

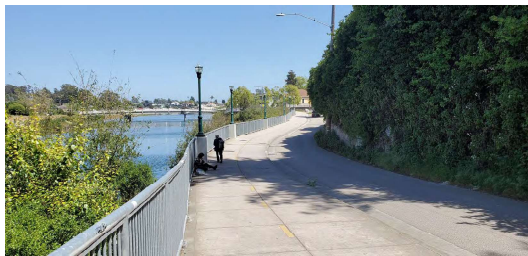
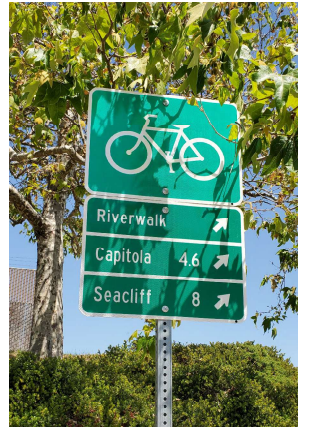
# SUSTAINABILITY & RESILIENCY



# Our Three “Big Ideas” Regarding Sustainability and Resiliency

1. New development can incorporate mitigation measures to increase resiliency of the project area and help protect neighborhoods beyond.
2. New development is very water efficient. The City’s Water Dept has planned for growth and continues to look for ways to improve the City’s water storage despite climate change threats to supply.
3. Protecting and maintaining the City’s flood infrastructure (River Levee, pump station #1) is an important component of any plan for the future of this area.





DOWNTOWN PLAN EXPANSION

SAN LORENZO RIVER

# A Brief History of WSAC

## 2014

In 2014 the Council appointed 14 applicants to the city's Water Supply Advisory Committee (WSAC). The goal for the committee was to come up with solutions to address the City's water shortages and to increase supply. Committee members represented broad community interests such as environmental, commerce, development, education, and so on.

## Water Supply Convention

Many members of the community had ideas for how to increase supply. One of the first orders of business for the WSAC was to hold a "science fair" style event for residents to showcase their ideas. Over 100 ideas were submitted and over 40 met criteria to be studied in depth by WSAC.

## WSAC learns the system

WSAC members did a deep dive into the City's water system, learning about supply sources, how the system operates, regulatory and environmental requirements, and the challenges in operating a system in the face of climate change.

## Identifying the problem

After many months of studying the water system and reviewing climate change models, the WSAC identified the water supply problem as being a lack of water storage exacerbated by climate change.

## The problem

The City has only one drinking water reservoir, Loch Lomond, which holds about a year's worth of water when full. During years with normal precipitation, the reservoir fills annually and there are no shortages. Climate change has altered annual precipitation patterns so significantly that Loch Lomond no longer reliably fills, and the City has no other means of significant storage.

## WSAC recommendations

The WSAC recommended using local depleted aquifers to store excess winter water during years with "average" rainfall. They also recommended maximizing water conservation practices as well as adding new sources of water, such as purified recycled or desalinated water.

## 2015 to Present

The Water Department has studied all recommendations concurrently for feasibility, yield, cost, environmental footprint and climate-change related reliability. These studies have included in-depth analysis, pilot testing, and full testing. We've petitioned the State to change our water rights; we've codified our commitment to fish flows with regulators.



**Our  
Water,  
Our  
Future**



# What's changed since WSAC?

## Ongoing record low water use

WSAC work occurred during significant drought and mandatory water rationing. Under rationing, per person use dropped from an average of 67 gallons per day (in 2014) to 48 gallons per person, per day – some of the lowest use in the state. Since rationing was rescinded in 2016, use has not rebounded and current use is 47 gallons per person per day. In fact Santa Cruz has already met and exceeded the WSAC goals for maximizing conservation.

## Impacts of climate change

We're experiencing more extreme weather events with longer dry periods and atmospheric rivers, both of which affect our system's reliability.

## Significant upgrades to water system

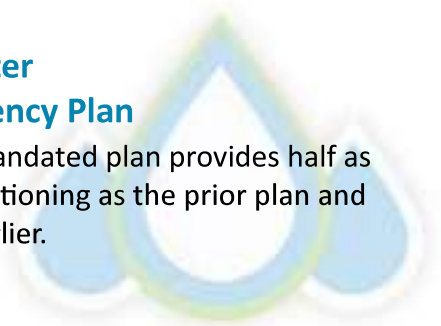
We're replacing or rehabilitating backbone infrastructure to help ensure that our system is more reliable in extreme weather events.

## State involvement with water

Since the WSAC completed its work in 2015, the State has become much more hands-on with water use regulations and in promoting new technologies for water supply.

## New updated Water Shortage Contingency Plan

The updated state-mandated plan provides half as much water during rationing as the prior plan and affects commerce earlier.



## WSAC by the numbers

**14 MEMBERS** ♦ **ABOUT 250 HOURS OF PUBLIC MEETINGS** ♦ **18 MONTHS OF STUDY** ♦ **\$2 MILLION COST**





## **Frequently Asked Questions about Growth and Development**

Water is a vital element of sustainable development in our community. It must be managed proactively and strategically to ensure there's enough water for today, without compromising the ability of future generations to meet their needs.

### **If the City stopped growing, would we still have water shortages?**

Yes. Santa Cruz has had water shortages for the last several decades, driven by droughts. Yet even with 30% growth since the 1980s, we're using as much water now as we were then, thanks to conservation efforts including plumbing code changes and water efficient appliances and landscapes. Our supply problem has been caused by cyclical shortfalls in rain, exacerbated by a long-term lack of ability to capture and store rainfall. Climate change is now making this problem much worse, with so-called "normal" rainfall years a thing of the past.

### **How can the City continue to allow growth when we know there will be water shortages?**

Thanks to climate change, our water supply problem must be solved regardless of whether or not the City grows. With changes to our climate now happening quickly, our supply problem needs to be solved for today's needs as well as tomorrows'.

### **Why not eliminate growth and simply conserve more water to get us through shortages?**

Our reality is that even if the population of Santa Cruz could be frozen in time, with not a single person added, further conservation won't eliminate water shortages. The difficulties of climate change demand that we increase our water supply.

### **What's the connection between climate change, water supply, and growth?**

Climate change is increasing the frequency of our water shortages and decreasing the reliability of our supply - regardless of growth. It necessitates the need to add to our supply to ensure there is water for today's needs, as well as to support the needs of tomorrow's community. The size and impact of this

challenge is essentially the same, whether or not current growth projections are included.

### Why not just stop development until the water supply problem is solved?

Projected city growth - meaning state-assigned growth and additional housing requirements - is included in our water supply and demand management planning. We've planned for growth. In addition, much of the development in Santa Cruz replaces older, inefficient buildings, with new buildings containing efficient plumbing and fixtures. Many new higher-density buildings use much less water than their lower-density predecessors.

### When you say you've planned for growth, how do you know how much growth to plan for?

The California Department of Water Resources has specific requirements and methodologies for water agencies to use to determine how much new housing and population growth is expected to occur over time. To make our most recent growth projection, we used existing references such as general plans, long range development plans, and regional growth projections issued by the Association of Monterey Bay Area Governments to forecast expected increases in local housing and population within our service area.

