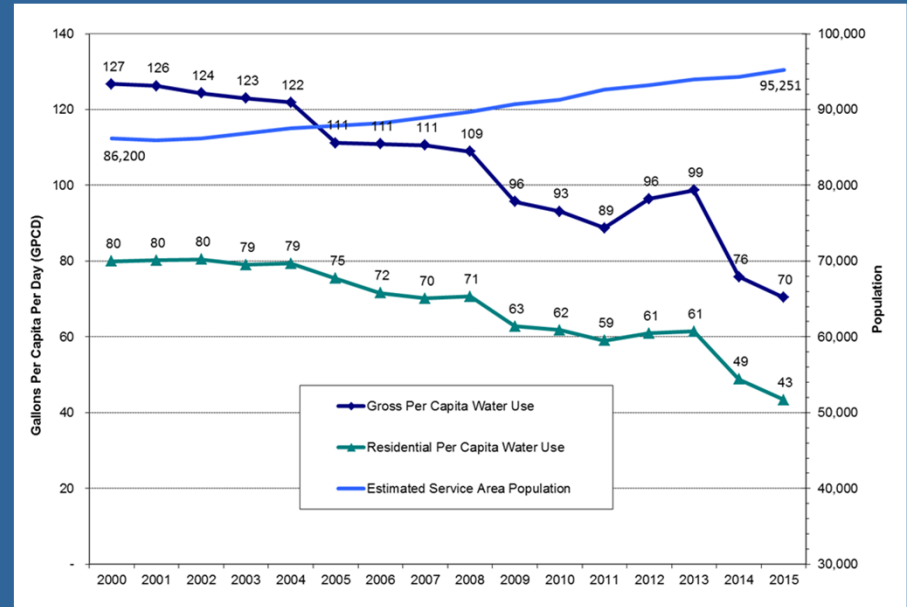


Of these, LIMITED STORAGE is the most significant



Customer Usage Trends

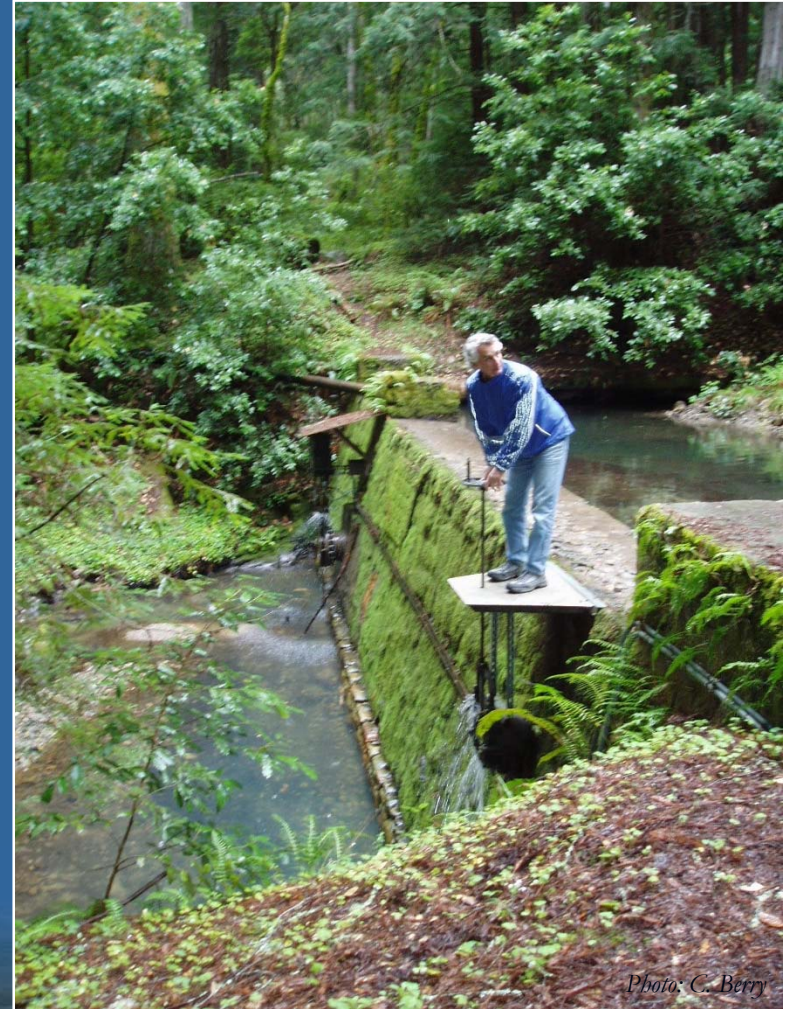
- Among the lowest per capita water use in the state
- Highest annual consumption was in the late 1990s
- Active conservation program in place for decades, includes both regulatory, voluntary and incentive programs
- Water rates collect most revenues through volume charges to further incentivize conservation



Scope of City Conservation Actions:

The ESA law requires agencies to “avoid, minimize and mitigate impacts to the maximum extent practicable.”

- ◆ Avoidance and Minimization
 - ◆ Instream Flow Improvements
 - ◆ Construction/Maintenance best practices, etc.
- ◆ Compensation for Remaining Biological Effects
 - ◆ Non-Flow Conservation Fund



The first time flow was released to Laguna Creek for fish from the City's water diversion...



HCP

“Covered Activities”

- 💧 Water Diversions
- 💧 Routine Operations
- 💧 Pipeline Repair and Maintenance
- 💧 Open Space Management



Top: Felton Diversion, Bottom: North Coast Pipeline

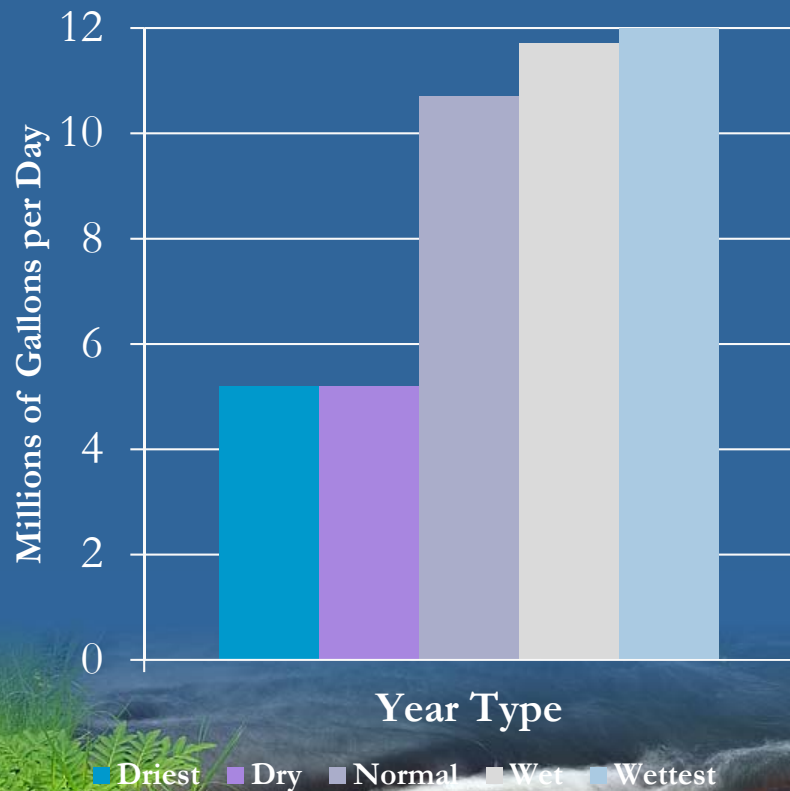
Water Rights Project - *Project Components*

- 💧 Adding instream flow requirements to all of the City's existing rights for the benefit of aquatic species;
- 💧 Expanding and making consistent the places of use for all water rights to support potential future conjunctive use of surface water and groundwater resources in mid and northern Santa Cruz County;
- 💧 Adding direct diversion rights for Newell Creek and the Felton Diversion and adding flexibility in the points of diversion for the San Lorenzo River rights;
- 💧 Extending the timeline for perfection of the Felton water rights.

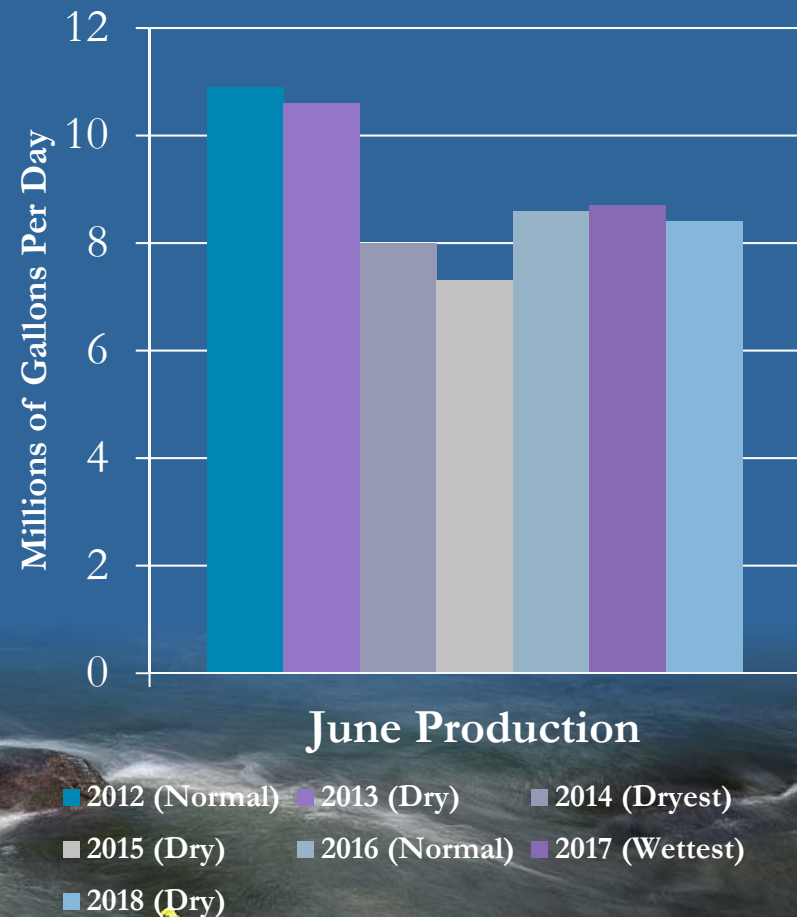


Putting the City's Summer Fish Flow Commitments in Context

June Fish Flow Bypassed



June Water System Production



Related Efforts – Habitat Restoration

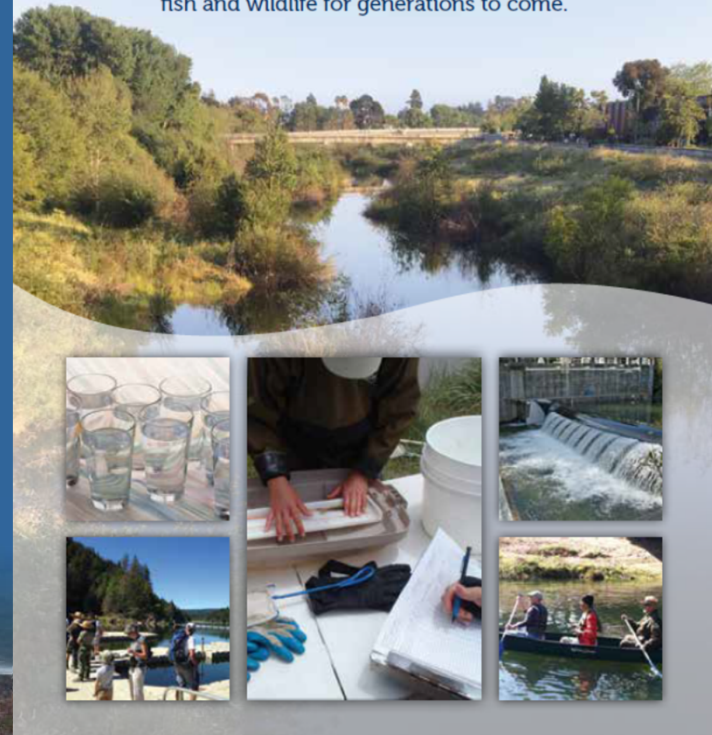
San Lorenzo River 2025

- 💧 Partnership effort to improve habitat conditions to complement additional flows
- 💧 Resource Conservation District, Coastal Watershed Council, City and County
- 💧 Hosted several tours, successful grant application, riparian conservation strategy framework

San Lorenzo River 2025 Partnership

Santa Cruz depends on The San Lorenzo River.
It is the lifeblood of our community. When the
San Lorenzo is at risk, we are all at risk.

IF WE ACT NOW we can keep the San Lorenzo River
watershed viable for our communities and our native
fish and wildlife for generations to come.



Related Efforts – Habitat Restoration



Related Efforts – Lagoon Management

Lagoon Management

- ◆ Improve water quality conditions in the SLR lagoon and deter artificial breaching activities
- ◆ Successful grant application to the Wildlife Conservation Board in partnership with the RCD
- ◆ Project re-design and grants re-submittal



Related Efforts – Watershed Management

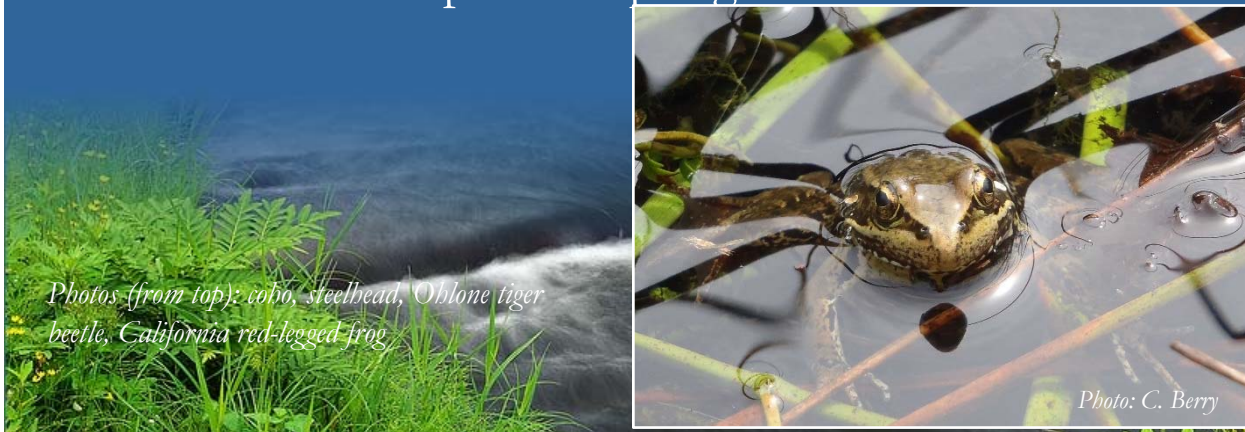
Example Activities

- 💧 Drinking water sanitary survey
- 💧 Source water protection – Karst Protection w/ SLV Water
- 💧 Participation on the Santa Cruz Fire Safe Council
- 💧 Fuel load reduction efforts / road and watershed management



High Priority Species Conservation

- Coho, Steelhead, Ohlone Tiger Beetle, Mt. Hermon June Beetle, California red-legged frog
- City Habitat Conservation Plans and Actions:
 - Existing Mount Hermon June Beetle “low effect” HCP currently being implemented
 - Multi-species HCP currently in final review by Ventura USFWS office
 - Administrative draft Anadromous Salmonid HCP will be complete in spring



Photos (from top): coho, steelhead, Ohlone tiger beetle, California red-legged frog

Habitat Conservation Plans

What is a Habitat Conservation Plan (HCP)?

- A HCP is used by an agency such as a water utility to develop a long term approach to complying with the federal Endangered Species Act requirements.
- Describes effects of covered activities that may result in “take” and how those effects **will be tracked, avoided, minimized and mitigated**
- May include “special-status” listed species or unlisted species likely to be listed under the Endangered Species Act in the future.
- Demonstrates funding assurances for plan implementation
- When approved, the plan provides the agency with a long term Incidental Take Permit for their operations under the Endangered Species Act

