Welcome
The meeting will begin at 5:00 p.m.

OUR WATER FUTURE
Water Supply Alternatives Plan
srcity.org/OurWaterFuture

Community Workshop #1
October 26, 2022
OUR WATER FUTURE
Water Supply Alternatives Plan

Welcome

AGENDA
• Background
• Project Overview
• Project Objectives
• Next Step
• Questions & Answers
Our Water Future: Background

Colin Close
Senior Water Resources Planner
Santa Rosa Water
Santa Rosa

- 176,000 residents
- 6.3 billion gallons of water/year for urban uses (not agriculture)
- 3 water sources
- 23 Reservoirs
- 600 miles of drinking water pipe
- 600 miles of sanitary sewer pipe
- 7 billion gallons of wastewater recycled and used regionally/year
Santa Rosa’s Water Sources
Normal Water Years (average rainfall)

9.48 billion gallons - Sonoma Water
0.75 billion gallons - City Wells
0.05 billion gallons - City Recycled Water
10.28 billion gallons (31,540 acre-feet)

Lake Sonoma
2020 Water Use in Santa Rosa
6.3 billion gallons (19,387 acre-feet)

WATER USE

Residential 68%
Commercial, Institutional, Industrial, and CII Irrig 24%
Non-revenue 8%

WATER SOURCES

Sonoma Water 93%
City wells 6%
Recycled 1%
Santa Rosa’s total water consumption has decreased. 2020 water use was 14% less than 1990 and 20% less than 2004.
Santa Rosa has improved water use efficiency.
(GPCD = gallons per capita per day)

1990 - 2020
Population up 57%
GPCD down 45%
Over 7 decades of helping Santa Rosa use water wisely.

- **1940s**: Meters for all services
- **1959**: Connect to Sonoma Water
- **1970s**: Urban Water Management Plan
- **1983**: First water conservation programs. Recycled water for agriculture.
- **1991**: Water Conservation Coordinator
- **1992**: Water Shortage Contingency Plan
- **1993**: Water Efficient Landscape Ordinance
- **1995**: Water Efficient Building Codes
- **1999**: Water Waste Ordinance
- **2003**: Two wells returned to production
- **2007**: Geysers recycled water use
- **2009**: Meters upgraded to AMI
- **2016-2019**: Urban Recycled Water Use Pilot Project
30+ years of water efficiency staff and programs.

srcity.org/WaterSmart

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>56,000+</td>
<td>Toilets replaced</td>
</tr>
<tr>
<td>4.0</td>
<td>Million square feet of turf converted</td>
</tr>
<tr>
<td>9</td>
<td>Types of rebate &amp; incentive programs</td>
</tr>
<tr>
<td>10</td>
<td>Additional ways we help customers</td>
</tr>
<tr>
<td>2.3</td>
<td>Billion gallons less water use per year</td>
</tr>
</tbody>
</table>
Over 25 years of water efficient building codes and state regulations
(reduced annual water demand by about 2.5 billion gallons)

Standards for new development
• Must be at least 20% more efficient than older homes
• Must meet building codes and state regulations for water efficient plumbing fixtures, appliances, & landscaping

Water demand for new dwellings
• 500 Single Family Dwellings
  Less than 0.5 percent (less than half of 1%) of Santa Rosa’s water demand.
• 500 Multi-Family Dwellings
  0.3 percent (less than one third of 1%) of water demand

Water offsets during severe shortages
• During severe drought, new developments must offset their demand
  • Must have a net-zero impact on water demand during shortages of 30% or greater
In average rainfall years, water supply meets the needs of our growing community through 2045 and beyond.
Lake Sonoma Water Supply Storage

- 30-yr avg (1992-2021)
- Lowest 1992-2020
- 100,000 AF
- Recent Actual

Acre-Feet

Water Year 2019-20
Water Year 2020-21
Water Year 2021-22
Severe shortages (30% or greater) would occur if there was approximately one year or less of water supply in Lake Sonoma.
Water Supply Alternatives Plan

**Context** – Adding to existing planning efforts with a focus on resiliency.

**Purpose** - Enhance Santa Rosa’s water supply to reduce risk of shortages due to emergencies and droughts.

**Approach** - Study the feasibility of new water supply options and develop a road map for increasing resiliency and reliability.
Questions the Project Will Address

• How much new water supply is appropriate to mitigate the risk of shortages?
• Which supply options should be studied?
• What criteria should be used to assess each supply option?
• Which mix(es) of options will help us meet the local water supply goals?
• What is the most reasonable path forward?
Requested Scope of Work

ENGAGE STAKEHOLDERS
• Get input from a wide range of stakeholders, including our community.

SET OBJECTIVES
• Set water supply goals, identify potential water supply options, establish criteria and study methods.

STUDY SUPPLY OPTIONS
• Study feasibility of potential water supply options.
• Develop and assess portfolios of feasible options.

DEVELOP A PLAN
• Develop long-term plan for achieving supply goals.
Water Supply Alternatives Plan

Katie Cole
Project Manager
Woodard & Curran
Project Overview

What work is being completed?
How long will it take?
Who’s involved?
Project Overview

Establish water supply goals (Late 2022)

Identify supply options and evaluation criteria (Late 2022)

Determine feasibility of supply options (Early 2023)

Evaluate portfolios of supply options (Early 2023)

Prepare Water Supply Alternatives Plan (Summer 2023)
We are Seeking Input from a Wide Range of Interests

Water Team
- City staff and system operators
- Subject matter experts

Stakeholder Group
- Water users
- Environmental interests
- Business interests
- Community interests

Board of Public Utilities
- Oversees Santa Rosa Water
- Appointed by Council

Santa Rosa City Council
- Elected officials

The Community
- You!
Community Meetings

• To educate the community and invite their questions, comments, and suggestions
• Four meetings (Oct 26, Jan 25, & May, Aug)
• Live Spanish interpretation
• 1st meeting: Oct 26th from 5-7 p.m., via Zoom
  • Background info, project purpose & approach, draft water supply goals, proposed supply options to be studied, and criteria for studying the options.

More information & registration link
srcity.org/OurWaterFuture
Goals, Supply Options, and Criteria

What are Santa Rosa's water supply reliability goals?
What water supply options can be used to meet our goals?
Which criteria should be used to evaluate water supply options?
Initial Water Supply Goals
Share your thoughts! Poll #1

How important is it for Santa Rosa to increase its water supply reliability for emergencies and droughts?

A. Very Important
B. Somewhat Important
C. No Opinion
D. Not Very Important
E. Not at all important
Key Question: How much is enough?

What is the right goal for Santa Rosa?

How much water supply resiliency should Santa Rosa develop to reduce the impacts of ...
  • More frequent droughts?
  • More severe droughts?
  • Sudden emergency events?

The goal will help define the size and types of projects needed to reduce the risk of shortages from drought or emergencies.
How much resiliency is “enough”? 

More water, more resiliency, and higher cost

Minimal conservation needed

Less conservation needed during severe droughts

Less conservation needed during “average” droughts

Meet basic health & safety needs and basic needs for businesses during emergencies

Meet basic health & safety needs of residents during emergencies

Less water, less resiliency, and lower cost
Scenarios

How much is enough?

Scenario A - $$$$$
- Minimal conservation required in severe droughts (5-10% reduction needed), and most water supply in sudden emergencies (20-22 gallons per person per day).

Scenario B - $$
- Some conservation required in severe droughts (10-15% reduction needed), and moderate water supply in sudden emergencies (16-19 gallons per person per day).

Scenario C - $$
- Moderate conservation required in severe droughts (15-20% reduction needed), and minimal water supply in sudden emergencies (13-15 gallons per person per day).

Scenario D - $
- Significant conservation required in severe droughts (20-25% reduction needed), and very minimal water supply available in sudden emergencies (10-12 gallons per person per day).
Balancing Volume of Water vs. Cost

The study will help define cost, but first we need to define the supply goal.

<table>
<thead>
<tr>
<th>Volume of Water</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower</td>
<td>Lower</td>
</tr>
<tr>
<td>Higher</td>
<td>Higher</td>
</tr>
</tbody>
</table>
Share your thoughts! Poll #2

In your opinion, Santa Rosa should explore options for potential new water supplies to provide water so that ...

A. Minimal conservation needed in droughts (5-10%); significant supply available in sudden emergencies (20-22 gpcd).

B. Some conservation needed in droughts (10-15%); moderate supply available in sudden emergencies (16-19 gpcd).

C. More conservation needed in droughts (15-20%); less supply available in sudden emergencies (13-15 gpcd).

D. Significant conservation in droughts (20-25%); minimal supply available in sudden emergencies (10-12 gpcd).
Preliminary Water Supply Options
Preliminary Water Supply Options

• Where might new water supplies come from?
  • Groundwater
  • Purified recycled water
  • Desalination
  • Surface water
  • Conservation & efficiency
Groundwater

• What is groundwater?
  • Water held underground in the soil or in pores and crevices in and between rocks.

• What types of projects might this entail?
  • Construct new wells to extract groundwater
  • Construct new wells that can both extract groundwater and store excess water (when available) to use at a later time. This is referred to as “ASR”, or aquifer storage and recovery.
Purified Recycled Water

• What is purified recycled water?
  • Recycled water that undergoes advanced treatment to purify it for drinking water.

• What types of projects might this entail?
  • Build advanced treatment facility to purify recycled water that is first added to groundwater or surface water before being used.
  • Build advanced treatment facility to purify recycled water that is added directly to the drinking water system.
Desalination

• What is desalination?
  • Removing salt and impurities from seawater or other brackish (less salty) sources for drinking water.

• What types of projects might this entail?
  • Build facility to produce drinking water from ocean water
  • Build facility to produce drinking water from brackish (less salty) water
Surface Water

• What is surface water?
  • Water from rivers, streams, lakes, ponds, or other above ground reservoirs

• What types of projects might this entail?
  • New above ground storage of storm water using new or existing reservoirs or tanks, for later use (may require treatment to meet drinking water standards)
Conservation & Efficiency

- What is conservation & efficiency?
  - Short-term efforts to use less water and long-term improvements in water use efficiency.

- What types of projects might this entail?
  - Water conservation and efficiency programs, such as rebates, incentives, workshops, site visits, and technical assistance.
  - Already included in Santa Rosa’s existing strategies for water supply.
Share your thoughts! Poll #3

Which two supply options do you feel are most promising as water supplies for Santa Rosa? Select your top two choices.

A. Groundwater - Construct wells to extract (and store) groundwater.
B. Purified recycled water - Build facility to purify recycled water.
C. Desalination - Build facility to produce drinking water from salty water.
D. Surface Water - Build storage to capture surface water for use at a later time.

What other supply options do you feel would be promising for Santa Rosa?
Initial Evaluation Criteria for Water Supply Options
Evaluation Criteria

• Which water supply options are the best fit for our community?

• Need to consider operations, cost, regulations, and more!
## Preliminary Criteria Overview

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations</td>
<td>How will the supply option integrate into the existing system?</td>
</tr>
<tr>
<td>Cost</td>
<td>What will it cost (including construction, operation and maintenance)?</td>
</tr>
<tr>
<td>Regulatory</td>
<td>What environmental requirements, permitting requirements, or other legal requirements must be met?</td>
</tr>
<tr>
<td>Other</td>
<td>What’s the schedule for implementation? Can the supply option be scaled up or down? Is the supply option resilient?</td>
</tr>
</tbody>
</table>
Share your thoughts! Poll #4

Which two criteria do you feel are most important for assessing water supplies for Santa Rosa? Select your top two options.

A. Environmental impacts, including greenhouse gases
B. Quality of new water supply
C. Quantity of water that would be available
D. How quickly the water source could become available
E. Effect on cost of water

What other criteria do you feel are very important for assessing water supplies for Santa Rosa?
We appreciate your participation!

We are here!

Goals, criteria, methodology, supply options

Spring 2023

Feasibility analysis & portfolios

Summer 2023

Water Supply Alternatives Plan
Questions & Answers

• Zoom participants – click “Raise Hand”

• Phone participants – Press *9
Public Input

Meetings

Community Meetings (Zoom)
• January 25, 2023 from 5-7 p.m.
• May & Aug 2023 – stay tuned!

Board of Public Utilities (Hybrid)
• December 15, 2023 – 1:30 p.m.
• July, Sep, & Oct 2023 – stay tuned!

City Council (Hybrid)
• Sep & Oct 2023 – stay tuned!

Written comments

Email
• WaterResources@ssrcity.org

Postal Service
• Santa Rosa Water
  Attn: Colin Close
  69 Stony Circle
  Santa Rosa, CA 95401
Thank you!

OUR WATER FUTURE
Water Supply Alternatives Plan
srcity.org/OurWaterFuture