



Drought Resource Guide

Produced by the Bay Area Climate Adaptation Network

July 2021

How to Use This Guide

With the 2021 Drought firmly upon us, BayCAN is pleased to present the Drought Resource Guide 1.0.

BayCAN kicked-off the 2021 Heat-Drought-Fire Season with a May 5th special presentation from climate scientist Daniel Swain (UCLA). You can see the recording [here](#) (fast forward to the 2:11 mark).

In the following pages, you will find two types of resources:

First, we present some of the best **drought portals and reports** -- your gateway to fabulous information on key issues, trends and solutions.

Second, we spotlight a number of **drought projects and programs** that BayCAN members are planning and implementing this year. This includes not only water-related agencies, but cities and counties.

NOTE: if the resource is underlined, you click the link to get access to the resource! If there is no link, the resource is not yet publicly available.

Enjoy the Drought Resource Guide. We will be adding and updating regularly through the Summer and Fall at www.baycanadapt.org.

For questions, comments or any suggested additions to the guide, please contact Bruce Riordan at bruce@baycanadapt.org, or Yeshe Salz at yeshe@baycanadapt.org.

Drought Portals and Reports

[California Drought Portal](#)

Pacific Institute

Tons of great info and resources on drought conditions and solutions from Oakland's own Pacific Institute.

[NOAA California Drought Portal](#)

NOAA – National Integrated Drought Information System

Drought maps, charts, documents and more useful resources from NOAA.

[Running Out of Water and Time: How Unprepared is California for 2021's Drought?](#)

CalMatters

Updated in mid-June, this 21-page piece provides great information, commentary and links to resources on all facets of the California drought.

[The 2021 Western Drought: What to Expect as Conditions Worsen](#)

Pacific Institute

The [American West](#) has entered another drought crisis. State and local leaders are making emergency declarations. Water allocations are being slashed. We are already seeing fish die-offs and domestic wells running dry — and the dry season is just beginning.

[Drought and Equity in the San Francisco Bay Area](#)

Pacific Institute and Environmental Justice Coalition for Water

This excellent 15-page study was developed with 8 Bay Area organizations using a community-based participatory research model (CBPR). The study outlines key issues and concerns—water infrastructure, water affordability and inequitable water use—and then presents solutions for water rates, billing practices, financial assistance, and more.

[Falling Dominoes: A Planner's Guide to Drought and Cascading Impacts](#)

American Planning Association

This guide makes the case for establishing drought as a priority for local planning. Planners are central in influencing land-use patterns and helping communities guide how development and redevelopment occur. Planners do this by planning at all scales, creating land-use regulations, and reviewing development projects. These are all opportunities to address drought.

[How Can Cities Work With Nature When Droughts Take Their Toll!](#)

The Conservation – Blog Post

Faced with a drought, it's tempting for city managers to reduce the amount of space that needs water. Municipalities typically respond to a drought by limiting water use, and then by looking at ways to cover spaces with artificial surfaces like paving instead of lawns and plants. There are four reasons why that is a bad idea.

[North Bay Watershed Association Spring 2021 Newsletter – DROUGHT](#)

North Bay Watershed Association

Special issue chock full of drought news and resources aimed at the North Bay but good for everyone.

BayCAN Member Projects

Key contacts listed at the back of this section

CITIES AND COUNTIES:

Palo Alto

[One Water Plan](#)

Embarking on a “One Water” planning effort which will incorporate all potable and non-potable water supply options with dry year availability as a key criteria.

[Northwest County Recycled Water Strategic Plan](#)

In partnership with Valley Water, Palo Alto has completed the Northwest County Recycled Water Strategic Plan for expanding production and regional use of recycled water. Designing onsite advanced water purification at Palo Alto wastewater treatment plant to reduce recycled water salinity.

[Regional Recycled Water Program](#)

This program currently produces and provides recycled water to Palo Alto and Mountain View facilities.

San Rafael

[Drought Water Conservation Strategies](#)

See the city of San Rafael’s website for a host of water conservation tips and recommendations.

[Marin Municipal Water District Rules and Regulations](#)

Water conservation rules and regulations from Marin Municipal Water District.

Marin County

[County update of General Plan Safety Element](#)

Marin County is doing the SB 379-required Safety Element update for the General Plan which will address heat, fire, drought and other climate issues.

Sonoma County Regional Climate Protection Authority

[BayREN Water Upgrades \\$ave Program](#)

RCPA is now running this on-bill program regionwide. This program provides financial incentives for individuals to improve water efficiency in homes.

WATER AGENCIES:

Bay Area Clean Water Agencies (BACWA)

[Regionwide survey of member agencies on climate change assessments](#)

BACWA is collaborating with the Regional Water Board on a region-wide POTW (publicly owned treatment works) survey to obtain information on the status of agencies' climate change vulnerability assessments. The survey will collect information on agencies' planned responses to SLR, rising groundwater, extreme weather and drought. *Survey results will be available in the Summer.*

[Recycled Water Evaluation](#)

The San Francisco Bay Nutrient Watershed Permit (R2-2019-0017) requires POTWs to conduct an evaluation of the potential to reduce nutrient loads to the Bay by water recycling. To comply with this effort, BACWA is conducting an evaluation to compile current and planned recycled water projects regionwide. See [Scoping and Evaluation Plan](#).

[Drought and fire plans by each agency](#)

Each of the 40+ members of the Bay Area Clean Water Agencies crafts its own response to drought and fire, but common approaches include: (1) Significantly upgrading backup power supply and electrical equipment due to now-common Public Safety Power Shutoffs and blackouts and (2) Increasing maintenance of sewers due to reduced sewer flows during drought, which can cause clogging and odors.

San Francisco Public Utilities Commission

[Water Supply Long Term Vulnerability Assessment](#)

Developing long-term vulnerability assessment for Hetch Hetchy Regional Water System, the San Francisco Public Utilities Commission's water supply system.

Sonoma Water

[Forecast Informed Reservoir Operations \(FIRO\)](#)

This research in partnership with CW3E, NOAA (NWS, OAR, NMFS), DWR, USACE, and BOR has led to development of a model that helps inform reservoir operators at Lake Mendocino in response to forecasted precipitation. This enables operation of Lake Mendocino for improved flood, ecosystem and water supply management to provide for more flexible and adaptive management of this facility. The new program allowed the US Army Corps of Engineers to save water in Lake Mendocino this fall and winter, reducing the immediate impact of the current dry conditions.

[Regional Water Supply Resiliency Study](#)

Although the water systems of Sonoma Water and its Retail Customers are interconnected, they are not operated or managed in a coordinated manner, especially in times of water shortage. The region would benefit by leveraging the collective water resources and infrastructure of Sonoma Water and its Retail Customers to improve regional water supply reliability and resiliency through integrated water resources planning and management. The primary goal of the study is to develop an integrated water supply planning process that takes into account the sources of water supply for Sonoma Water and its Retail Customers, and their specific vulnerabilities (hydro-climatic, seismic, regulatory and/or infrastructure related).

Managed Aquifer Recharge (FloodMAR)

FloodMAR is an emerging water resource (and climate adaptation strategy) that aims to reduce flood risk and promote water supply by directing flood waters to specific locations for temporary storage and spreading where this water can recharge to underlying groundwater basins. Another potential benefit of FloodMAR is the enhancement of riparian ecosystems.

Groundwater Production Well Renovation and Aquifer Storage and Recovery (ASR)

Re-establish functionality of Santa Rosa Plains Groundwater Production Wells that were mothballed years ago due to inability to meet clean drinking water disinfection requirements. Wells would supplement Sonoma Water's currently limited Russian River source to help address near-term drought impacts to Sonoma Water's retail customers and drought impacted community members such as this in the agriculture sector. Project would also help meet compliance with the Sustainable Groundwater Management Act.

East Bay Municipal Utility District (EBMUD)

Climate Action Plan

In January 2021 the District published a Climate Action plan that summarizes current and future efforts to adapt to and mitigate the impacts of climate change, including the goal of reaching carbon neutrality for the water system by 2030, developing additional renewable energy projects and expanding the number of low- and zero-emission vehicles in the District's fleet.

2021 Special Drought Preparation

1. Procurement and deployment of several backup generators throughout the water distribution system to ensure no water outages during PSPS events.
2. Stage 1 drought declaration (at this time) asking for voluntary conservation (could escalate) and decision to bring in supplemental water supply (Sacramento River) to the East Bay.
3. Huge effort to manage vegetation on open space areas and along facilities (using an array of different tools), via our IPM program, to meet fire ordinance requirements.
4. Updating smoke and heat illness guidance for field workers.
5. Various tasks to manage changes in water quality chemistry due to heat and drought.

Water Conservation Strategic Plan

Updating this 2011 plan as part of drought preparedness; target completion schedule is Spring 2021.

Water Supply Management Program 2040

The [program](#) estimates EBMUD's water supply needs over a thirty-year planning horizon and proposes a diverse portfolio of policy initiatives and projects to ensure that those needs can be met in dry years.

Napa Sanitation District

Napa Valley Drought Contingency Plan

The Napa Valley Drought Contingency Plan (DCP) is being developed by a task force of Napa Valley water managers using a grant from the US Bureau of Reclamation's Drought Response Program. The DCP process prepares local agencies for drought and associated impacts in advance of a crisis. By prioritizing the development of projects and management response actions, the DCP assists local water managers and provides the tools for long-term drought resilience for the region's water supply. The DCP will include a list of proposed projects in Napa County to improve drought resilience.