



Legislation Text

File #: 2021-0378, **Version:** 1

To: Board of Directors, Sonoma County Water Agency
Department or Agency Name(s): Sonoma County Water Agency
Staff Name and Phone Number: Paul Piazza, (707) 547-1968
Vote Requirement: Majority
Supervisorial District(s): Countywide

Title:

3:30 P.M. - Urban Water Management Plan 2020 and Water Shortage Contingency Plan Public Hearing

Recommended Action:

- A) Hold a Public Hearing on the Water Shortage Contingency Plan and Urban Water Management Plan
- B) Adopt a Resolution of the Board of Directors of the Sonoma County Water Agency Adopting the Water Shortage Contingency Plan
- C) Adopt a Resolution of the Board of Directors of the Sonoma County Water Agency Adopting the Urban Water Management Plan 2020

Executive Summary:

The Urban Water Management Planning Act (Act), California Water Code Sections 10610 through 10656, requires every urban water supplier that provides water for municipal purposes to more than 3,000 connections, or supplying more than 3,000 acre-feet (ac-ft) of water annually, to adopt and submit a plan every five years to the California Department of Water Resources (DWR).

Under the Act, the Sonoma County Water Agency's (Sonoma Water) plan must "describe and evaluate sources of supply, reasonable and practical efficient [water] uses, [and] reclamation and demand management measures" (Water Code section 10615). This plan serves as a long-range planning document for Sonoma Water's wholesale water supply and serves as a regional water supply planning tool for Sonoma Water and its water contractors and customers, including the cities of Santa Rosa, Cotati, Rohnert Park, Sonoma, and Petaluma, the Town of Windsor, and the North Marin, Valley of the Moon and Marin Municipal Water Districts. Sonoma Water has prepared an Urban Water Management Plan (Plan) every five years since 1985.

The 2020 Plan, including the required Water Shortage Contingency Plan, has been prepared in accordance with the provisions of the Act, and must be approved by Sonoma Water's Board and filed with DWR by July 1, 2021.

Discussion:

Since Sonoma Water's 2015 Plan was adopted, the Act was amended requiring both new elements and changes to the criteria used for water supply reliability analyses in consideration of anticipated longer drought periods. The changes are largely the result of 2018 water conservation legislation following the last drought period in California from 2014-2016. These changes include:

- A water supply reliability analysis for a multiple dry-year scenario lasting five years (previously three years) in five-year increments from 2025-2045.
- A new Drought Risk Assessment (DRA) for a five-year drought (consisting of the five consecutive driest years) beginning the year after the Plan assessment (i.e., 2021-2025).
- New prescriptive elements to the Water Shortage Contingency Plan section to include six standard shortage levels, procedures for an annual water supply and demand assessment, and seismic risk assessment and mitigation plan.
- Coordination or demonstrated consistency with Groundwater Sustainability Plans.
- Estimates of energy used to manage and deliver water supplies.
- A discussion of climate change impacts on projected supplies and demands

To help prepare the Plan and address the new requirements, Sonoma Water retained the professional consulting services of Brown and Caldwell, an environmental engineering and consulting firm. Brown and Caldwell has completed more than 100 urban water management plans throughout California. Furthermore, Brown and Caldwell team members participated on past California Department of Water Resources (DWR) Urban Water Management Plan (UWMP) Guidebook committees and have been closely engaged with the 2020 UWMP Guidebook development. The DWR 2020 UWMP Guidebook is offered to help suppliers prepare their urban water management plans in a way that is consistent with the legal requirements of the Act. The notice of completion of the final DWR 2020 UWMP Guidebook was received on April 6, 2021. Although not anticipated, if significant changes result in Sonoma Water's Plan from those reported here due to final revisions of the Guidebook, it will be noted in the staff presentation at the Board meeting.

The analysis presented in the Plan involves evaluating projections of future water demands on Sonoma Water's transmission system and considering how those future demands will be met. The evaluation and conclusions in the Plan are based in part upon assumptions about the most likely outcome of decisions by regulatory agencies and other circumstances beyond Sonoma Water's control over the 25-year planning period. Given the facts currently available and best available information, the assumptions in the Plan are reasonable, but Sonoma Water will monitor the assumptions and update subsequent Plans as warranted by new information.

Because Sonoma Water is a wholesale water purveyor, it does not develop water demand projections for its customers (except as necessary to account for customers who do not prepare their own urban water management plans given their small size and exemption from the Act). Sonoma Water's contractors develop demand projections as part of their own urban water management plans and then utilize the information provided to them by Sonoma Water's Plan to demonstrate what portion of their demands can be met using Sonoma Water's supplies. Sonoma Water staff monitored the development of the water demand projections from 2025 through 2045 by the water contractors and Marin Municipal Water District (MMWD) as part of their urban water management plans. Sonoma Water staff worked interactively with its retail water customers to develop projections of future water demand and supply, taking into account the demand reduction to be provided through maximized conservation efforts, local supplies and recycled water use. These components are summarized below.

Water Demand Projections

Sonoma Water staff coordinated with its water contractors and MMWD as they developed water demand projections through 2045 as part of their urban water management plans. The projections of water demand

presented in the Plan include the combined results of these individual evaluations. Details regarding each customer's specific demand projections, water conservation savings, recycled water use, and local supplies are provided in each of the water contractor's and MMWD's urban water management plans. To identify the projected portion of future water demand that Sonoma Water expects to supply to the water contractors and MMWD, the following general process was followed:

1. The total projected population and water demand was estimated by each water contractor and MMWD utilizing its respective land use planning information (e.g., general plans, Association of Bay Area Governments [ABAG] projections) and projected account growth and associated demands by sector, or equivalent methods of analysis.
2. The amount of future expected conservation savings was estimated by each water contractor and MMWD utilizing the Alliance for Water Efficiency (AWE) Water Conservation Tracking Tool (AWE Model).
3. The water contractors and MMWD estimated the amount of their respective water demand (after accounting for conservation savings) that could be offset by their respective projected recycled water and local supplies.
4. The remaining net demand represents the portion of water supply projected to be provided by Sonoma Water. For MMWD, which has a significant amount of local supply, the projected portion of MMWD's water demands to be met by Sonoma Water was based on MMWD's analysis presented in its urban water management plan.
5. Unconstrained demands for the Drought Risk Assessment years 2021-2025 were provided by each contractor and MMWD.

Sonoma Water staff developed population and water demand projections for its smaller customers that are not required to prepare urban water management plans. With the exceptions noted below, the projected demands for these customers were evaluated by considering the historical total demands, Sonoma Water deliveries to each customer, available population growth projections through ABAG/Metropolitan Transportation Commission, and assumed available local supply projections. The estimated future annual diversions by the Russian River customers (City of Healdsburg, Camp Meeker and Occidental) under Sonoma Water's water rights were assumed based on the primary purpose of these water supply agreements as a backup water supply source.

Water Supply Projections

Sonoma Water's water supply was evaluated to determine whether there is sufficient supply to meet the projected collective water demand of Sonoma Water's transmission system customers, after taking into account the customers' water conservation, recycled water use, and local water supplies. Sonoma Water's water supply is primarily derived from the Russian River, with supplemental supply provided by its groundwater wells located in the Santa Rosa Plain.

In making this evaluation, Sonoma Water staff made certain assumptions about likely future conditions with respect to (1) the implementation of the Russian River Biological Opinion and the impact of the listing of three Russian River salmonid species under the federal and state Endangered Species Acts, (2) diversions into the Russian River watershed from the Potter Valley Project, (3) expected future changes to minimum instream flow requirements, and (4) climate change impacts. These assumptions and the reasons professional engineering staff at Sonoma Water and Brown and Caldwell believe that the assumptions are reasonable are

set forth in detail in Section 1.4 of the Plan.

Sonoma Water's Russian River supplies were evaluated using the Russian River System Model (RR ResSim), an operations modeling system for the Russian River developed using the United States Army Corp of Engineers (USACE) - Hydrologic Engineering Center (HEC) ResSim code. The model is used as a planning tool to simulate the effects of various climatic conditions, levels of demand, and operational criteria on the water supply available for use by Sonoma Water and others. RR ResSim calculates what releases must be made from Lake Mendocino and Lake Sonoma, taking into account USACE flood control operations criteria, Decision 1610 minimum instream flow requirements, and the requirements of the Biological Opinion.

The model incorporates 108 years of hydrologic data (1910-2017) and water demands from agricultural and urban Russian River water users to evaluate whether Sonoma Water's Russian River water supply, combined with its supplemental groundwater supplies, is sufficient to meet the projected needs of Sonoma Water's retail customers.

Sufficiency of Sonoma County Water Agency Water Supply

The Plan compares the projected water supply and customer demands from the transmission system from 2025 to 2045, in five-year increments, as required by the Act. The results presented in the Plan represent the demand for Sonoma Water wholesale water by Sonoma Water's customers and does not include the portion of the customers' retail demand met by water conservation, recycled water, and local supplies. Water "supply to demand" comparisons were evaluated for normal year (2002), single extremely dry year (1977, one of the driest on record) and multiple-dry year scenarios in which none were as dry as 1977 (1987 - 1991), as required by the Act and the results indicate the following:

1. For a normal hydrologic year, Sonoma Water has adequate water supply to meet demands through the year 2045.
2. For a single dry year, water demands will exceed water supplies in the year 2030 by approximately 16% and will exceed water supplies in 2045 by approximately 19%. This is due to Sonoma Water's diversions being curtailed by its water rights permits and Decision-1610 when Lake Sonoma storage is less than 100,000 acre-feet before July 15. During these single dry years, Sonoma Water would work with its customers to reduce water demands as described in Sonoma Water's Water Shortage Contingency Plan (discussed below) in addition to utilizing local water supplies as appropriate. In addition, Sonoma Water would work with the State Water Resources Control Board and other Russian River water users, as was done in 2013, 2014 and 2015, to reduce demands and to preserve storage in Lakes Sonoma and Mendocino. This may include Sonoma Water proactively petitioning the State Water Resources Control Board for temporary relief from the minimum instream flow requirements in the Russian River and Dry Creek, in order to conserve water supply in Lake Sonoma and Lake Mendocino in advance of reaching the 100,000 acre-feet threshold to reduce the likelihood of a mandatory diversion curtailment pursuant to Decision-1610.
3. For multiple dry years (five years), there is adequate water supply during multiple dry years to meet demands through 2045. This assumes that none of the years would be as dry as 1977. Although the analysis estimates that all demands can be met for the multiple dry year scenarios, modeling predicts relatively low storage levels in Lake Mendocino during some portions of the five-year scenario. Thus, it is likely that some demand-management measures by Russian River water users, including Sonoma Water customers, would be implemented to maintain higher Lake Mendocino storage levels, as was

the case in 2013, 2014 and 2015.

4. For the Drought Risk Assessment, there is adequate water supply to meet demands in each year of the modeled five-year drought from 2021 through 2025.

Water Shortage Contingency Plan

As one of the required elements of the Plan, the Water Shortage Contingency Plan (WSCP) section is somewhat unique in that it can be adopted as a chapter within the Plan, or separately as a standalone document and affixed as an appendix to the Plan. Although the approach used in previous Sonoma Water Plans was to include the WSCP as a chapter, the recommendation in the DWR UWMP Guidebook is to adopt the WSCP separately, allowing for changes to be made based on lessons learned or as otherwise needed. In order to maintain flexibility for further refinement outside the five-year update cycle of the Plan, and in recognition of the many new prescriptive elements of the WSCP in the Act, the Water Shortage Contingency Plan and Urban Water Management Plan are recommended for adoption by separate resolutions as standalone plans.

Sonoma Water's WSCP addresses the six shortage levels required, provides the narrative methodology to be followed for annual water supply and demand assessments in collaboration with Sonoma Water's customers, details Sonoma Water's 2018 adopted Local Hazard Mitigation Plan to address seismic risk, provides for the legal authority and agreements relied on by Sonoma Water to declare a water supply emergency, and details the shortage response actions Sonoma Water may take during a water shortage.

As a wholesale water provider, Sonoma Water has no ability to directly restrict the use of water by end users during a shortage. Under the Restructured Agreement, Sonoma Water has a number of methods available to it to ensure that its contractors do not use more than the amount of water allocated by Sonoma Water during a time of shortage.

If it appeared that a water supply shortage might occur, Sonoma Water's first stage of action would be to notify its customers and the general public of that possibility. Depending on the severity of the shortage, Sonoma Water would work with its customers to encourage voluntary demand reduction measures. Sonoma Water would also encourage its customers to maximize use of local water supplies. Finally, Sonoma Water would take steps to publicize the potential shortage, and to encourage agricultural and non-Sonoma Water-related diverters from the Russian River and Dry Creek to reduce diversions to the extent possible.

If these voluntary measures were insufficient, if the 30% cutback provision in Sonoma Water's water rights permits were triggered, or if hydrologic conditions were likely to lead to a situation in which transmission system demands would exceed Sonoma Water's available water supply, Sonoma Water would then calculate the amount of water available to its water contractors, other water transmission system customers, Russian River customers, and Marin Water under existing contractual provisions, including Section 3.5 of the Restructured Agreement, by using the then-existing allocation methodology adopted pursuant to Section 3.5 (d) of the Restructured Agreement. As mentioned previously, Sonoma Water could also petition the State Water Resources Control Board for temporary relief from the minimum instream flow requirements in the Russian River and Dry Creek, in order to conserve the remaining water supply in Lake Sonoma and Lake Mendocino.

Under Section 3.5(e) of the Restructured Agreement, a contractor taking more than its allocated amount of

water during a shortage is subject to a liquidated damages surcharge equal to 50 percent of the then-current operations and maintenance charge for each acre-foot of water taken by the contractor in excess of its allocation. Section 3.5(e) also reserves to Sonoma Water all other rights it may have to limit contractors and other customers to their allocated amounts, including physically limiting the quantity of water taken to the amounts allocated, and pursuing all other available legal and equitable remedies applicable to such violations. Finally, Section 3.5(e) allows the Water Advisory Committee to request that Sonoma Water physically limit the quantity of water taken by a Regular Customer to the amounts authorized by Section 3.5, or pursue all other available legal and equitable remedies applicable to such violations.

Outreach, Public Participation and Coordination

The Act requires Sonoma Water to coordinate the preparation of its Plan and WSCP with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies. Sonoma Water staff coordinated the preparation of this Plan and WSCP with its customers, as well as many other relevant agencies. These agencies include the State Water Resources Control Board, the National Marine Fisheries Service, the California Department of Fish and Game, the Federal Energy Regulatory Commission, the North Coast Regional Water Quality Control Board, and the U.S. Army Corps of Engineers, each of which was given an opportunity to review and comment on the draft Plan and WSCP.

Sonoma Water encouraged community and public interest involvement in the Plan update through public notifications, internet and social media postings, and inspection of the draft document. Letter communications were distributed to organizations, informing the recipients that Sonoma Water was starting the Plan update process, and inviting the recipients to provide input into the Plan. Sonoma Water also included articles about the Plan update process in its monthly electronic newsletter (Sonoma Water E-News).

Sonoma Water's external public web site (www.sonomawater.org) featured a special Plan update web page that included public notices, Plan update schedule and staff contact information. Public hearing notifications on both the Plan and WSCP were published in the Santa Rosa Press Democrat, in the March and April 2021 issues of Sonoma Water's monthly public electronic newsletter (Sonoma Water E-News), on Sonoma Water's website and included in its social media sites.

Public Hearing and Adoption

Sonoma Water released the draft Plan and WSCP on April 27, 2021, for public review and comment. Copies of the draft Plan and WSCP were made available for public inspection at Sonoma Water's Administration building, the office of the Clerk of Sonoma Water's Board of Directors, and Sonoma Water's website.

The Act requires that Sonoma Water hold a public hearing before adopting the draft Plan and WSCP. The purpose of the public hearing is to provide an opportunity for members of the public to learn and ask questions about the draft Plan and WSCP and Sonoma Water's plans for providing a reliable, safe, high-quality water supply, and to obtain public comment on the draft Plan.

Any written comments received by Sonoma Water during the public review period on the draft Plan and WSCP will be summarized during Sonoma Water's staff presentation at the Board meeting, and Sonoma Water staff will make recommendations for edits, if any, to the draft Plan and WSCP for Board approval.

Prior Board Actions:

10/13/20: Authorized Sonoma County Water Agency’s General Manager to execute an agreement with Brown and Caldwell for preparation of the 2020 Urban Water Management Plan and update to Water Shortage Allocation Model, through June 30, 2022, in the not-to-exceed amount of \$200,000.

06/21/16: Approved Resolution No. 16-0256 Adopting Urban Water Management Plan 2015.

FISCAL SUMMARY

Expenditures	FY 20-21 Adopted	FY21-22 Projected	FY 22-23 Projected
Budgeted Expenses			
Additional Appropriation Requested			
Total Expenditures			
Funding Sources			
General Fund/WA GF			
State/Federal			
Fees/Other			
Use of Fund Balance			
Contingencies			
Total Sources			

Narrative Explanation of Fiscal Impacts:

None.

Staffing Impacts:			
Position Title (Payroll Classification)	Monthly Salary Range (A-I Step)	Additions (Number)	Deletions (Number)

Narrative Explanation of Staffing Impacts (If Required):

N/A

Attachments:

- Resolution (R1) Adopting Water Shortage Contingency Plan
- Resolution (R2) Adopting Urban Water Management Plan 2020

Related Items “On File” with the Clerk of the Board:

Draft Urban Water Management Plan and Water Shortage Contingency Plan (Appendix C)

