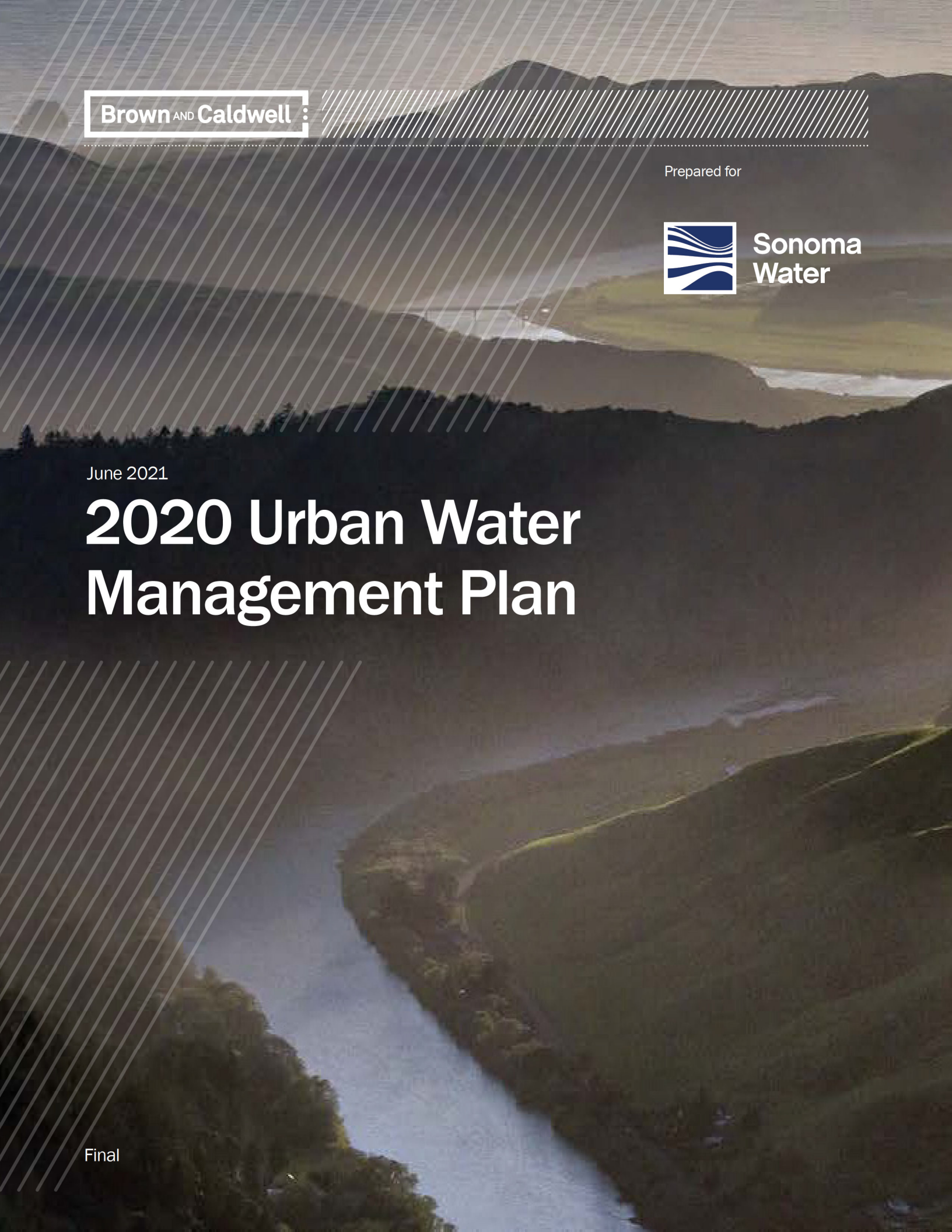

Brown AND Caldwell

Prepared for

Sonoma Water

June 2021

2020 Urban Water Management Plan

Final

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List of Abbreviations

ABAG	Association of Bay Area Governments
Act	Urban Water Management Planning Act
Action Plan	Water Supply Strategies Action Plan
ac-ft	acre-feet
ac-ft/yr	acre-feet per year
ALWSZ	Airport-Larkfield-Wikiup Sanitation Zone
AMP	Asset Management Program
AR	atmospheric river
ASR	Aquifer Storage and Recovery
Authority	North Bay Water Reuse Authority
CalWEP	California Water Efficiency Partnership
CAP	Sonoma Water Climate Vulnerability Assessment and Adaptation Plan
CASGEM	California Statewide Groundwater Elevation Monitoring Program
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
cfs	cubic feet per second
CIMIS	California Irrigation Management Information System
County	County of Sonoma
CUWCC	California Urban Water Conservation Council
DEIR	Draft Environmental Impact Report
DIY	Do-It-Yourself
DSM	decision support model
DWR	California Department of Water Resources
EOC	Emergency Operations Center
EOP	Emergency Operation Plan
ESA	Endangered Species Act
ETo	evapotranspiration
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FIRO	Forecast Informed Reservoir Operations
Fish Flow Project	Fish Habitat Flows and Water Rights Project
FVA	final viability assessment
GCM	Global Circulation Model
GIS	Geographic Information System
GMP	Groundwater Management Plan
gpm	gallons per minute
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
HEC	Hydrologic Engineering Center
ILP	Integrated Licensing Process
JPA	joint powers authority
kWh	kilowatt-hour
LHMP	local hazard mitigation plan
LRT2	Local Supply/Recycled Water/Tier 2 Conservation Fund
M&I	municipal and industrial
MCRRFCWCID	Mendocino County Russian River Flood Control and Water Conservation Improvement District
MCL	maximum contaminant level
MG	million gallons
mgd	million gallons per day
Marin Water	Marin Municipal Water District
MOU	Memorandum of Understanding
NBWD	North Bay Water District
NCEI	National Center for Environmental Information
NMFS	National Marine Fisheries Service
NMWD	North Marin Water District
NOI	Notice of Intent
PAD	Pre-application Document
PG&E	Pacific Gas and Electric
Plan	Urban Water Management Plan
PVID	Potter Valley Irrigation District
PVA	preliminary viability assessment
PVP	Potter Valley Hydroelectric Project
PWRPA	Power and Water Resources Pooling Authority
Restructured Agreement	Restructured Agreement for Water Supply
RR ResSim	Russian River System Model
SB	Senate Bill
SGMA	Sustainable Groundwater Management Act
Sonoma RCD	Sonoma Resource Conservation District

Sonoma Water	Sonoma County Water Agency
Steering Committee	Lake Mendocino Steering Committee
SVCSD	Sonoma Valley County Sanitation District
SWRCB	State Water Resources Control Board
TAC	Technical Advisory Committee
TUCP	Temporary Urgency Change Petition
USACE	United States Army Corps of Engineers
USGS	United States Geological Survey
WAC	Water Advisory Committee
Water Control Manual	USACE Coyote Valley Dam Water Control Manual
WSCP	Water Shortage Contingency Plan

Section 1

Introduction and Lay Description

This wholesale Urban Water Management Plan (Plan) addresses the Sonoma County Water Agency (Sonoma Water) water transmission system and includes a description of the water supply sources, historical and projected water use, and a comparison of water supply to water demands during normal, single-dry, and multiple-dry years. Sonoma Water provides wholesale water, principally from the Russian River, to eight water contractors,[1] other water transmission system customers,[2] and to the Marin Municipal Water District (Marin Water)[3], collectively referred to as Sonoma Water's customers. Sonoma Water also supplies small quantities of water (when available) from its transmission system to surplus water customers[4], and allows other entities known as Russian River customers[5] to divert water from the Russian River under Sonoma Water's water rights using their own facilities. Each of the water contractors and Marin Water has prepared its own 2020 urban water management plan. This section describes the Urban Water Management Planning Act (Act), the Plan organization, and key assumptions.

1.1 Urban Water Management Planning Act

Sonoma Water's Plan has been prepared in accordance with the Act, which is in the California Water Code, Division 6, Part 2.55 and Part 2.6, Section 10608 and Sections 10610 through 10656. The Act requires every urban water supplier that provides water for municipal purposes to more than 3,000 connections or supplies 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). This Plan serves as a long-range planning document for Sonoma Water's wholesale water supply. Individual water contractors' plans should be consulted for details on their demands and supplies.

1.2 Plan Organization

This section provides a summary of the sections in the Plan. Section 2 presents the basis for preparing the Plan, linkage to regional planning, and coordination and outreach. Section 3 provides the system description including Sonoma Water's organization, service area, climate, and demographics. Section 4 presents current and projected water uses. Water supply sources, water supply facilities, and the transmission system are described in Section 5. Section 6 describes the reliability of the water supplies. Section 7 presents a description of the Water Shortage Contingency Plan (WSCP) and Section 8 addresses water demand

[1] The water contractors include the Cities of Santa Rosa, Petaluma, Rohnert Park, Cotati, and Sonoma, the Town of Windsor, and the North Marin and Valley of the Moon Water Districts.

[2] The other water transmission system customers include the Forestville Water District, California-American Water Company (with respect to the Larkfield-Wikiup area), the Kenwood Village Water Company, Lawndale Mutual Water Company, and Penngrove Water Company, the County of Sonoma, the State of California, and Santa Rosa Junior College.

[3] Sonoma Water's deliveries to Marin Water are authorized by the Restructured Agreement for water supply (See Section 5.1.3) and are subject to the terms of a Supplemental Water Supply Agreement, dated July 1, 2015 between Sonoma Water and the Marin Water, which renewed two existing agreements (the "Offpeak Water Supply Agreement" and the "Agreement for the Sale of Water"). Deliveries to Marin Water under the Supplemental Water Supply Agreement are subject to a number of limitations, including sufficient transmission system capacity. The maximum monthly delivery limit for Marin Water is approximately 12.8 mgd during the months of May through October, which is a combination of the limits under the Agreement for the Sale of Water (9 mgd) and the Offpeak Water Supply Agreement (360 ac-ft/month).

[4] Surplus Water is water that from time to time may be available for delivery from the Transmission System in excess of the amounts required to meet Sonoma Water's contractual obligations and the requirements of all Sonoma Water's regular customers. Surplus customers are subject to Sonoma Water's Water Service Rules.

[5] These "Russian River Customers" include: City of Healdsburg, Camp Meeker Recreation and Park District, and Occidental Community Services District. Russian River customers divert at least a portion of their water supply under Sonoma Water's water rights.

management measures. Section 9 presents the references used to help prepare this Plan. Appendices A through E provide relevant supporting documents, including the WSCP.

DWR has provided a checklist of the items that must be addressed in each Plan based upon the Act. This checklist makes it simple to identify exactly where in the Plan each item has been addressed. The checklist (included in Appendix E) is completed for this Plan and references the section number(s) where each item can be found. The tables that are required by DWR are identified in this Plan with their applicable DWR table number (DWR, 2021).

1.3 Lay Description

Sonoma Water is a special district that provides wholesale water supply to several cities and water districts in Sonoma and Marin counties, including eight water contractors, Marin Water, and other water transmission system customers (collectively referred to as Sonoma Water's customers). Sonoma Water's customers then retail water directly to different types of water users, including single-family and multi-family residences; commercial, industrial, and institutional/governmental users; and landscape irrigators. As of 2020, Sonoma Water and its customers collectively serve 629,414 people and the population is projected to grow to 773,926 by 2045.

Most of Sonoma Water's customers prepare their own urban water management plans that provide further detail on water demand projections, conservation savings, recycled water use, and local water supplies. Sonoma Water developed population and water demand projections for smaller customers (who are not required to prepare their own urban water management plan) using historical demand data, deliveries to each customer, available population growth projections, and assumed available local supply projections. The water demand projections included in this Plan consider impacts of climate change, water conservation savings, and water losses. Total demand for Sonoma Water supply was 52,793 ac-ft in 2020 and is projected to be approximately 74,500 ac-ft by 2045.

Sonoma Water mostly depends on the Russian River for water supply, with groundwater supply from the Santa Rosa Plain as a secondary source (to be used during drought or when the Russian River is otherwise constrained). Almost all of Sonoma Water's customers have other water supplies, in addition to those provided by Sonoma Water, such as local surface water, local groundwater, and recycled water. In addition to water supply, the Russian River provides habitat for many aquatic species (including some threatened and endangered species) and is also used to generate hydropower. Sonoma Water's Russian River water supply is controlled and influenced by a variety of agreements and decisions that aim to balance and protect these different uses.

Although groundwater is not the primary source of supply for Sonoma Water, it is still an important resource for the region, and Sonoma Water has led and been involved in many groundwater related studies. Sonoma Water is currently working closely with Groundwater Sustainability Agencies (GSAs) and other local stakeholders to develop and implement Groundwater Sustainability Plans (GSPs) that comply with the Sustainable Groundwater Management Act (SGMA) requirements. Sonoma Water is also working with local stakeholders to identify opportunities to better manage stormwater and alleviate flooding, while possibly recharging groundwater aquifers or providing other benefits. Furthermore, while not directly supplying recycled water, Sonoma Water is involved with coordinating recycled water programs including funding for projects that offset Sonoma Water deliveries.

Sonoma Water has developed a Water Supply Strategies Action Plan, which outlines strategies to increase water supply system reliability, resiliency, and efficiency in the face of limited resources, regulatory constraints, and climate change uncertainties. Currently, the availability of water in the Russian River presents the most prominent potential physical constraint on the delivery of water to Sonoma Water's customers, particularly during high demand periods in the summer months. While no immediate constraints in the transmission system have been identified, conditions into the future need to be monitored to mitigate

any constraints that may arise. Sonoma Water does not anticipate any water quality issues that would significantly affect water supply reliability.

An analysis of projected water supply and demand data shows that Sonoma Water has adequate water supply to meet demands through 2045 under most conditions, including under the five-year drought risk assessment (see Section 6.5). In single dry years, which are modeled using the driest year on record (1977), model simulations predict supply shortages beginning in 2030. In these circumstances, Sonoma Water will work with its customers to reduce water demands and/or utilize additional local sources, as described in the WSCP (Appendix C). Based on efforts over the last five years during dry conditions, Sonoma Water does not anticipate any difficulty in maintaining an adequate water supply during the single-dry year.

It is important to note that this Plan is based upon reasonable assumptions about Sonoma Water's sources of water supply. The Plan will be updated every five years, or more often if needed, to incorporate new information.

1.4 Assumptions

The evaluation and conclusions in this Plan are based in part upon assumptions (identified below and discussed in subsequent chapters) about the most likely outcome of decisions by regulatory agencies and other circumstances beyond Sonoma Water's control over the 25-year planning period. Sonoma Water recognizes that regulatory agencies may make different decisions or take different actions than those assumed by Sonoma Water, which may affect the availability of water and the adequacy of Sonoma Water's transmission system. Similarly, Sonoma Water worked closely with its water contractors and Marin Water as they developed their future water demand projections and their projections of the portion of their future demands to be supplied by Sonoma Water (after considering conservation, recycled water, and local supplies). Sonoma Water concludes, given the facts currently available, that the assumptions in this Plan are reasonable, and will monitor the assumptions and update subsequent Plans as warranted by new information.

Local planning agencies choosing to consider this document as a reference for analysis of water availability are encouraged to check with Sonoma Water or the appropriate water retailer for updated information regarding the assumptions on which this Plan is based.

1.4.1 Potter Valley Project

The Potter Valley Hydroelectric Project (PVP) is located on the Eel and Russian rivers in northwestern California. The Eel River Power and Irrigation Company began construction of the PVP in 1905 and completed Cape Horn Dam and Van Arsdale Diversion in 1908. In 1920, the Snow Mountain Water and Power Company began construction of Scott Dam, completed the dam in 1921, and obtained the PVP's first operational license in 1922. Pacific Gas and Electric Company (PG&E) acquired the PVP and operating license in 1930 and has owned and operated the PVP since its acquisition.

Natural flows of Eel River water and water released from Lake Pillsbury storage are diverted 12 miles downstream from Scott Dam at Cape Horn Dam and then are conveyed through a diversion tunnel and penstocks to the Potter Valley Powerhouse, which is located in the Russian River watershed. Some of the water discharged from the powerhouse is diverted into canals from which the Potter Valley Irrigation District (PVID) receives water under a water supply agreement with PG&E and its own appropriative water rights license. The remaining water discharged from the powerhouse not consumptively used by PVID flows down the East Fork Russian River into Lake Mendocino. The average annual transfer through PVP between 1922 and 2006 was approximately 150,000 ac-ft. In 2004, the Federal Energy Regulatory Commission (FERC) issued an order amending PG&E's operating license for the PVP. Since 2006, when PG&E began fully complying with the terms of the amended license, the average annual transfer of Eel River water into the Russian River Watershed has been reduced to approximately 60,000 ac-ft.

PG&E's most recent license to operate the PVP expires on April 14, 2022. As such, PG&E filed with FERC on April 6, 2017 its Notice of Intent (NOI) and Pre-application Document (PAD) initiating a renewal of the license. On January 25, 2019, PG&E filed a notice of withdrawal of its NOI and PAD and discontinuation of the Integrated Licensing Process (ILP). This withdrawal also suspended implementation of the FERC-approved study plan, such that studies were stopped abruptly with studies in various stages of completion. PG&E's withdrawal from the relicensing process became effective on February 11, 2019.

Following FERC's solicitation for other interested applicants, on June 28, 2019, Sonoma Water, Mendocino County Inland Water and Power Commission, California Trout, Inc., and the County of Humboldt filed their intent to apply for a new license for the PVP. Shortly thereafter these parties and the Round Valley Indian Tribes entered into a collaborative planning agreement to advance a two-basin solution and are collectively referred to as the NOI Parties. The NOI Parties are committed to forming a Regional Entity to acquire the PVP and operate it in a way that meets the eight Shared Objectives of a Two-Basin Solution for the mutual benefit of the Eel River and Russian River basin stakeholders (https://www.twobasinsolution.org/).

The NOI Parties came together to form a partnership to reduce uncertainty regarding the fate of the PVP after PG&E's withdrawal, and to create a positive outcome that meets the shared objectives for stakeholders in both the Eel and Russian river basins. Without the intervention of the NOI Parties, and with no other applicants, the PVP was subject to license surrender and decommissioning by PG&E. This path would likely cause substantial uncertainty in outcomes that could potentially affect both Eel and Russian river stakeholders. On August 1, 2019, FERC issued a public notice of the NOI Parties' intent to continue the ILP initiated by PG&E and file a final license application by April 14, 2022. The NOI Parties intend that a Regional Entity will be formed to file the new license application for the PVP, and the new license will reflect modifications to achieve the Shared Objectives of a Two-Basin Solution.

On May 13, 2020, the NOI Parties filed a Feasibility Study Report that included initial information on the proposed Regional Entity; a "Project Plan" of proposed changes to PVP facilities and operations that differ significantly from that which PG&E originally proposed in its PAD; and proposed revisions to the FERC-approved study plan and two new studies to inform the PVP ILP. The proposed PVP Project Plan includes removal of Scott Dam and restoration of the Lake Pillsbury area after all PVP facilities are removed; modification of the Van Arsdale Diversion; modification of Cape Horn Dam to improve fish passage; and a Revised Operational Plan that includes an instream flow schedule downstream of Cape Horn Dam, a seasonal PVP diversion schedule, and associated changes in instream flows on the East Branch Russian River.

On September 14, 2020, the NOI Parties filed an Initial Study Report with FERC. Disagreements and requests to amend the Study Plan from all stakeholders were due to FERC by November 13, 2020. The NOI Parties filed Responses to Disagreements and Amendment Requests with FERC on December 14, 2020. On March 16, 2021, FERC issued a Study Plan Determination. The NOI Parties are now in the process of seeking funding to implement the studies and intend to begin priority studies in the summer or fall of 2021.

At this time, there is significant uncertainty regarding whether the NOI Parties will be successful in obtaining a new license for the PVP and executing the substantial infrastructure improvements to PVP facilities that have been identified in the Project Plan. If the NOI Parties are unsuccessful, FERC will require PG&E to file a schedule for developing and filing a surrender application for the PVP after the current license expires in April of 2022. The surrender application will require a plan for decommissioning the PVP. Decommissioning requirements can range widely and include leaving PVP features in-place for other uses to removal of all PVP features and site restoration. The plan must address any dam safety and environmental concerns that could remain after the license is surrendered. Decommissioning of the PVP would likely result in the termination of transfers of Eel River water to the Russian River watershed.

Regardless of whether the NOI Parties are successful in obtaining a new operating license or PG&E is ordered by FERC to surrender and decommission the PVP, both outcomes will require a long and contested

process. Either outcome will likely require decades to accomplish. In the interim, PG&E or its successor will continue to operate the PVP under annual licenses issued by FERC with the same terms and conditions as the current license. Because of the significant uncertainty regarding the schedule and final disposition of the PVP, Sonoma Water is assuming the PVP will operate under annual licenses after April 2022 for the 25-year planning horizon of the 2020 Plan. In order to base the water supply analysis in this Plan on an alternate assumption, Sonoma Water would have to select a specific schedule and outcome from a universe of potentially available options. Consequently, Sonoma Water's reliance on existing conditions instead of a speculative future alternative is reasonable and appropriate. Sonoma Water will re-evaluate the assumptions for PVP in five years during preparation of its 2025 Plan when new information will likely be available.

1.4.2 Threatened and Endangered Species – Russian River Biological Opinion

Two salmonid species inhabiting the Russian River watershed (Chinook salmon and steelhead) have been listed as "threatened" under the federal Endangered Species Act (ESA), and one species—Coho salmon—has been listed as "endangered" under the federal ESA and under the California ESA. Protective regulations promulgated under the ESA prohibit the "take" of these species. "Take" is broadly defined in the ESA and its implementing regulations; it includes not only intentionally killing a protected species, but also actions that unintentionally result in actual harm to a member of a protected species, including adverse modification of habitat. Civil and criminal penalties may be imposed under the ESA for the "take" of protected species.

Because Sonoma Water's water supply facilities and operations have the potential to adversely affect the three listed species, Sonoma Water entered into a Memorandum of Understanding (MOU) in December 1997 to participate in a consultation under Section 7 of the ESA. The other signatories to the MOU included the U.S. Army Corps of Engineers (USACE), National Marine Fisheries Service (NMFS), and Mendocino County Russian River Flood Control and Water Conservation Improvement District (MCRRFCWCID). NMFS issued its Biological Opinion for Water Supply, Flood Control Operations, and Channel Maintenance conducted by the USACE, Sonoma Water, and the MCRRFCWCID in the Russian River Watershed (Russian River Biological Opinion) on September 24, 2008. The California Department of Fish and Wildlife (CDFW) issued a consistency determination on November 9, 2009, finding that the NMFS' Russian River Biological Opinion was consistent with the requirements of the California ESA and adopting the measures identified in the Russian River Biological Opinion.

The Russian River Biological Opinion requires Sonoma Water and the USACE to implement a series of actions to modify existing water supply and flood control activities that, in concert with habitat enhancement, are intended to minimize impacts to listed salmon species and enhance their habitats within the Russian River and its tributaries. In return, the Russian River Biological Opinion contains an "incidental take statement" that allows Sonoma Water to "take" listed salmonid species (within limits specified in the Russian River Biological Opinion) while operating its water transmission system and flood control activities, without violating the federal ESA. The CDFW consistency determination gives similar protection to Sonoma Water under the California ESA. The Russian River Biological Opinion is in effect until September 2023.

Sonoma Water must implement the following general categories to avoid jeopardy and maintain the Incidental Take Statement provided in the Russian River Biological Opinion:

- Modifying minimum instream flows in the Russian River and Dry Creek.
- Enhancing salmonid habitat in Dry Creek and its tributaries.
- Developing a feasibility study of a bypass pipeline around Dry Creek that would be considered if habitat enhancement is unsuccessful.
- Changing Russian River estuary management.
- Improving water diversion infrastructure at Sonoma Water's Wohler and Mirabel facilities.
- Modifying flood control maintenance activities on the mainstem Russian River and its tributaries.

- Continued participation in the Coho Broodstock program at the Warm Springs Dam Fish Hatchery.

This Plan assumes that the Russian River Biological Opinion will remain in effect and that Sonoma Water will carry out the actions required by (and be subject to the restrictions set forth in) the Russian River Biological Opinion. Although the Russian River Biological Opinion is only in effect until 2023, for purposes of this Plan, Sonoma Water assumes that it will engage in a new Section 7 consultation with NMFS and USACE and that a new Biological Opinion will be issued in the future. Sonoma Water will initiate the new Section 7 consultation with NMFS and USACE in 2021. The Plan also assumes that the requirements, terms and conditions similar to those in the existing Russian River Biological Opinion will continue to be applicable through 2045. Although it is likely that any future consultation and new Biological Opinion will have provisions that differ from the existing Russian River Biological Opinion, it is impossible for Sonoma Water to guess what new provisions might be added in future consultations. Moreover, given the long history of coordination and cooperation between Sonoma Water, USACE, NMFS, and CDFW, Sonoma Water reasonably assumes that any changes to the Russian River Biological Opinion will not affect Sonoma Water's ability to deliver the quantities of water authorized under its existing water rights from its transmission system projected in this Plan.

Sonoma Water has met the requirements of the Russian River Biological Opinion since its issuance and has worked closely with NMFS and CDFW on the implementation of projects under the Russian River Biological Opinion. (The current status of Sonoma Water activities related to the Russian River Biological Opinion is available online at https://www.sonomawater.org/biological-opinion). The long history of cooperation between Sonoma Water and NMFS/CDFW and the successful implementation by Sonoma Water of the Russian River Biological Opinion to date establish the reasonableness of Sonoma Water's assumption.

Section 5.1.5 provides more detail about the terms and conditions of the Russian River Biological Opinion with respect to water supply.

1.4.3 Future Water Supply Projects

Section 5.7 and Table 5-10 describe the expected future water supply projects that will be necessary for Sonoma Water to deliver the quantities of water from its transmission system projected in this Plan. This Plan assumes that those facilities will be approved and constructed within the timeframes described in Table 5-10. The Plan assumes the existing overall annual diversion and re-diversion limit of 75,000 ac-ft in Sonoma Water's water rights permits will be adequate to meet future demands through 2045 and that it is no longer necessary for Sonoma Water to make filings with the State Water Resources Control Board (SWRCB) to increase its annual diversion and re-diversion limit of Russian River water by 1,000 acre-feet by 2045, as was assumed in the 2015 Plan, due to conservation and the resulting lower demand projections. The need to increase the 75,000 ac-ft/yr diversion and re-diversion limit in Sonoma Water's water-right permits and the schedule for requesting any new water-right permit or changes to Sonoma Water's existing permits will be reevaluated in Sonoma Water's 2025 Plan.

1.4.4 Forecast Informed Reservoir Operations

In response to changes in the operation of the PVP in 2006 and experiences from the recent drought years of water years 2013 through 2015, Sonoma Water, Scripps Institution of Oceanography and USACE were motivated to evaluate the viability of forecast informed reservoir operations (FIRO) for Lake Mendocino to benefit water supply without impairing flood management capacity. FIRO is a reservoir-operations strategy that better informs decisions to retain or release water by integrating additional flexibility in operation policies and rules with enhanced monitoring and improved weather and water forecasts (American Meteorological Society, 2020). FIRO is a non-structural alternative to improving efficiency of multi-purpose reservoirs in that it seeks to modernize operations by incorporating state-of-the-art forecast information without the need of modifying existing infrastructure. The goal of FIRO at Lake Mendocino is to increase water supply reliability without reducing—and while possibly enhancing—the existing flood protection capacity

of Lake Mendocino and downstream flows for fisheries habitat. Flooding and water supply in the Russian River basin are driven almost entirely by atmospheric rivers (ARs), which are storms that transport large amounts of tropical and narrowly focused atmospheric moisture. Given the significance of the timing and location of where ARs make landfall, the success of FIRO at Lake Mendocino depends on research to improve AR forecasts, work that is being led by the Scripps Institution of Oceanography.

Operational decisions at Lake Mendocino are governed by rules in the USACE Coyote Valley Dam Water Control Manual (Water Control Manual). Those rules define the Lake Mendocino guide curve, which allocates available storage to a flood control pool at the top of the reservoir and a water supply pool below that. The USACE determines the schedule and amount of water released from Lake Mendocino during flood control operations when storage levels exceed the water supply storage pool. Rules of the Water Control Manual require the flood control pool to be empty except during periods of high flows downstream. The Lake Mendocino watershed experiences large variations in the annual amount and timing of precipitation, and the occurrence of a few large storms (often in the form of ARs) can be the difference between an ample water year and a drought (Dettinger et al., 2011). Water supply capture in Lake Mendocino is sensitive to yearly timing or distribution of rainfall due to the variable water supply pool. Given the constraints of the current guide curve, the lake must receive significant inflow in the spring (past March 1) to meet the minimum instream flow requirements and downstream demands for the remainder of the year, which has become increasingly challenging with the changes in PVP operations in 2006.

To guide the Lake Mendocino FIRO project, the Lake Mendocino Steering Committee (Steering Committee) was formed in 2014 with representatives from multiple disciplines (flood/ environmental/ water supply managers, engineers/hydrologists, and meteorologists/ atmospheric scientists) from multiple agencies including the USACE, Sonoma Water, Scripps Institution of Oceanography, National Oceanic & Atmospheric Agency, U.S. Geological Survey, U.S. Bureau of Reclamation, and DWR. A work plan was developed by the Steering Committee (2015) to establish a framework for evaluating whether FIRO is a viable strategy to safely manage storage levels, i.e., to maintain existing flood control protection while also improving storage reliability for water supply and ecosystems.

In July 2017, the Steering Committee completed a preliminary viability assessment (PVA) of FIRO for Lake Mendocino (FIRO Steering Committee, 2017). The evaluation of FIRO was enabled by the existence of forecasts of runoff throughout the Russian River watershed from the California Nevada River Forecast Center. Daily ensemble flow forecasts from the National Weather Service Hydrologic Ensemble Forecast System (Demargne et al., 2014) include five locations in the Upper Russian River. Retrospective ensemble forecasts (i.e., hindcasts) of Lake Mendocino inflow and the downstream watersheds were generated by the California Nevada River Forecast Center over a 26-year period from 1985 to 2010, which allowed for model simulation and evaluation of FIRO alternatives for this historical timeframe. This study found that a forecast-based decision support system could be a viable solution to meet project goals of improving the storage reliability of Lake Mendocino for water supply and ecosystems without increasing the flood risk to downstream communities.

Based on the positive outcomes of the PVA, major deviations to the Water Control Manual were requested by the Steering Committee and approved by the USACE to implement FIRO on an interim basis for water years 2019 and 2020. These major deviations implemented the Hybrid alternative evaluated in the PVA that was developed by Sonoma Water (Delaney et al., 2020), which provides 11,650 ac-ft of encroachment in the flood control pool between November 1 and the end of February. Under these major deviations, USACE operators could retain water under their discretion within this encroachment pool for water supply using FIRO decision support tools developed by Sonoma Water and Scripps, along with existing USACE procedures and protocols. However, if forecasts indicated it was unsafe, this water could be released to the existing guide curve level. Water year 2019 was a wet year with a significant flood that occurred in February, which demonstrated that a FIRO decision support system can be used to effectively manage storage levels and regulate downstream flows during flood events. Water year 2020 was a much drier year by comparison and

did not result in any flood control operations of the reservoir, but two AR events in February and transfers of Eel River water through the PVP allowed reservoir storage to reach the top of the major deviation encroachment level resulting in approximately 11,000 ac-ft of additional storage when compared to the estimated storage level if the major deviation were not implemented. Figure 1-1 below shows the observed storage at Lake Mendocino that resulted from the 2020 major deviation compared to modeled storage if the major deviation had not been in place. The additional storage resulting from the major deviation was very important considering water year 2021 has been one of the driest years on record.

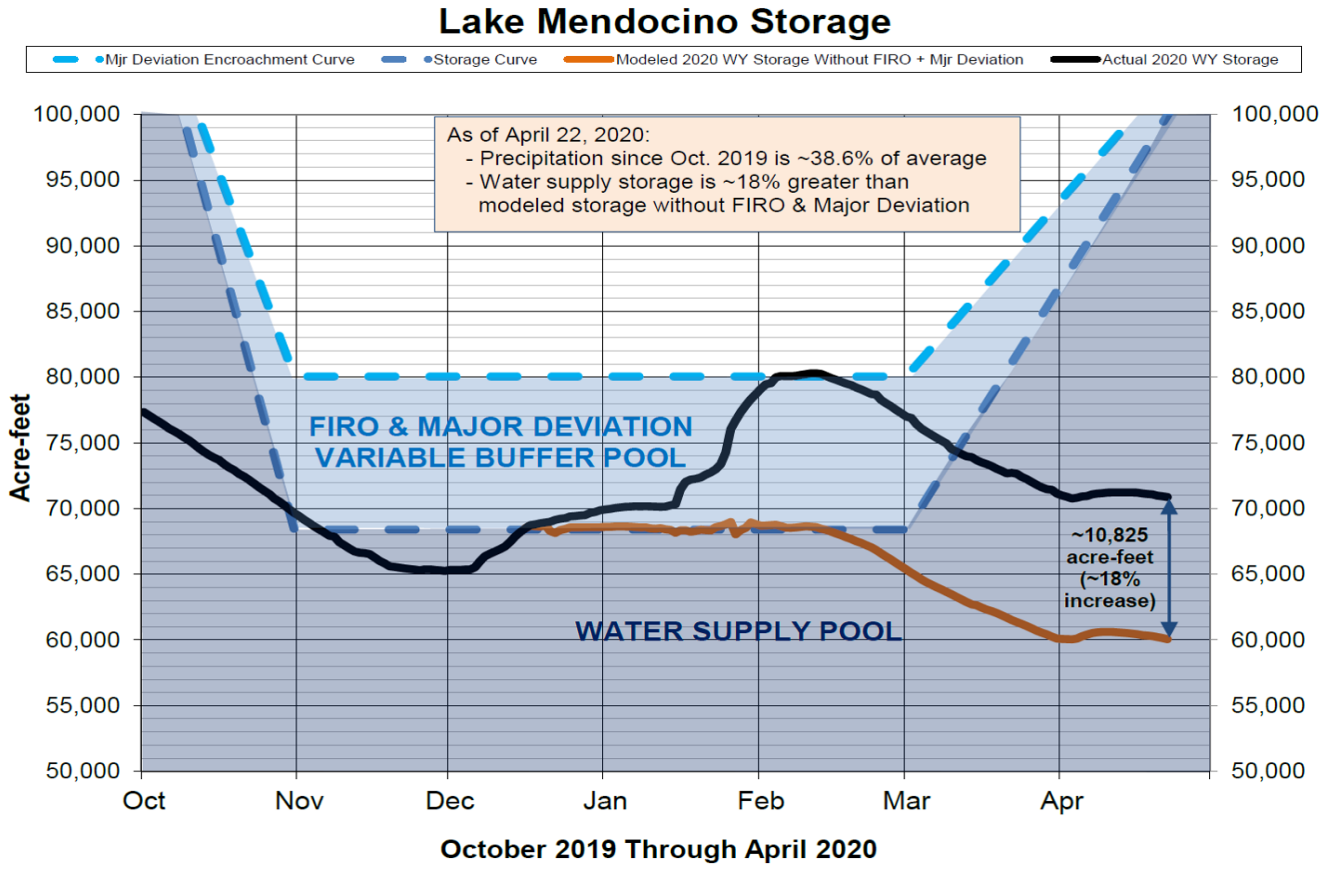

Figure 1-1. Actual 2020 Storage Levels in Lake Mendocino Compared to Modeled Storage (without FIRO)

The viability of FIRO was further evaluated by the Steering Committee with the final viability assessment (FVA) that was completed in February 2021 (Jasperse et al., 2021). This study built from the efforts of the PVA through the completion of detailed hourly time-step modeling of the operations, hydraulics and flood damages of four different water control plan alternatives (compared to current operations under the existing Water Control Manual) and included the simulation of extreme flood events of 200-year and 500-year recurrence frequencies. Results of this study supported the results of the PVA and found that all the alternatives evaluated could meet the project objectives with varying degrees of success for different criteria. This study also provided a review of ongoing and future research by project partners to support future improvements in reservoir operations.

A 5-year major deviation was requested by the Steering Committee and approved by the USACE in February 2021 for water years 2021 through 2026, which provides temporary implementation of the Modified Hybrid alternative. This alternative, developed by Sonoma Water, was evaluated in the FVA and demonstrated best overall performance for most criteria. The Modified Hybrid alternative is similar to the Hybrid alternative which was implemented in the 2019 and 2020 major deviations but allows for an earlier date (from March 1

to February 15) to begin the transition of the encroachment pool for springtime operations, which expands the flood pool encroachment from February 15 to May 11. Figure 1-2 compares the deviation requested for water years 2021 through 2026 (blue line) to the interim 2019 and 2020 deviations (green line) and existing Lake Mendocino guide curve (red dashed line).

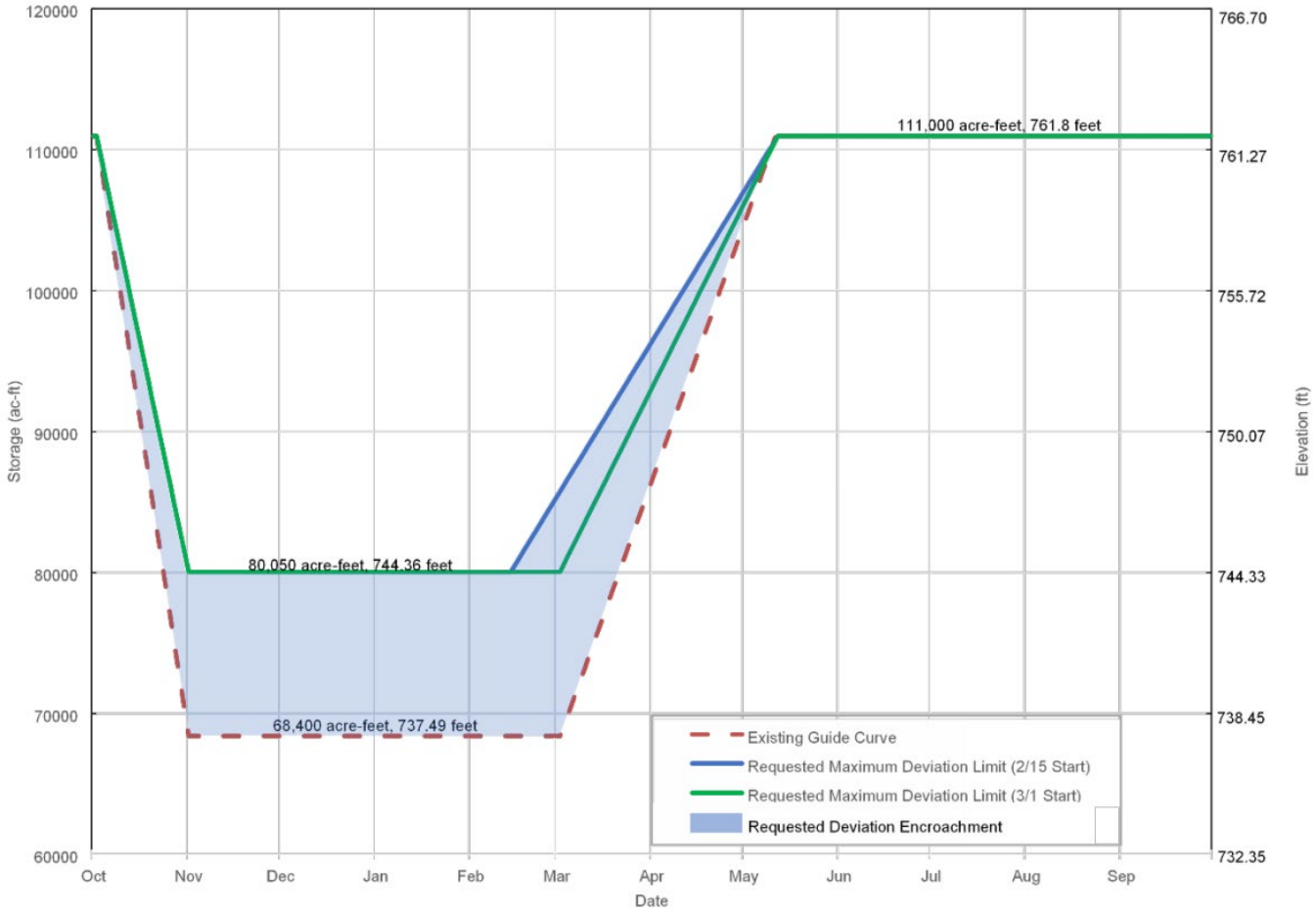

Figure 1-2. Lake Mendocino Guide Curve and Requested FIRO Deviations

The USACE has begun the process and studies required to permanently implement FIRO for Lake Mendocino through updating the Water Control Manual. This will likely be a multi-year effort which requires in-depth engineering and environmental review. It is anticipated the update will be completed within the next five years prior to the 2025 Plan. Consequently, for the water availability analysis, Sonoma Water is assuming the Lake Mendocino Water Control Manual update will be completed prior to the expiration of the current major deviation and FIRO will be in place for the 25-year planning horizon of the 2020 Plan.

1.4.5 Climate Change

Sonoma Water has investigated whether existing downscaled climate models can be used or modified to provide reliable estimates of the effects of increased concentrations of carbon dioxide and other greenhouse gases on temperatures and precipitation patterns within Sonoma Water's service area and within the watersheds from which Sonoma Water obtains its water supply during the 25-year planning horizon. As of this time, no detailed analysis of potential climate change impacts exists that considers the influence of marine layers, whose effects on the region are difficult to model. Given the uncertainties between various downscaled models, Sonoma Water evaluates ensembles of downscaled models for general water supply

planning purposes. However, there is not one model that can be selected with any confidence to be analyzed for the required format of this Plan. For these reasons, this Plan assumes that the climatic patterns and associated hydrology experienced over the past 108 years of record (1910-2017) provide a reasonable basis for the 25-year planning horizon that would impact the water supply and water demand analysis set forth in the Plan. As discussed in Section 5.9, however, the United States Geological Survey (USGS) conducted a study for Sonoma Water on the potential effects of climate change on Sonoma Water's water supply, which has provided additional information on the potential impacts of climate change on Sonoma Water's service area. Furthermore, Sonoma Water has embarked on development of a Climate Adaptation Plan that studies the potential impacts of climate change regarding both water supply reliability and Sonoma Water's transmission system facilities. This planning process analyzes the results of multiple climate models to determine a range of potential climate related impacts. A risk-based analysis of the potential impacts to the watershed and Sonoma Water facilities will be used to identify courses of action that can be pursued to mitigate the effects of climate change. The work plan was developed in 2015 and a robust planning process began in 2016. Sonoma Water expects to bring the Climate Adaptation Plan to its Board of Directors for approval in September 2021.

If one or more of the assumptions about the Potter Valley Project, Russian River Biological Opinion, FIRO, or climate change, discussed above, do not come to pass, there are other alternative projects that could be evaluated and potentially implemented to mitigate the effect of any reduction in water supply caused thereby. Although the assumptions set forth above are reasonable and supported by substantial evidence at the present, certainty of outcomes over the 25-year planning horizon of this Plan is not possible. For this reason, this Plan will be updated in 2025 and every five years thereafter, so that new information can be considered, and Sonoma Water will make interim modifications to the Plan as warranted. Customers of Sonoma Water, local planning agencies, and other persons relying on this Plan as a reference for analysis of water supply availability are encouraged to check with Sonoma Water for updated information regarding these assumptions.

Section 2

Plan Preparation

This section presents the basis for preparing the Plan, Plan identification, coordination and outreach, and Plan adoption and submittal.

2.1 Basis for Preparing the Plan

Sonoma Water is a wholesale urban water supplier. While Sonoma Water is extensively involved in regional planning, individual reporting is selected for this Plan as identified in Table 2-1. Each of the retail water agencies has developed their own Plan. Sonoma Water has selected to report on a calendar year basis using ac-ft as the unit of measure as noted in Table 2-2.

Table 2-1. Plan Identification (DWR Table 2-2)

✓	Individual UWMP
	Water supplier is also a member of a Regional UWMP
	Water supplier is also a member of a Regional Alliance
	Regional UWMP (RUWMP)

Table 2-2. Agency Identification (DWR Table 2-3)

Type of Supplier (select one or both)	
✓	Supplier is a wholesaler
	Supplier is a retailer
Fiscal or Calendar Year (select one)	
✓	UWMP Tables are in calendar years
	UWMP Tables are in fiscal years
Units of Measure Used in UWMP	
Unit	ac-ft

2.2 Coordination and Outreach

The Act requires Sonoma Water to coordinate with its retail water agency customers as well as with other pertinent agencies and the community.

2.2.1 Wholesaler and Retailer Coordination

As noted in Table 2-3, Sonoma Water coordinated the preparation of its Plan with its retail water agency customers listed in Table 2-4 by identifying and quantifying water supplies available to each retailer from Sonoma Water. The retailers provided their projected use of wholesale water as well as their population projections. Sonoma Water and its customers coordinated the preparation of their respective Plans at the monthly meetings of the Water Advisory Committee and the Technical Advisory Committee (TAC). Appendix A includes documentation of water supplier coordination.

Table 2-3. Wholesale: Water Supplier Information Exchange (DWR Table 2-4)	
✓	Supplier has informed more than 10 other water suppliers of water supplies available in accordance with CWC Section 10631. Completion of the table below is optional. If not completed, include a list of the water suppliers that were informed.
2-3 – 2-4	Provide page number for location of the list. Table 2-4 lists transmission system customers under 'Water Contractors' and 'Other Transmission System Customers and Marin Water' categories and non-transmission system customers under 'Russian River Customers (Direct Diverters)' category.
	Supplier has informed 10 or fewer other water suppliers of water supplies available in accordance with CWC Section 10631.Complete the table below.

2.2.2 Coordination with Other Agencies and the Community

Sonoma Water coordinated the preparation of this Plan with its customers, as well as many other relevant agencies. Table 2-4 provides a summary of Sonoma Water's coordination efforts with the appropriate agencies.

Sonoma Water encouraged community and public interest involvement in the Plan update through public notifications and website and social media postings. Letters 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. The coordination letter and outreach list are provided in Appendix A.

Sonoma Water also included articles about the Plan update process in its monthly electronic newsletter (SCWA E-News) in March and April 2021. Sonoma Water utilized social media as a part of its Plan update outreach strategy. A special Plan preparation e-mail account (uwmp@scwa.ca.gov) was established at Sonoma Water to help coordinate public input. Sonoma Water's external public website (www.sonomawater.org/uwmp) featured a special Plan preparation web page that included public notices, Plan preparation schedule, and staff contact information.

Table 2-4. Coordination of Plan Preparation							
	Was notified that Plan development was initiated	Participated in developing the Plan	Commented on the draft Plan	Attended Sonoma Water public meetings	Was contacted for assistance	Was sent a copy of the draft Plan	Was sent a notice of public meeting and intention to adopt
Water Contractors							
City of Cotati	✓	✓			✓	✓	✓
North Marin Water District	✓	✓	✓	✓	✓	✓	✓
City of Petaluma	✓	✓			✓	✓	✓
City of Rohnert Park	✓	✓			✓	✓	✓
City of Santa Rosa	✓	✓			✓	✓	✓
City of Sonoma	✓	✓			✓	✓	✓
Valley of the Moon Water District	✓	✓	✓		✓	✓	✓
Town of Windsor	✓	✓			✓	✓	✓
Other Transmission System Customers and Marin Water							
Forestville Water District	✓				✓	✓	✓
Marin Water	✓	✓			✓	✓	✓
California American Water Company (Larkfield)	✓				✓	✓	✓
Penngrove Water Company	✓				✓	✓	✓
Lawndale Mutual Water Company	✓				✓	✓	✓
Kenwood Water Company	✓				✓	✓	✓
Russian River Customers (Direct Diverters)							
Camp Meeker Recreation and Park District	✓				✓	✓	✓
Occidental Community Services District	✓				✓	✓	✓
City of Healdsburg	✓				✓	✓	✓
Counties							
County of Marin	✓					✓	✓
County of Sonoma	✓					✓	✓
County of Mendocino	✓					✓	✓

Table 2-4. Coordination of Plan Preparation							
	Was notified that Plan development was initiated	Participated in developing the Plan	Commented on the draft Plan	Attended Sonoma Water public meetings	Was contacted for assistance	Was sent a copy of the draft Plan	Was sent a notice of public meeting and intention to adopt
Regional Agencies							
Mendocino County Russian River Flood Control and Water Conservation Improvement District (MCRRFCWCID)	✓					✓	✓
Santa Rosa Plain Groundwater Sustainability Agency							✓
Sonoma Valley Groundwater Sustainability Agency							✓
Petaluma Valley Groundwater Sustainability Agency							✓
State Agencies							
North Coast Regional Water Quality Control Board	✓					✓	✓
San Francisco Bay Regional Water Quality Control Board	✓					✓	✓
State Water Resources Control Board	✓					✓	✓
California Department of Fish and Wildlife (CDFW)	✓					✓	✓
Federal Agencies							
U.S. Army Corps of Engineers (USACE)	✓					✓	✓
Federal Energy Regulatory Commission (FERC)	✓					✓	✓
National Marine Fisheries Service (NMFS)	✓					✓	✓
Other							
City of Cloverdale	✓					✓	✓
City of Ukiah	✓					✓	✓
City of Sebastopol	✓					✓	✓
Potter Valley Irrigation District	✓					✓	✓
Redwood Valley County Water District	✓					✓	✓
Sweetwater Springs Water District	✓					✓	✓
Pacific Gas & Electric (PG&E)	✓					✓	✓
General public	✓		✓	✓		✓	✓

2.2.3 Adoption and Submittal

Cities and counties within the service area were notified that the Plan was being prepared more than 60 days prior to the public hearing, as noted in Table 2-5 and documented in Appendix B with some example notifications. Public hearing notifications were published in the Santa Rosa Press Democrat, in the April 2021 issue of Sonoma Water monthly public electronic newsletter (SCWA E-News), on Sonoma Water's website, and on its social media sites. Copies of the draft Plan were made available for public inspection at Sonoma Water's Administration building, the Clerk of Sonoma Water's Board of Directors, and Sonoma Water's website.

Table 2-5. Wholesale: Notification to Cities and Counties (DWR Table 10-1)

✓	Supplier has notified more than 10 cities or counties in accordance with CWC Sections 10621 (b) and 10642. Completion of the table below is not required. Provide a separate list of the cities and counties that were notified. Location of this list in the UWMP: Table 2-5	
Page 2-5	Provide the page or location of this list in the UWMP.	
	Supplier has notified 10 or fewer cities or counties. Complete the table below.	
City Name	**60 Day Notice**	**Notice of Public Hearing**
City of Santa Rosa	✓	✓
City of Sonoma	✓	✓
City of Cotati	✓	✓
Town of Windsor	✓	✓
City of Rohnert Park	✓	✓
City of Petaluma	✓	✓
City of Novato	✓	✓
City of Sebastopol	✓	✓
City of Healdsburg	✓	✓
City of Cloverdale	✓	✓
City of Ukiah	✓	✓
County Name	**60 Day Notice**	**Notice of Public Hearing**
Marin County	✓	✓
Sonoma County	✓	✓
Mendocino County	✓	✓

The public hearing was held on May 11, 2021 as agenda item 58 to provide an opportunity for all residents and those employed in the service area to learn and ask questions about their water supply and Sonoma Water's plans for providing a reliable, safe, high-quality water supply. One set of written comments and three verbal comments were received. A video of the public hearing and Plan adoption can be viewed at the County of Sonoma's web page for Board of Supervisors meetings (https://sonoma-county.legistar.com/Calendar.aspx). This Plan and the WSCP were both adopted as separate actions by Sonoma Water's Board of Directors on May 11, 2021 after the public hearing was closed. Copies of the adoption resolutions are provided in Appendix B and D.

The 2020 Plan was submitted to DWR, the California State Library, and Sonoma, Mendocino, and Marin Counties and pertinent cities within 30 days after adoption. The Plan was made available for public review on Sonoma Water's website within 30 days after filing a copy of the Plan with DWR.

Section 3

System Description

This section describes Sonoma Water's history and service area, including current and projected population, land uses, climate, and socioeconomic factors.

3.1 General Description

Sonoma Water was created as a special district in 1949 by the California Legislature to provide flood protection and water supply services. Legislation enacted in 1995 added the treatment and disposal of wastewater to Sonoma Water's responsibilities.

The Sonoma County Board of Supervisors acts as Sonoma Water's Board of Directors. Sonoma Water is a separate legal entity created by State law, having specific limited purposes and powers, and separate sources of funding. Sonoma Water is thus different from County departments, which are created by the Board of Supervisors for administrative purposes but are not separate legal entities.

Sonoma Water's service area covers a large part of Sonoma County (County), as well as the eastern portion of Marin County. The service areas of Sonoma Water's customers are shown on Figure 3-1, as well as some of Sonoma Water's water supply, storage, and transmission facilities. Sonoma Water's infrastructure is distributed over a large geographic area with varying topography, including hills, mountains, valleys, and bay flats.

Although there is a large agricultural presence in the region, Sonoma Water's service area is generally characterized as urban, with development mostly concentrated within cities along Highway 101 and the City of Sonoma. Voter-approved urban growth boundaries and open space preserves have maintained separation between cities and the surrounding agricultural land and natural scenery.

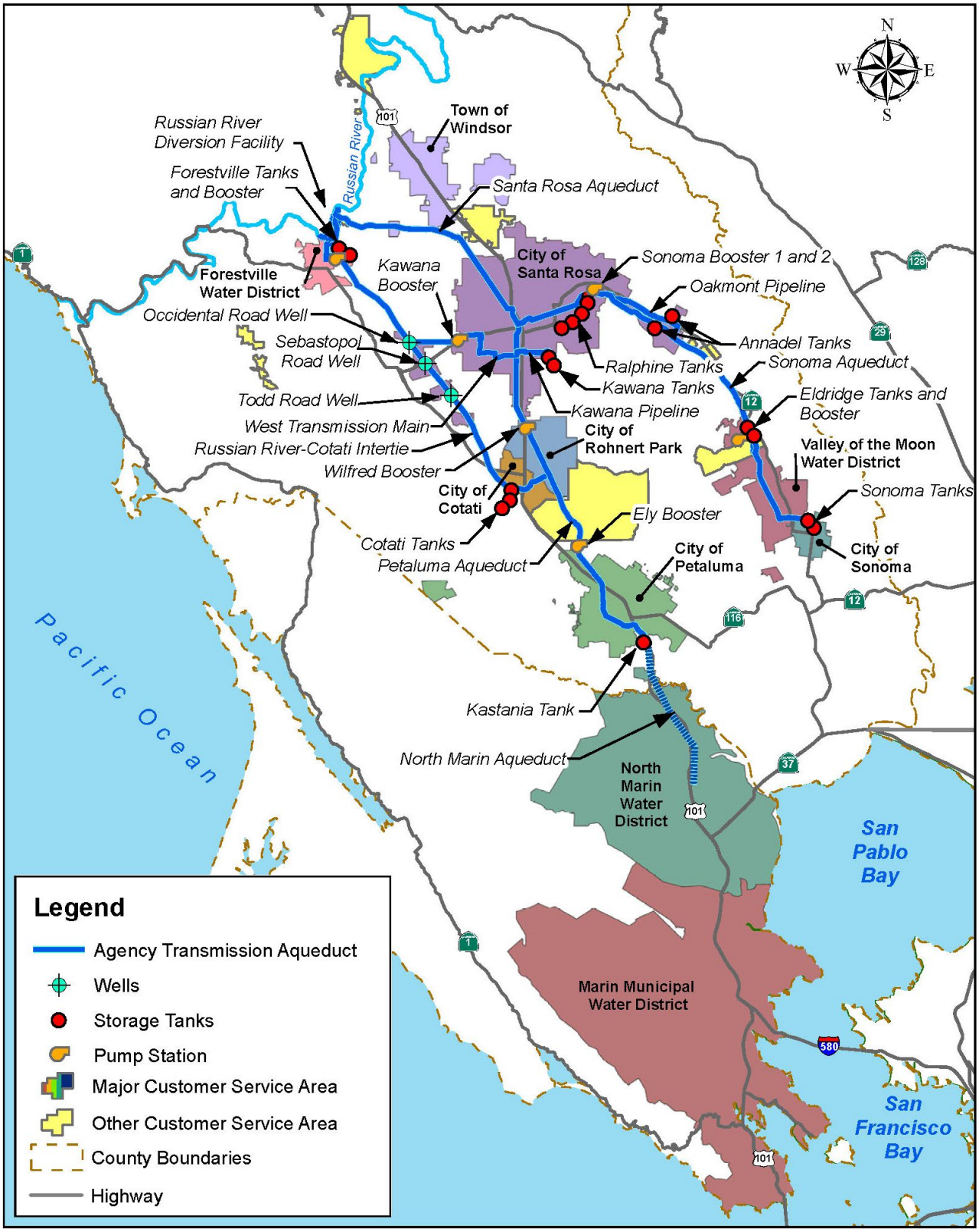

Figure 3-1. Sonoma Water Service Areas and Water Transmission System Facilities

3.2 Service Area Climate

The climate in the service area influences water demands, particularly outdoor water use, and the amount of surface water supplies. The climate of the Russian River watershed, the source of the majority of Sonoma Water's water supply, influences the magnitude and timing of Russian River flows. The Russian River watershed is also influenced by its proximity to the Pacific Ocean. In common with much of the California coastal area, the year is divided into wet and dry seasons. Approximately 93 percent of the annual precipitation normally falls during the wet season, October to May, with a large percentage of the rainfall typically occurring during three or four major winter storms. These major storms often come in the form of an atmospheric river, which is the horizontal transport of large amounts of water vapor through the atmosphere along a narrow corridor. Although brief, atmospheric rivers produce about 45 percent of the region's annual precipitation on average. Winters are cool, and below-freezing temperatures seldom occur. Summers are warm and the frost-free season is fairly long. A significant part of the region is subject to marine influence, including periods of fog and low cloud cover west of the Sonoma Mountains during the summer months. Prevailing winds are from the west and southwest.

Table 3-1 summarizes the monthly average climatic data at the Santa Rosa climate station operated under DWR's California Irrigation Management Information System (CIMIS) for January 1990 through December 2020 (CIMIS, 2020). Located within the inland valleys, six CIMIS weather stations in the service area typically report an annual average of about 45 inches of water being transferred to the atmosphere through evapotranspiration (ETo). Warm seasons produce the highest levels of ETo, with some areas within the service area recording maximum ETo values near 55 inches annually (Table 3-2). According to the National Center for Environmental Information (NCEI), from 1990 - 2020 daily minimum and maximum temperatures, on average, ranged from about 45ºF to 73ºF within the service area (NCEI cooperative stations: Petaluma 46826, San Rafael 47880, Santa Rosa 47965, Sonoma 48351, and Sonoma County Airport 23213). Figure 3-2 displays the distribution of CIMIS and NCEI weather stations throughout the service area.

The unique geographical characteristics of Sonoma County result in a number of microclimates throughout the region, some of which are not captured by the CIMIS and NCEI weather stations. For example, as shown in Figure 3-3, average annual precipitation is as high as 80 inches in the mountainous coastal region of Sonoma County. The quantity of rainfall over Sonoma and Marin counties increases with elevation, with the greatest precipitation occurring over the highest ridges (in the northwest potion of the County). The valleys, where the majority of the water users are located, receive considerably less rainfall with some areas averaging just over 20 inches of precipitation annually.

Figure 3-2. Climate Stations Distribution

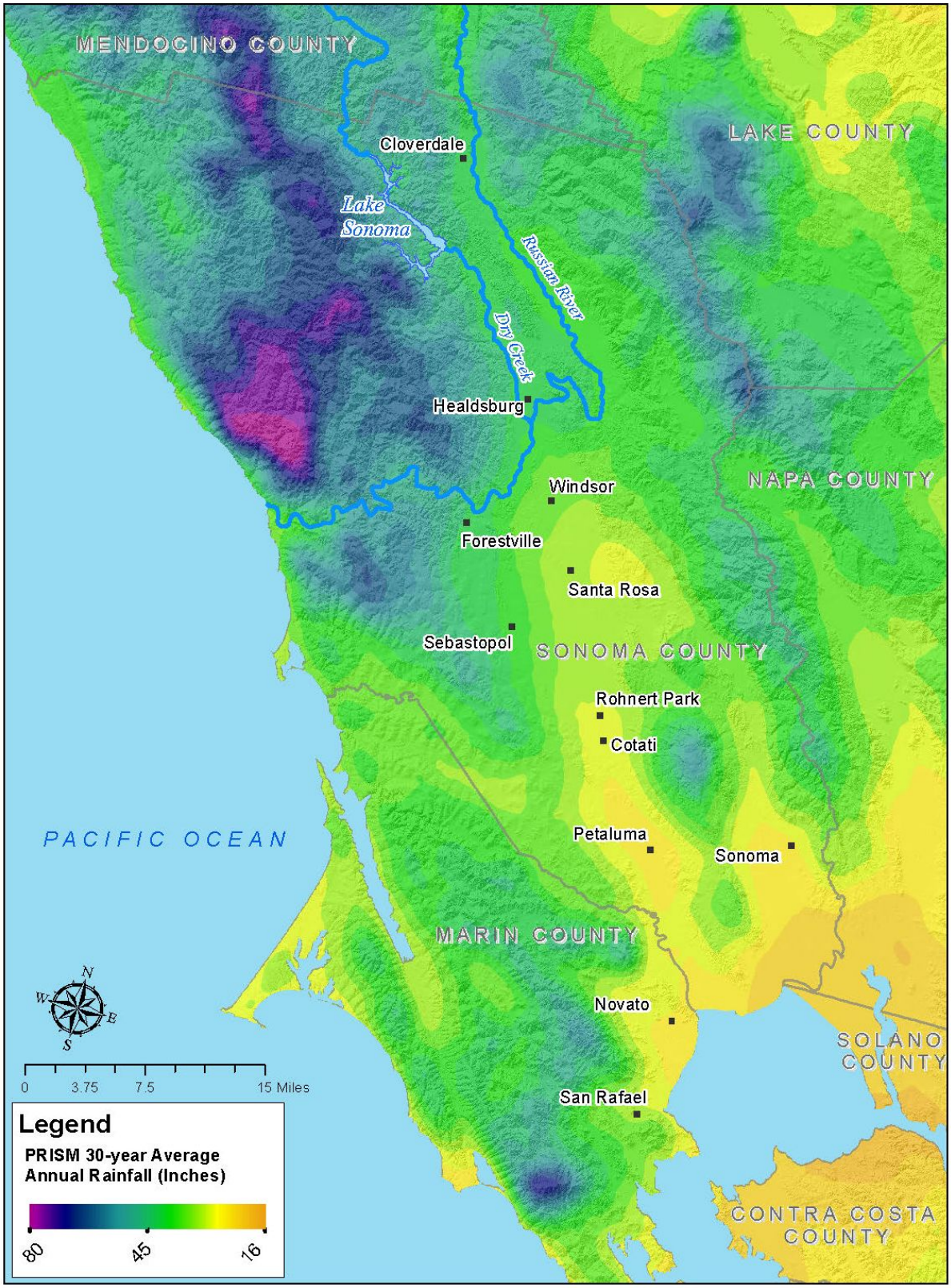

Figure 3-3. Precipitation Map

Table 3-1. Climate			
	Standard average monthly ET_o, in.	Average monthly rainfall, in.	Average monthly temperature, °F
January	1.12	6.03	46
February	1.74	5.57	48
March	3.08	4.18	50
April	4.34	1.96	53
May	5.46	1.30	57
June	6.20	0.74	61
July	6.42	0.22	62
August	5.77	0.23	62
September	4.60	0.23	61
October	3.29	1.51	57
November	1.62	3.24	50
December	1.06	6.27	45
Annual	44.70	31.49	54

Note: Data represent the monthly average from January 1990 to December 2020 and was recorded from Santa Rosa CIMIS Station 83. Data obtained from CIMIS website (https://cimis.water.ca.gov/) on January 25, 2021.
ET_o, or reference evapotranspiration, is the loss of water from evaporation and transpiration from plants and is specifically related to turf.

Table 3-2. Annual Evapotranspiration throughout Service Area (Inches)						
	Santa Rosa #83	Bennett Valley #158	Windsor #103	Petaluma East #144	Point San Pedro #157	Black Point #187
	1990-2020	2001-2020	1991-2012; 2018-2020	2000-2020	2003-2020	2004-2020
Minimum	36.98	39.95	42.51	32.38	40.03	39.77
Maximum	50.57	47.7	49.74	48.25	48.56	54.92
Average	44.70	44.51	45.88	43.46	45.47	48.95

Note: Data represent annual evapotranspiration during the specified time period for each CIMIS station. Data obtained from CIMIS website (https://cimis.water.ca.gov/) on January 25, 2021.

3.2.1 Climate Change

In 2012 the USGS, in collaboration with Sonoma Water, completed a study of the effects of climate change in the Russian River Valley and the Santa Cruz Mountains (USGS, 2012). The study was based on analyzing Global Circulation Model (GCM) projections that had been downscaled to a 270-meter spatial grid cell resolution and a daily temporal scale resolution from 2000 to 2099. The future climate projections were then used as the climatic input into a hydrologic model developed by the USGS of the Russian River Basin (Basin Characterization Model) to analyze how projected changes in climate, potential evapotranspiration, recharge, runoff, and climatic water deficit may affect basin hydrology. Findings of this work showed significant variability to changes in precipitation and hydrologic response in the Russian River due to climate

change. Some future climate projections predicted drier conditions, while others predicted wetter conditions. Hydrologic models predicted reduced early and late wet season runoff for the end of the century for both wetter and drier climate projections, which could result in an extended dry season.

This study further found that all of the GCM projections analyzed predicted continual warming for the region. Summers are projected to be longer and drier in the future than in the past regardless of precipitation trends. Furthermore, water supply could be subject to reduced reliability due to greater variability in precipitation, increased evapotranspiration rates, and climatic water deficit during the extended summers. In 2015, the USGS developed unimpaired flows for the Russian River and the upper portion of the Eel River (USGS, 2015) under historical (1910-2013) and projected future (2001-2099) climates. Sonoma Water continues to work with the USGS and other partners in the region to expand climate change modeling to include updated GCM projections and other model refinements.

3.3 Service Area Population, Demographics, and Socioeconomic Factors

Table 3-3 provides the total current and projected populations through the year 2045 for Sonoma Water's customers. Table 3-4 presents the population of each individual retail water agency. The water contractors and Marin Water provided the population estimates to Sonoma Water that are contained in Table 3-4, developed during the preparation of their own urban water management plans. Sonoma Water developed the population projections for its other customers based on census tracts and Association of Bay Area Governments (ABAG) data, as described in Section 4.1.2.

Table 3-3. Wholesale: Population - Current and Projected (DWR Table 3-1)

Population Served	2020	2025	2030	2035	2040	2045
	629,414	664,644	700,229	722,685	747,802	773,926

Table 3-4. Population by Retail Agency – Current and Projected						
Water Contractors [a]	2020	2025	2030	2035	2040	2045
City of Cotati	7,945	8,490	9,475	9,695	10,770	11,964
North Marin Water District	61,658	63,389	65,440	67,838	68,631	69,432
City of Petaluma	63,168	65,894	67,285	68,505	69,980	71,486
City of Rohnert Park	43,069	50,220	52,720	53,895	56,050	58,291
City of Santa Rosa	173,305	186,445	204,795	213,615	223,060	232,923
City of Sonoma	10,880	11,235	11,570	11,675	11,905	12,140
Valley of the Moon Water District	31,000	33,396	35,977	38,757	41,753	44,979
Town of Windsor	29,585	33,554	36,253	39,040	42,027	45,047
Other Water Transmission System Customers [b]						
Larkfield (California American Water Company)	7,270	7,630	8,019	8,061	8,378	8,707
Forestville Water District	3,250	3,397	3,533	3,556	3,576	3,597
Kenwood	1,000	1,039	1,078	1,109	1,116	1,122
Lawndale	218	227	235	242	243	245
Penngrove	1,706	1,790	1,862	1,947	1,989	2,032
Marin Water [a]	195,360	197,939	201,987	204,750	208,324	211,961
Total	629,414	664,644	700,229	722,685	747,802	773,926

a. As provided by the water contractors and Marin Water.

b. Estimated by Sonoma Water using historical data, available population growth projections through ABAG/Metropolitan Transportation Commission, and assumed available local supply projections, as described in Section 4.1.2.

3.3.1 Other Social, Economic, and Demographic Factors

Within Sonoma Water's service area, employment is primarily in the public sector and in the service and manufacturing industries. Regionally, employment in the agricultural industry is associated with vineyards, livestock, orchards, silage crops, and timber. The primary industrial activities in the region include telecommunications, wine production, recreation, tourism, timber and other agricultural product processing, energy production, and miscellaneous manufacturing. The urban water management plans developed by Sonoma Water's customers should be consulted for descriptions of socioeconomic factors in their retail service areas.

Other demographic factors that affect water management planning include the uncertainty in estimating future population growth and per capita water use. The actual population growth that has occurred since the preparation of the 2015 Plan has been generally less than anticipated. Additionally, the adoption of 2020 per capita demand targets in 2010 along with conservation programs enacted during the drought in 2014 and 2015 have resulted in a significant decline in per capita water use, which has not fully rebounded. Long-term impacts of the COVID-19 pandemic and associated economic downturn may also impact future water use. The uncertainties with both future population and per capita water use are considered in Sonoma Water's water management planning.

3.4 Land Uses within Service Area

Land use within Sonoma Water's service area is characterized as urbanized. Residential development is more densely concentrated in the cities of Santa Rosa, Rohnert Park, Petaluma, Windsor, Cotati, and Sonoma, with Forestville, Valley of the Moon, and Larkfield-Wikiup having less concentrated development. In Marin County, residential development is concentrated along Highway 101 and adjacent to San Pablo Bay.

Sonoma County, by policy, concentrates urban growth within incorporated cities, not in the unincorporated area. Sonoma County has a voter approved County-wide urban growth boundary and each city has an urban growth boundary. There are voter-approved taxes supporting open space acquisition in Sonoma and Marin counties. Most of Sonoma Water's water contractors have locally approved growth management ordinances.

Section 4

System Water Use

This section presents the current and projected wholesale water demands of Sonoma Water's wholesale water customers and direct diverters, transmission system losses, and climate change impacts on water use.

4.1 Evaluation of Portion of Projected Total Water Demand to be met by Sonoma Water

This section describes: (1) the general process that Sonoma Water's retail water contractors and Marin Water employed to develop population and water demand projections; and (2) Sonoma Water's analysis of population and water demands for other Sonoma Water transmission system customers[6] and Russian River customers.

4.1.1 Evaluation of Water Demand Projections by Sonoma Water's Water Contractors and Marin Water

Sonoma Water coordinated with its water contractors and Marin Water as they developed population and water demand projections through 2045 as part of their urban water management plans. The projections of water demands presented in this Plan include the combined results of these individual evaluations, each of which was developed in coordination with the local land use authority and considers the impacts of climate change (particularly hotter, drier weather) on water demands. Details regarding demand projections, water conservation savings, recycled water use, and local supplies are provided in each of the water contractor's and Marin Water's urban water management plans. Their urban water management plans also contain their analysis of low-income water demand projections and per capita demand baselines and targets as defined by Senate Bill (SB) X7-7, along with regional compliance with the 2020 per capita water use target.

To identify the portion of future water demand that Sonoma Water, as a wholesaler, is projected to supply to the water contractors and Marin Water, the following process was followed:

1. Total water demand was estimated by each water contractor and Marin Water based on projected population and employment growth, planned developments and land uses, and estimated conservation savings.
2. The water contractors and Marin Water evaluated the amount of the remaining water demand that could be offset by their respective projected recycled water and local supplies.
3. The remaining net demand represents the portion of water supply projected to be provided by Sonoma Water. The projected portion of Marin Water's water demands to be met by Sonoma Water was based on Marin Water's analysis presented in its urban water management plan.

Sonoma Water, the water contractors, and Marin Water coordinated with each other throughout this evaluation process.

[6] Sonoma Water only developed population and water demand projections for customers that are not required to prepare urban water management plans because they are small and are exempt from the Act. Sonoma Water customers that do not prepare urban water management plans due to exemptions based on their size include the Forestville Water District, California-American Water Company (with respect to the Larkfield District), the Kenwood Water Company, Lawndale Mutual Water Company, Penngrove Water Company, the County of Sonoma, the State of California, and Santa Rosa Junior College.

4.1.2 Evaluation of Water Demand Projections for Other Water Transmission System Customers and Russian River Customers

Sonoma Water developed population and water demand projections for other water transmission system customers and Russian River customers that are not required to prepare an urban water management plan given their small number of connections and/or annual deliveries. The projected demands for the other transmission system 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. Using the Census Tract population projections dataset (available at: https://opendata.mtc.ca.gov/), the population growth rates for the customer service areas were estimated based on analyses of the overlapping Census Tracts. 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.

4.2 Water Uses

Sonoma Water provides wholesale water to its customers, which then retail water directly to different water user categories, including single-family, multi-family, commercial, industrial, institutional/governmental, and landscape irrigation. The information on the water demands of each user type is contained in the individual urban water management plans prepared by Sonoma Water's customers.

Table 4-1 presents the 2020 water demands by user type that are supplied by Sonoma Water. Table 4-2 presents the projected demands in five-year intervals through 2045. Table 4-3 breaks down the current and projected wholesale water sales to other agencies for each of Sonoma Water's water contractors, other transmission system customers and Russian River customers. Customers' demand projections are based on information provided by Sonoma Water's customers as described in Section 4.1. Tables 4-1, 4-2, and 4-3 do not include demands that are met by water conservation or are supplied by the customers' recycled water or local supplies (consisting of groundwater, and, in the case of North Marin Water District [NMWD] and Marin Water, surface water). The total amount of water projected to be provided by Sonoma Water is presented in Table 4-4. Sonoma Water does not purchase water from other agencies.

Table 4-1. Wholesale: Demands for Potable and Non-Potable Water – Actual (DWR Table 4-1)			
Use Type	2020 Actual		
	Additional Description (as needed)	Level of Treatment When Delivered	Volume, ac-ft
Sales to other agencies	Includes sales under water rights that are not delivered via transmission system	Drinking water (47,765 ac-ft) / raw water (3,290 ac-ft)	51,055
Transfers to other agencies			0
Exchanges to other agencies			0
Groundwater recharge			0
Saline water intrusion barrier			0
Agricultural irrigation		Drinking Water	98
Wetlands or wildlife habitat			0
Retail demand for use by suppliers that are primarily wholesalers with a small volume of retail sales		Drinking Water	176
Losses	Only includes Sonoma Water transmission system losses		1,463
Other Potable			0
Other Non-Potable			0
Other			0
Total			52,793

Table 4-2. Wholesale: Use for Potable and Raw Water – Projected (DWR Table 4-2)						
Use Type	Additional Description (as needed)	Projected Water Use, ac-ft				
		2025	2030	2035	2040	2045
Sales to other agencies	See Table 4-3 for breakdown by agency. Includes sales under water rights that are not delivered via transmission system	62,882	66,846	68,278	70,015	71,844
Transfers to other agencies		0	0	0	0	0
Exchanges to other agencies		0	0	0	0	0
Groundwater recharge		0	0	0	0	0
Saline water intrusion barrier		0	0	0	0	0
Agricultural irrigation		98	98	98	98	98
Wetlands or wildlife habitat		0	0	0	0	0
Retail demand for use by suppliers that are primarily wholesalers with a small volume of retail sales	Small non-surplus customers include the County of Sonoma, the State of California, and Santa Rosa Junior College	256	336	416	496	576
Losses	Only includes Sonoma Water transmission system losses	1,783	1,897	1,933	1,979	2,029
Other Potable						
Other Non-Potable						
Other		0	0	0	0	0
Total		65,020	69,177	70,725	72,588	74,547

Table 4-3. Sonoma Water Sales to Contractors and Customers, ac-ft/yr						
	Actual [a]	Projected [b]				
Water Contractors [c]	2020	2025	2030	2035	2040	2045
City of Cotati	592	931	1,007	1,013	1,107	1,215
North Marin Water District	6,831	8,866	9,031	9,245	9,254	9,284
City of Petaluma	7,388	8,706	8,870	8,973	9,255	9,576
City of Rohnert Park	2,424	5,199	5,289	5,306	5,412	5,538
City of Santa Rosa	18,174	20,220	21,643	22,212	22,889	23,657
City of Sonoma	2,000	2,168	2,194	2,197	2,213	2,233
Valley of the Moon Water District	2,243	2,897	3,001	3,120	3,252	3,377
Town of Windsor [d]	3,726	4,235	4,587	4,979	5,370	5,669
Other Water Transmission System Customers [e]						
Larkfield (California American Water Company)	280	308	339	329	351	373
Forestville Water District	422	441	459	462	465	467
Kenwood	7	12	16	20	21	21
Lawndale	60	64	67	69	69	70
Penngrove	200	210	218	228	233	238
Marin Water [f]	6,668	8,500	10,000	10,000	10,000	10,000
Other Customers [g]	274	354	434	514	594	674
Russian River Customers	40	125	125	125	125	125
Total	51,330	63,237	67,280	68,792	70,609	72,518

a. Actual values calculated for calendar year based on adjustment to initial and final billing period.

b. Because the figures in this table from 2025 to 2045 are projections, actual local water supply development amounts may vary over time from those estimated for purposes of the figures set forth in the table, as may the manner in which contractors achieve those local water supply amounts (i.e., projected savings and local supply/recycled water may vary)

c. Projections of future demand in this table represent the water demand figures provided by the water contractors as developed for their individual urban water management plans less savings due to an individual water contractor's water conservation and local water supply development (groundwater, recycled water, or surface water). Pursuant to the Restructured Agreement for Water Supply, the water contractors have also agreed to use their best efforts to secure the implementation of recycled water or local supply projects to reduce the water contractors' collective deliveries from the Transmission System.

d. Includes deliveries to Town of Windsor via Sonoma Water's transmission system and direct river diversions by the Town of Windsor under Sonoma Water's water rights permits.

e. Projections based on historical deliveries, population growth estimates derived from the Association of Bay Area Governments/Metropolitan Transportation Commission 2040 Regional Plan data by Census Tract, and assumed local supply projections, where applicable.

f. Projections provided by Marin Water.

g. 2020 actual sales include surplus water sales and small non-surplus customers (the County of Sonoma, the State of California, and Santa Rosa Junior College).

Table 4-4. Wholesale: Total Water Use (Potable and Non-Potable), ac-ft (DWR Table 4-3)						
	2020	2025	2030	2035	2040	2045
Potable and Raw Water From Tables 4-1 and 4-2	52,793	65,020	69,177	70,725	72,588	74,547
Recycled Water Demand	0	0	0	0	0	0
Total Water Demand	52,793	65,020	69,177	70,725	72,588	74,547

As noted above, the future water demand estimates in Table 4-4 are based upon information provided by Sonoma Water's customers and reflect projected population growth and water conservation savings. If the actual future population in Sonoma Water's customers' service areas is less than that estimated by the customers or additional water conservation programs are implemented reducing demand, then the actual future water demands may be less than those shown in Table 4-4.

4.3 Transmission System Losses

As a wholesaler, Sonoma Water is not required to perform water loss audits. However, Sonoma Water estimates water losses in the transmission system for 2020 were three percent of the total volume produced, as reported in Table 4-1. The water loss was calculated using the American Water Works Association water audit methodology and consists of real and apparent losses between the diversion location on the Russian River to the points of connection with Sonoma Water's customers.

4.4 Climate Change Considerations

Sonoma Water's customers' individual demand projections consider how increased temperatures and prolonged dry periods associated with climate change may impact demands. For example, climate change may impact landscape water use due to projected temperature increases that will likely require more water to maintain a healthy landscape. Sonoma Water and its customers continue to promote locally appropriate plant material through its Water Use Efficiency Programs, while offering incentives to replace high water use plants that will require more water as the impacts of climate change develop.

Section 5

System Supplies

This section describes the water supply sources and quantities of Sonoma Water's water supplies. The urban water management plans of Sonoma Water's customers should be consulted for details on their individual local water supplies.

The Russian River provides most of Sonoma Water's water supply with groundwater from the Santa Rosa Plain as a secondary source. Almost all of Sonoma Water's customers have other water supplies, in addition to those provided by Sonoma Water, including local surface water, local groundwater, and recycled water. These local supplies are accounted for in these entities' retail urban water management plans. With the exception of limited quantities of water sold by Sonoma Water to government entities, "surplus water" irrigation customers and the provision of fire protection service, the water supplied by Sonoma Water through the water transmission system is sold wholesale to retail water suppliers.

5.1 Surface Water

Sonoma Water's Russian River water supply is controlled and influenced by a variety of agreements and decisions. This section describes the water rights held by Sonoma Water, the surface water supply facilities, and the various agreements and issues that may influence the availability of the surface water supply.

5.1.1 Water Rights

Currently, four water rights permits[7] issued by the SWRCB authorize Sonoma Water to store up to 122,500 ac-ft/yr of water in Lake Mendocino and up to 245,000 ac-ft/yr of water in Lake Sonoma, and to divert or redivert up to 180 cubic feet per second (cfs) of water from the Russian River with a limit of 75,000 ac-ft/yr. The permits also establish minimum instream flow requirements for fish and wildlife protection and recreation. These minimum instream flow requirements vary based on the hydrologic classifications of *Normal*, *Dry*, and *Critical* water supply conditions as defined by Sonoma Water's water rights permits and SWRCB Decision 1610, adopted in 1986. Sonoma Water meets the various instream flow requirements by making releases from Coyote Valley Dam and Warm Springs Dam. As described in Section 1.4.2, the Russian River Biological Opinion requires modification of minimum instream flow requirements on the Russian River and Dry Creek to maintain the Incidental Take Statement provided by the Biological Opinion. The evaluation of future Russian River water supply availability is based upon the assumption that that proposed changes to the minimum instream flow requirements under Decision 1610 set forth in the Biological Opinion are implemented.

5.1.2 Surface Water Supply Facilities

The Russian River watershed drains an area of 1,485 square miles that includes much of Sonoma and Mendocino counties. The headwaters of the Russian River are located in central Mendocino County, approximately 15 miles north of Ukiah. The Russian River is approximately 110 miles long and flows generally southward to Mirabel Park, where it changes course and flows westward to the discharge point at the Pacific Ocean near Jenner, approximately 20 miles west of Santa Rosa. Figure 5-1 depicts the Russian River watershed and Sonoma Water's water supply system.

[7] The four permits from the SWRCB are Permits 12947A, 12949, 12950, and 16596.

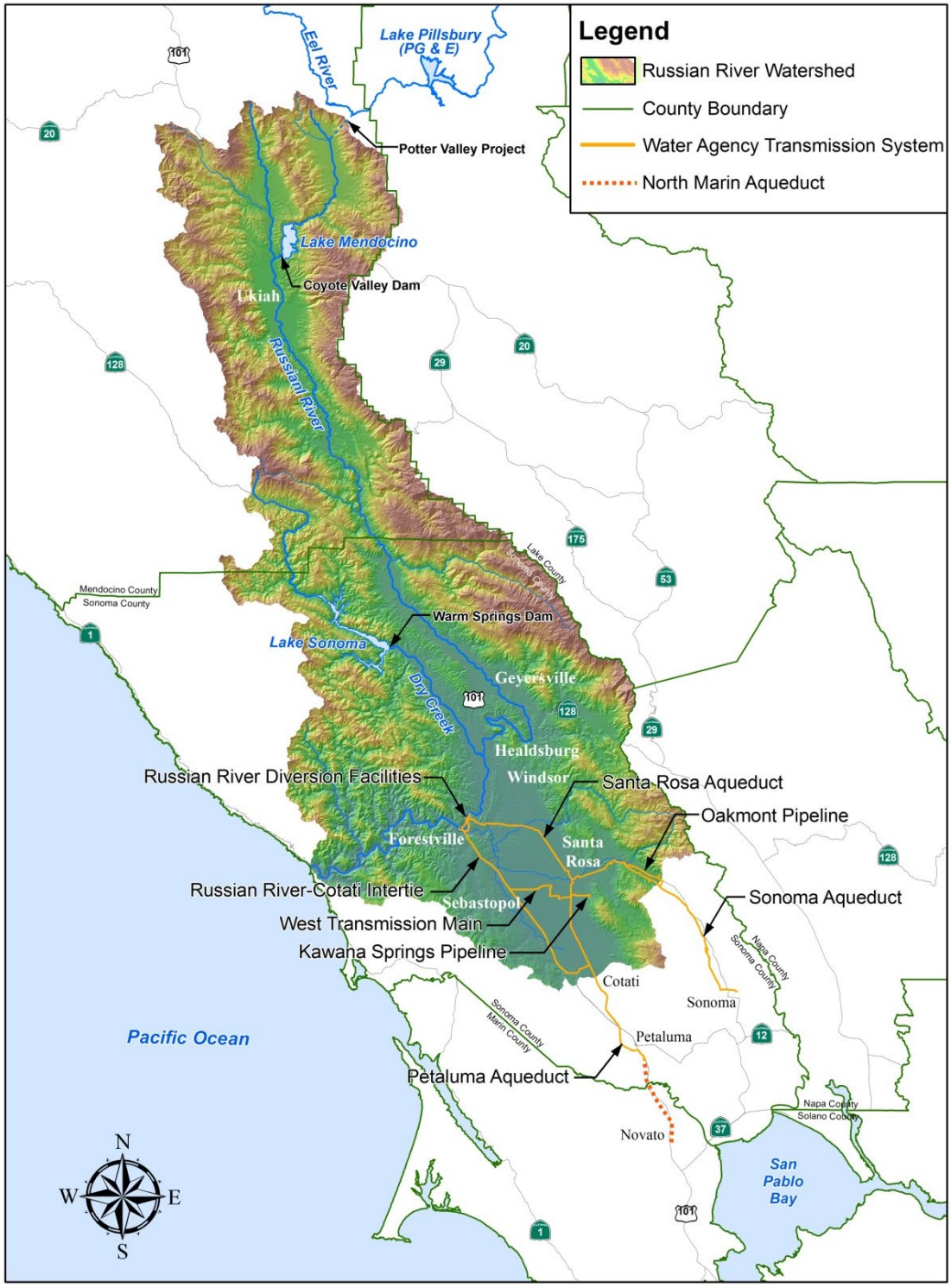

Figure 5-1. Russian River Watershed

Two federal projects impound water in the Russian River watershed: the Coyote Valley Dam on the Russian River east of the city of Ukiah in Mendocino County (forming Lake Mendocino), and the Warm Springs Dam on Dry Creek (a tributary of the Russian River) northwest of the City of Healdsburg in Sonoma County (forming Lake Sonoma). Because Sonoma Water was the local sponsor for the dams and partially financed their construction, Sonoma Water has the right to control releases from the water supply pools of both reservoirs. PG&E's PVP, discussed below, diverts water from the Eel River into the Russian River watershed. Lake Sonoma and Lake Mendocino and their associated facilities, collectively referred to as the Russian River Project, are operated in accordance with criteria established by Sonoma Water's water rights permits and SWRCB's Decision 1610, which establish minimum instream flow requirements for Dry Creek and the Russian River. Sonoma Water makes no diversions from the Russian River between Lake Mendocino and the Russian River's confluence with Dry Creek but does authorize diversions by others (see Section 5.1.3) under its water rights permits. Flood management releases from both reservoirs are controlled by the USACE. Sonoma Water diverts water from the Russian River near Forestville and conveys the water via its transmission system (including diversion facilities, treatment facilities, aqueducts, pipelines, water storage tanks, and booster pump stations) to its customers.

5.1.2.1 Lake Pillsbury and the Potter Valley Project

PG&E's PVP, originally constructed in 1908, results in a diversion of water from the Eel River into the Russian River watershed. Water is stored in Lake Pillsbury on the Eel River (constructed for the PVP in 1922), then released and re-diverted 12 miles downstream at Cape Horn Dam through a diversion tunnel and penstock to the Potter Valley powerhouse in the Russian River watershed. The water is discharged from the powerhouse into a tailrace from which the PVID diverts water. Water not diverted by PVID flows into the East Fork of the Russian River to Lake Mendocino. As noted in Section 1.4.1, PVP diversions are assumed to operate under annual licenses issued by FERC after April 2022 for the 25-year planning horizon of the 2020 Plan. These diversions serve multiple purposes, including power generation, Potter Valley agricultural irrigation, and minimum instream flow requirements in the East Fork of the Russian River and Eel River below Cape Horn Dam.

5.1.2.2 Lake Mendocino and Coyote Valley Dam

Coyote Valley Dam impounds water, forming Lake Mendocino on the East Fork of the Russian River. Lake Mendocino has been an operating reservoir since 1959 and captures water from two sources: (1) runoff from a drainage area of approximately 105 square miles and (2) Eel River water diverted by PG&E's PVP. Natural drainage and stream flow (as opposed to reservoir releases) contribute the majority of the Russian River flow downstream of Coyote Valley Dam and above Dry Creek during the rainy season (November through April). In contrast, during the drier months of May through October, water released from Lake Mendocino accounts for most of the water in the Russian River upstream of Dry Creek.

Sonoma Water and the MCRRFCWCID have water right permits authorizing storage up to the design capacity of 122,500 ac-ft/yr in the reservoir. Sonoma Water controls releases from the water supply pool in Lake Mendocino to meet minimum instream flow requirements and municipal, industrial, and agricultural demands downstream of the reservoir. The water supply pool capacity of Lake Mendocino between November 1 and February 28 is 68,400 ac-ft. Beginning March 1, the water supply pool begins increasing by approximately 600 ac-ft per day until May 10 when it achieves a maximum water supply pool capacity of 111,000 ac-ft. The USACE manages flood control releases when the water level exceeds the top of the water supply pool elevation.

5.1.2.3 Lake Sonoma and Warm Springs Dam

Water stored behind Warm Springs Dam, completed in 1983, forms Lake Sonoma, which is located approximately 10 miles northwest of the City of Healdsburg on Dry Creek. Runoff from a drainage area of approximately 130 square miles contributes water to Lake Sonoma. Lake Sonoma has a design capacity of

381,000 ac-ft at the spillway crest and a design water supply pool capacity of 245,000 ac-ft. Sonoma Water controls water supply releases from Lake Sonoma and the USACE manages flood control releases.

Natural drainage and stream flow (as opposed to reservoir releases) contribute the majority of the Dry Creek flow downstream of Warm Springs Dam during the rainy season (November through April). During the dry season (May through October), reservoir releases contribute the majority of the flow in Dry Creek. Such reservoir discharges supply flow to meet minimum instream flow requirements and municipal, domestic, and industrial demands in the lower Russian River area. Water released from Lake Sonoma and runoff from other tributaries contribute to meeting these demands.

5.1.2.4 Water Transmission System

Sonoma Water diverts surface water from the Russian River and delivers it to Sonoma Water's customers through a transmission system. The transmission system is also supplied by groundwater as described in Section 5.2. Sonoma Water's diversion facilities extract Russian River underflow, which is reported under Sonoma Water's surface water rights. Sonoma Water operates six radial collector wells at the Wohler and Mirabel production facilities adjacent to the Russian River. The first two collector wells (Collectors 1 and 2) were constructed in the late 1950s in the vicinity of Wohler Bridge. Between 1975 and 1983, Collectors 3, 4, and 5 were constructed near Mirabel Park. Collector 6, located in the Wohler area, was completed in 2006. Each collector well consists of a 13- to 18-foot diameter concrete caisson extending vertically approximately 60 to 110 feet into the alluvial aquifer. Horizontal perforated intake laterals extend radially from the bottom of each caisson into the aquifer. Each collector well houses two vertical turbine pumps driven by electrical motors. An important method used to increase production capacity during peak demand months involves raising an inflatable dam on the Russian River near Mirabel that allows for operation of five infiltration ponds at Mirabel that increase the area of infiltration along the Russian River. Water pools behind the inflatable dam and is diverted into the infiltration ponds to recharge the aquifer in the vicinity of Collectors 3, 4, and 5. Backwater conditions along the river also result in increased infiltration in the Wohler area, thereby enhancing the production capacity of Collectors 1, 2 and 6.

In addition to Collectors 3, 4 and 5, there are also seven vertical wells located at the Mirabel area. These wells are not operated as primary production facilities but are maintained for standby emergency production.

Sonoma Water's transmission system extends from Sonoma Water's Russian River diversion facilities located near Forestville to the Santa Rosa, Petaluma, and Sonoma valleys. The transmission system consists of over 85 miles of pipelines that range in diameter from 16 to 54 inches, six booster pump stations, and 18 storage tanks with a combined storage capacity of 129 million gallons (MG). The major pipelines that comprise the system are known as the Santa Rosa Aqueduct (built in 1959), the Sonoma Aqueduct (built in 1963), the Petaluma Aqueduct (built in 1962), and the Russian River - Cotati Intertie (built in 1977). Sonoma Water owns the northern portion of the North Marin Aqueduct that extends from the terminus of the Petaluma Aqueduct at McNear Avenue to the vicinity of the Kastania Booster Station, located near the border of Marin County with Sonoma County. The remainder of the North Marin Aqueduct is owned and maintained by NMWD, which transfers water to the NMWD's service area. Sonoma Water's storage facilities are located at Ralphine (36 MG), Cotati (36 MG), Kawana Springs (20 MG), Kastania (12 MG), Sonoma (10 MG), Eldridge (8.0 MG), Annadel/Los Guilicos (5.5 MG) and Forestville (1.3 MG).

5.1.3 Restructured Agreement for Water Supply

The Restructured Agreement for Water Supply (Restructured Agreement), which was executed in 2006, generally provides for the finance, construction, and operation of existing and new diversion facilities, transmission lines, storage tanks, booster pumps, conventional wells, and appurtenant facilities. The Restructured Agreement provides the contractual relationship between Sonoma Water and its eight contractors and includes quantities of water they require and at flow rates that are necessary to meet their

peak day's demand subject to delivery limitations (Entitlement Limits).[8] Sonoma Water also has agreements that allow certain entities to divert water from the Russian River under Sonoma Water's water rights using their own diversion facilities. These "Russian River customers" include: City of Healdsburg, Town of Windsor, Camp Meeker Recreation and Park District, and Occidental Community Services District (pending petition approval from the SWRCB). Sonoma Water's agreements with these customers require them to use any water right they may have before using Sonoma Water's water rights.

5.1.4 Potter Valley Project License

As noted in Section 5.1.2.1, PG&E's PVP diverts water from the Eel River into a powerhouse in Potter Valley to generate electricity, after which the water flows into the East Fork of the Russian River. Operation of the PVP is licensed by the FERC.

On June 2, 2004, FERC issued its final order on an application filed by PG&E in 1998 to amend its FERC license to include an Eel River flow proposal to benefit Eel River fisheries that reduces the amount of water diverted into the Russian River watershed. The FERC order implemented a modified PVP flow regime based upon a PVP Biological Opinion issued by the NMFS as part of a consultation initiated by FERC under Section 7 of the federal ESA. The evaluation of future Russian River water supply availability in this Plan is based upon the assumption that the PVP diversions into the Russian River watershed permitted by the existing FERC license will continue until it expires in April 2022 and then under annual licenses for the 25-year planning horizon of the 2020 Plan. The reasons for this assumption are described in Section 1.4.1.

5.1.5 Threatened and Endangered Species – Russian River Biological Opinion

As noted in Section 1.4.2, the Russian River Biological Opinion places certain terms and conditions on Sonoma Water with respect to its water supply operations in order to have incidental take protection under the ESA. In particular, NMFS concluded in the Russian River Biological Opinion that the artificially elevated summertime minimum flows in the Russian River and Dry Creek that are currently required by Sonoma Water's water rights permits under Decision 1610 result in high water velocities that reduce the quality and quantity of rearing habitat for Coho salmon and steelhead. Additionally, NMFS concluded that maintaining these flows disrupts lagoon formation in the Russian River estuary and that allowing a lagoon to develop would likely enhance juvenile steelhead habitat.

NMFS' Russian River Biological Opinion concludes that reducing minimum instream flow requirements will enable alternative flow management scenarios that will increase available rearing habitat in Dry Creek and the upper Russian River, and provide a lower, closer-to-natural inflow to the estuary between late spring and early fall, thereby enhancing the potential for maintaining a seasonal freshwater lagoon that would likely support increased production of juvenile steelhead. NMFS also concluded that, in addition to providing fishery benefits, the lower instream flow requirements "should promote water conservation and limit effects on in-stream river recreation."

As required by the Russian River Biological Opinion, Sonoma Water filed a petition with the SWRCB in September 2009 to permanently change the Decision 1610 minimum instream flow requirements to those recommended in the Russian River Biological Opinion, in order to avoid jeopardizing the populations of and improve habitat conditions for endangered Central California Coast Coho salmon and threatened Central California Coast steelhead. This petition was modified in August 2016 to reflect proposed changes to minimum instream flow requirements that were developed after the 2009 petition submittal. This petition presently is pending before the SWRCB. The SWRCB will act on this petition after an Environmental Impact Report is completed in compliance with the California Environmental Quality Act (CEQA). However, as

[8] The Restructured Agreement also includes an aggregate maximum allocation for "other Agency customers" (see Section 1). Sonoma Water's deliveries to Marin Water are authorized by the Restructured Agreement and are subject to the terms of a Supplemental Water Supply Agreement, dated July 1, 2015, between Sonoma Water and Marin Water, which amended two existing agreements (the "Offpeak Water Supply Agreement" and the "Agreement for the Sale of Water").

required by the Russian River Biological Opinion, Sonoma Water requests the SWRCB reduce mainstem, but not Dry Creek, minimum flows each year on an interim basis until the SWRCB acts on the petition for permanent changes.

The Russian River Biological Opinion also specifies maximum flow releases from Warm Springs and Coyote Valley Dams, which, if exceeded, would result in an unacceptable take of listed salmonids, both before and after changes to minimum instream flow requirements under Decision 1610.

5.1.6 Russian River System Model

The projections of the future water supply available to Sonoma Water, which are presented in Section 5.8, are based on the results of operations modeling of the Russian River system. This section describes the modeling effort.

5.1.6.1 Model Approach

The Russian River System Model (RR ResSim) is an operations modeling system for the Russian River developed using the USACE Hydrologic Engineering Center (HEC) ResSim code.[9] 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, considering USACE flood control operations criteria, Decision 1610 minimum instream flow requirements, and the requirements of the Russian River Biological Opinion. RR ResSim calculates flows at discrete locations (or "nodes") within the Russian River system using water balance hydrologic methods.

The model simulates two initiatives to improve the water supply reliability of Lake Mendocino. The first initiative is FIRO, which is a management strategy that uses data from watershed monitoring programs and improved weather and water forecasting to help water managers retain or release water from reservoirs that more accurately reflects antecedent and anticipated hydrologic conditions. The model assumes FIRO flood control management in all the simulation scenarios, as described further in Section 1.4.4.

The second initiative is the development of a new hydrologic index and minimum instream flow requirements for the Russian River System. This is being completed as a component of the Fish Habitat Flows and Water Rights Project (Fish Flow Project), which seeks to modify Sonoma Water's water rights and operations of the Russian River system to improve habitat for native salmonids and comply with the Russian River Biological Opinion. The hydrologic index is a metric that sets the water supply condition and the corresponding minimum instream flow schedule for the Russian River System. The current hydrologic index, defined in Decision 1610, is a three-schedule index with conditions designated as *Normal*, *Dry* and *Critical*. The existing index is calculated based on cumulative flow into Lake Pillsbury in the Eel River watershed. For each index schedule there is a corresponding flow schedule for the Upper Russian River, Dry Creek, and the Lower Russian River. The existing hydrologic index was developed during very different operations of PVP and is no longer representative of water supply conditions in the Russian River System.

Sonoma Water has developed a new index which is a five-schedule index and is based on cumulative inflow into Lake Mendocino. In addition to cumulative inflow into Lake Mendocino, the proposed index will also evaluate storage conditions in Lake Mendocino to potentially trigger reductions in minimum flow requirements for the Upper Russian River (Coyote Valley Dam to the confluence of Dry Creek) to help conserve lake storage. The new index is proposed and evaluated (along with changes to the minimum instream flow requirements) in the Fish Habitat Flows and Water Rights Project Draft Environmental Impact Report (DEIR) released as a public draft in August 2016 (Sonoma Water, 2016). Sonoma Water is continuing to work on the DEIR and anticipates completion of the CEQA process, including a Recirculated DEIR and Final Environmental Impact Report, and consideration of the proposal by the SWRCB by 2023.

[9] See http://www.hec.usace.army.mil/software/hec-ressim/index.html for more information about the ResSim program.

Due to the anticipated date of adoption of 2023, the model incorporates the proposed new hydrologic index and minimum instream flow requirements proposed in the Fish Habitat Flows and Water Rights Project DEIR starting in the 2025 to 2045 water supply modeling scenarios. Whereas the 2020 model scenario assumes the current Decision 1610 hydrologic index and current Russian River Biological Opinion recommended minimum instream flow requirements.

The model incorporates 108 years of hydrologic data (1910 - 2017), represented as daily unimpaired tributary flows into the Russian River and Dry Creek. Unimpaired flows are the "natural" flows, unaffected by man-made influences, such as water demands, or reservoir operations. These unimpaired flows, which form the basis of the hydrology in the model, were synthetically derived by the USGS through their Basin Characterization Model using historical weather, climate, and hydrologic data. Unimpaired tributary flows are aggregated by reach between RR ResSim model nodes.

Diversions from the Eel River into the Russian River are defined explicitly in the model. These diversions are computed separately using the Potter Valley Project ResSim Model.[10] In the fall of 2006, operations of the PVP changed due to PG&E's reinterpreted implementation of amended flow requirements resulting from the 2004 FERC order terminating the license amendment proceedings. As a result, historical PVP diversions would not be representative of current operations. To determine the PVP diversions to be used in the RR ResSim model, Sonoma Water analyzed PVP diversions from the Eel River from October 1, 2006 to January 31, 2013. Using the Potter Valley Project ResSim Model and the results of this analysis, input datasets were developed for the RR ResSim Model, which represent inflows from the PVP under current PVP operating conditions under the different hydrological years.

Another major component of the RR ResSim model is the distributed losses throughout the Russian River system. These losses include not only Sonoma Water's diversions, but all other depletions from the watershed, including evapotranspiration by riparian vegetation, aquifer recharge, agricultural diversions, and non-Sonoma Water municipal and industrial (M&I) diversions. Much like the unimpaired flow datasets, system losses are aggregated by reach between each node. System losses not associated with Sonoma Water's diversions were estimated through an analysis of historical M&I data, flow gage data, and climate data. Because the model calculates the reservoir releases necessary to meet minimum instream flow requirements, all water uses in the watershed are satisfied by such simulated flow releases, not just demands of Sonoma Water's transmission system.

The RR ResSim model divides the Russian River and Dry Creek into 10 primary reaches:

1. Calpella: Potter Valley Project to Calpella Gage (USGS 11461500);
2. Upper East Fork Russian River: Calpella Gage to Coyote Valley Dam;
3. Lower East Fork Russian River: Coyote Valley Dam to Confluence of the West Fork;
4. West Fork Russian River: upstream of the Confluence with the East Fork;
5. Hopland: East Fork/ West Fork Confluence to the Hopland Gage (USGS 11462500);
6. Cloverdale: Hopland Gage to the Cloverdale Gage (USGS 11463000);
7. Healdsburg: Cloverdale Gage to the Healdsburg Gage (USGS 11465350);
8. Lake Sonoma: upstream of Lake Sonoma to Warm Springs Dam;
9. Dry Creek: Warm Springs Dam to the Dry Creek/ Russian River Confluence; and
10. Lower River: Healdsburg Gage to the Guerneville Gage (Hacienda Bridge, USGS 11467000).

The gains associated with unimpaired flows, and the losses associated with M&I diversions and/or other distributed demands, are accounted for within each reach.

[10] This model was developed in 2019 as part of the Congressman Jared Huffman Potter Valley Project Ad Hoc Committee for a Two Basin Solution (http://pottervalleyproject.org/).

The Lower River reach includes diversions made by Sonoma Water at the Wohler and Mirabel facilities, diversions made by the Town of Windsor and Russian River customers downstream from Healdsburg, agricultural diversions, and other losses.

Sonoma Water's water rights permits include a provision that requires Sonoma Water to impose a 30 percent deficiency curtailment in deliveries from the Russian River to its service area when Lake Sonoma storage levels drop below 100,000 ac-ft before July 15 of any year. According to Sonoma Water's water rights permits, this deficiency curtailment must remain in effect until "(1) storage in Lake Sonoma rises to greater than 70,000 ac-ft subsequent to December 31 after having fallen below that level, or (2) permittee has projected, to the satisfaction of the Chief, Division of Water Rights, that storage at Lake Sonoma will not fall below 70,000 ac-ft, or (3) hydrologic conditions result in sufficient flow to satisfy permittee's demands at Wohler and Mirabel Park and minimum flow requirements in the Russian River at Guerneville." This provision is intended to ensure the maintenance of minimum in-stream flows required by Decision 1610. This provision is accounted for in the modeling, although the model assumes delivery deficiencies curtailments remain in effect at least until storage has recovered in Lake Sonoma to greater than 70,000 ac-ft after December 31. The model does not allow for earlier termination of deficiencies curtailments based on hydrologic conditions.

Ongoing sedimentation of Lake Pillsbury, Lake Mendocino, and Lake Sonoma will result in a gradual small reduction in the water supply available to Sonoma Water's water transmission system. Thus, the total storage available under the future scenarios is slightly less than under the current scenarios. Sedimentation rates for each of these reservoirs have been estimated to develop future reservoir elevation-storage relationships (storage curves) from 2025 to 2045 in five-year increments. These future storage curves are accounted for in the Eel River model and RR ResSim model. For Lake Pillsbury, sedimentation rates were estimated based on 1952, 1985, and 1994 (effective 2001) bathymetric survey information. Although a new bathymetric survey was conducted in 2016, it incorporated a new methodology so was not used to calculate sedimentation for this Plan. For Lake Mendocino, sedimentation rates were estimated based on 1984 and 2001 bathymetric survey information. The USACE has not conducted a bathymetric survey at Lake Sonoma since the construction of the reservoir was completed. Therefore, sedimentation rates for Lake Sonoma were estimated based on observed sedimentation rates at the Dry Creek near Geyserville USGS gaging station. For the 15-year period, 1965 to 1979, an average suspended sediment yield of 3,640 tons per square mile was measured (USACE, 1984). From this, an annual sedimentation rate of approximately 2.3 ac-ft per square mile of watershed area was estimated and applied to calculate storage for the future scenarios.

Verification of the model was performed by developing a historical simulation of actual Russian River system operations from water years 2000 to 2013. Results of this historical simulation indicate that simulated reservoir storage levels trend well compared to actual storage levels for the simulated time period. Differences that were observed between simulated and actual reservoir storage levels are primarily attributable to managed encroachment into the reservoir flood pools that deviated from the reservoir rule curves. The RR ResSim model simulates reservoir operations with strict adherence to reservoir storage rule curves.

To determine the water available at Sonoma Water's water transmission system diversion facilities, RR ResSim was used to simulate different hydrologic periods as specified in California Water Code Section 10631(c). These periods were selected from the historical hydrologic record to best represent an average year, a single dry year, and multiple dry years. To represent an average year, 2002 was selected. Year 2002 was the closest to an average hydrologic year, although slightly drier than average. To represent a single dry year, year 1977 was selected. Year 1977 is the second year of the driest two-year period of record as well as the single driest year of record. To represent multiple dry years, years 1987 through 1991 were selected.

Although not required by the Act, when running simulations for these different hydrologic scenarios, the RR ResSim model uses reservoir levels predicted by the model for the start date of the simulation (a more conservative assumption) rather than assuming full reservoir conditions. For example, when simulating the single dry year (1977), the model assumes that Lake Sonoma and Lake Mendocino levels at the start of 1977 are at the levels estimated by the model at the end of 1976.

Moreover, although the RR ResSim model assumes that Sonoma Water will reduce its diversions by 30 percent to take into account diversion reductions required when Lake Sonoma storage falls below 100,000 ac-ft before July 15 (as described above), the model does not assume any other reductions in water demands during dry periods. Because it is likely that water demands from other Russian River water users would be reduced during drought periods, the RR ResSim model likely overestimates the drawdown of Lake Sonoma and especially Lake Mendocino during such periods.

It is also anticipated that if storage levels were to decline to critically low levels, Sonoma Water would likely file a Temporary Urgency Change Petition (TUCP). A TUCP issued by the SWRCB would enable Sonoma Water to temporarily deviate from the terms of their existing water right in order to preserve storage and provide relief from drought conditions.

5.1.6.2 Model Study Results

The evaluation of the Russian River water supply available to Sonoma Water's water transmission system consists of using the estimated annual water demand for 2025 to 2045 and simulating the hydrologic periods of interest to determine the water remaining in storage in Lake Mendocino and Lake Sonoma. The modeled estimated future Sonoma Water demands are presented in Table 5-1.

Table 5-1. Future Sonoma Water Russian River Demands Modeled

Scenario Year	Demand ac-ft
2025	65,020
2030	69,177
2035	70,725
2040	72,588
2045	74,547

Tables 5-2 through 5-7 summarize the simulated minimum storage levels of Lake Mendocino and Lake Sonoma for average, single dry year, and multiple dry year scenarios. The results of the model analysis indicate that adequate water supplies are available in Lake Mendocino and Lake Sonoma to meet in-stream flows, system losses, and demands for average and multiple dry year scenarios through 2045. In particular, Lake Sonoma has ample water supplies for average and multiple dry year scenarios. For the purpose of this Plan, if a projected Sonoma Water demand can be met while maintaining adequate storage in Lake Mendocino and Lake Sonoma, that demand is considered the supply for that scenario. The water stored in the reservoirs (especially Lake Sonoma) is typically greater than the supply needed to meet demands.

In the previous 2015 Plan, results of storage levels modeled in Lake Mendocino showed a decline to the lowest level that water can be released from the reservoir for all the single dry year scenarios. During this period, downstream demands and minimum instream flow requirements are not met due to depleted reservoir storage and inadequate inflow into the reservoir. Due to updated modeling assumptions of implementing FIRO for Lake Mendocino, the new hydrologic index, and new minimum instream flow requirements, Lake Mendocino does not reach these depleted storage levels in the current Plan in any of the

single dry year scenarios. This is a significant improvement in Lake Mendocino storage reliability compared to current operations and demonstrates the importance of implementing FIRO. For the single dry-year scenario starting in 2030 and continuing through 2045, storage levels in Lake Sonoma decline to below 100,000 ac-ft prior to July 15. As described in Section 5.1.6.1, this will require all diversions under Sonoma Water's water rights to be reduced by 30 percent. The model simulations do not assume that a TUCP petition would be filed but that remains a water management option if warranted to further preserve water storage for Lake Mendocino or Lake Sonoma.

Average Year. For the average year (2002), the hydrologic model simulation results for Lake Mendocino and Lake Sonoma are presented in Tables 5-2 and 5-3, respectively.

Table 5-2. Average Year Minimum Lake Mendocino Storage (2002)

Scenario Year	Lake Storage, ac-ft	Date of Minimum Lake Elevation
2025	61,269	12/12/2002
2030	60,553	12/12/2002
2035	59,961	12/12/2002
2040	59,792	12/12/2002
2045	59,007	12/12/2002

Note: Minimum lake storage remaining after demands are met.

Table 5-3. Average Year Minimum Lake Sonoma Storage (2002)

Scenario Year	Lake Storage, ac-ft	Date of Minimum Lake Elevation
2025	178,645	12/12/2002
2030	175,308	12/12/2002
2035	173,333	12/12/2002
2040	171,184	12/12/2002
2045	168,987	12/12/2002

Note: Minimum lake storage remaining after demands are met.

Single Dry Year. For the single dry year (1977), minimum lake storage for Lake Mendocino and Lake Sonoma are presented in Tables 5-4 and 5-5, respectively.

Table 5-4. Single Dry Year Minimum Lake Mendocino Storage (1977)

Scenario Year	Lake Storage ac-ft	Date of Minimum Lake Elevation
2025	18,787	11/20/1977
2030	18,050	11/20/1977
2035	17,525	11/20/1977
2040	17,282	11/20/1977
2045	16,764	11/20/1977

Note: Minimum lake storage remaining after demands are met.

Table 5-5. Single Dry Year Minimum Lake Sonoma Storage (1977)		
Scenario Year	Lake Storage ac-ft	Date of Minimum Lake Elevation
2025[a]	61,628	11/20/1977
2030[a]	62,497	11/20/1977
2035[a]	59,620	11/20/1977
2040[a]	56,333	11/20/1977
2045[a]	52,905	11/20/1977

Note: Minimum lake storage remaining after demands are met.

a. Reduction of demands will be required during a portion of the year as required by D1610.

Multiple Dry Years. For the multiple dry years (1987-1991), minimum lake storage for Lake Mendocino and Lake Sonoma are presented in Tables 5-6 and 5-7, respectively.

Table 5-6. Multiple Dry Year Minimum Lake Mendocino Storage (1987-91)		
Scenario Year	Lake Storage ac-ft	Date of Minimum Lake Elevation
2025	50,001	11/15/1988
2030	49,240	11/15/1988
2035	48,278	11/15/1988
2040	48,534	11/15/1988
2045	47,045	11/15/1988

Note: Minimum lake storage remaining after demands are met.

Table 5-7. Multiple Dry Year Minimum Lake Sonoma Storage (1987-91)		
Scenario Year	Lake Storage ac-ft	Date of Minimum Lake Elevation
2025	156,597	2/28/1991
2030	148,040	2/28/1991
2035	146,977	2/28/1991
2040	146,369	2/28/1991
2045	140,058	2/28/1991

Note: Minimum lake storage remaining after demands are met.

5.2 Groundwater

This section presents a description of groundwater resources and groundwater resource initiatives related to Sonoma Water interests.

- Section 5.2.1 describes how local agencies, including Sonoma Water, are coordinating to comply with requirements of SGMA.
- Section 5.2.2 describes Sonoma Water's groundwater supply in the Santa Rosa Plain groundwater sub-basin, including the basin description, Sonoma Water's groundwater facilities, previous groundwater management activities, and Sonoma Water's historical groundwater production.
- Section 5.2.3 describes other groundwater initiatives and programs Sonoma Water is involved in.

5.2.1 Sustainable Groundwater Management Act

In September 2014, Governor Brown signed legislation requiring that California's critical groundwater resources be sustainably managed by local agencies. SGMA gives local agencies (cities, counties and water districts) powers to sustainably manage groundwater over the long-term and requires GSAs be formed and GSPs be developed for medium- and high-priority groundwater basins. Sonoma County has two medium priority basins (Santa Rosa Plain and Petaluma Valley) and one high priority basin (Sonoma Valley). As authorized by SGMA, the GSA-eligible entities formed a Joint Powers Authority for each basin and are working together to implement the requirements of SGMA. The GSAs were formed as follows:

- Santa Rosa Plain GSA was formed through a joint powers authority (JPA) between the cities of Cotati, Rohnert Park, Santa Rosa, and Sebastopol, Town of Windsor, County of Sonoma, Sonoma Water, Gold Ridge Resource Conservation District, and Sonoma Resource Conservation District (Sonoma RCD) and has a participation agreement with mutual water companies and CPUC-regulated water corporations to allow them to participate in the GSA.
- Sonoma Valley GSA was formed through a JPA between the City of Sonoma, County of Sonoma, North Bay Water District (NBWD), Sonoma Water, Sonoma RCD, and Valley of the Moon Water District.
- Petaluma Valley GSA was formed through a JPA between the City of Petaluma, County of Sonoma, NBWD, Sonoma Water, and Sonoma RCD.

The GSAs were formed for the purpose of developing, adopting, and implementing a GSP for each basin and achieve the sustainability goals outlined in SGMA. All three GSAs are governed by Boards of Directors, which receive stakeholder feedback from Advisory Committees (one per basin).

Through close coordination with the GSAs and other local stakeholders, Sonoma Water will ensure that the plans and programs incorporated into this UWMP are consistent with the GSPs which are under development. Additionally, under professional services agreements with each GSA, Sonoma Water is leading the technical development of the GSPs and outreach and grant administration services for the GSAs. It is anticipated that a public review draft of each GSP will be issued in fall 2021, prior to adoption and submittal to DWR by January 2022.

The GSAs coordinate activities where appropriate and involve the public and local stakeholders through outreach and engagement in developing and implementing the GSP. More information on the GSAs, including links to the draft GSPs when available, can be found at http://petalumavalleygroundwater.org/, https://santarosaplaingroundwater.org/ and http://sonomavalleygroundwater.org/.

Sonoma Water staff also serve on the Technical Advisory Committee for the Ukiah Valley GSA in Mendocino County.

5.2.2 Sonoma Water's Santa Rosa Plain Groundwater Supply

DWR has identified a total of fourteen groundwater basins and sub-basins in Sonoma County, which are shown on Figure 5-2. As described below, Sonoma Water has groundwater supply wells only in the Santa Rosa Plain sub-basin of the Santa Rosa Valley basin.

The Santa Rosa Plain is a sub-basin (DWR number 1-55.01) of the Santa Rosa Valley basin, which also includes the Healdsburg Area sub-basin (1-55.02) and Rincon Valley sub-basin (1-55.03) (DWR, 2003). The Santa Rosa Plain drains northwest toward the Russian River and is thus part of the North Coast Hydrologic Region. The 81,281-acre Santa Rosa Plain Groundwater sub-basin is located within the larger 167,680-acre Santa Rosa Plain watershed (generally corresponding to the Laguna de Santa Rosa and Mark West Creek watersheds), which was the subject of the groundwater studies and management activities described in Section 5.2.2.1.

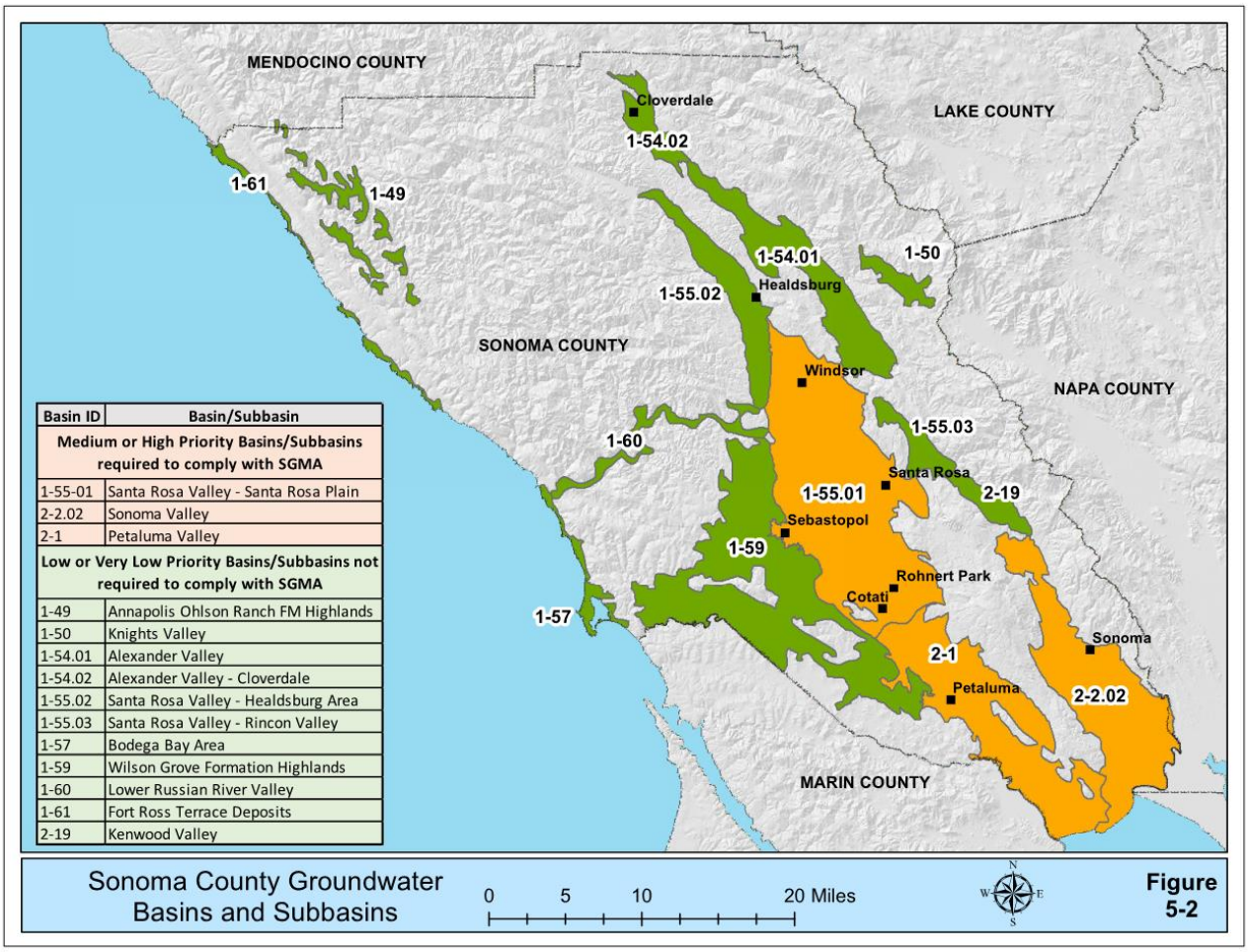

Figure 5-2. Groundwater basins within Sonoma Water Service Agency

Several of Sonoma Water's contractors and customers also use local groundwater supplies from the Santa Rosa Plain, along with the Sonoma Valley, and Petaluma Valley groundwater basins. Descriptions of these other basins, in addition to the Alexander Valley groundwater basin which underlies a large portion of the main stem of the Russian River, are provided in Section 5.2.3.1.

Water Code Section 10631(b) requires that urban water management plans state DWR's characterization of the basin with respect to overdraft. As required by SGMA, DWR most recently evaluated California's groundwater basins for conditions of critical overdraft[11] using available data, reports, and other information to identify basins with obvious and reported adverse impacts in its Draft Bulletin 118 – California's Groundwater, Update 2020 (DWR, 2021). No Sonoma County basins or sub-basins were included as critically overdrafted basins in the Draft Bulletin 118 Update 2020 or the prior Bulletin 118 – Interim Update 2016 (DWR, 2016). There are no adjudicated groundwater basins in Sonoma County. While this Plan also summarizes other available information (including previous groundwater studies and investigations) and evaluates limited data, it is beyond this Plan's scope to make an independent assessment of basin conditions with respect to overdraft.

5.2.2.1 Santa Rosa Plain Sub-basin Description and Prior and Current Management Activities

The Santa Rosa Plain sub-basin has been the subject of technical studies and voluntary groundwater management programs, which provide a strong technical and institutional foundation for the ongoing GSP development required by SGMA. The USGS completed studies and modeling of the basin in 2014 and between 2010 and 2017 Sonoma Water led the development, adoption, and implementation of a voluntary Santa Rosa Plain Watershed Groundwater Management Plan (GMP), the findings of which are incorporated into the basin description summary below. The sub-basin description is intended to provide an overview of the hydrogeologic setting and historical and recent groundwater conditions. Detailed information is available in the following key studies and plans that document the conditions of the sub-basin and surrounding watershed areas:

- 2014, Santa Rosa Plain Basin Advisory Panel. Santa Rosa Plain Watershed GMP. http://santarosaplaingroundwater.org/wp-content/uploads/SRP_GMP_12-14.pdf
- 2014, U. S. Geological Survey. Simulation of groundwater and surface-water resources of the Santa Rosa Plain watershed, Sonoma County, California: U.S. Geological Survey Scientific Investigations Report 2014–5052. https://pubs.usgs.gov/sir/2014/5052/
- 2013, U. S. Geological Survey. Hydrologic and geochemical characterization of the Santa Rosa Plain watershed, Sonoma County, California: U.S. Geological Survey Scientific Investigations Report 2013–5118. https://pubs.usgs.gov/sir/2013/5118/

The Santa Rosa Plain sub-basin is located within the geologically complex North Coast Ranges of California, dominated by northwest trending valleys with faults that may act as barriers to groundwater flow, or conduits to deeper saline water intrusion. The USGS study reveals a large geologically complex groundwater basin, with multiple aquifers that exhibit wide variations in well yields and groundwater quality. In addition, the groundwater system is subdivided into several compartments that are separated by fault zones, including the Rodgers Creek Fault, the Sebastopol Fault, and the Trenton Fault. Groundwater flows through and is stored in sedimentary and volcanic formations, which form the primary aquifers in the Santa Rosa Plain including sedimentary deposits of the Alluvium and Glen Ellen Formation, the Wilson Grove Formation, the Petaluma Formation, and the Sonoma Volcanics. The Sub-basin's best water-producing units are stream channels filled with alluvial sands and gravels (water and air deposited sand, silt, clay, and gravel); sands and gravels; basin-fill alluvium and alluvial fan deposits that connect the Santa Rosa Plain with its bordering hills; and massive sandstone units of the Wilson Grove Formation extending beneath the Sub-basin from the low western hills. The Sonoma Volcanics, a thick sequence of lava flows along the eastern boundary of the

[11] As defined by SGMA, "A basin is subject to critical overdraft when continuation of present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts". DWR also utilized definitions from Bulletin 118-2003 Update, which characterize groundwater overdraft as the condition of a groundwater basin or sub-basin in which the amount withdrawn by pumping exceeds the amount of water that recharges the basin over a period of years, during which the water supply conditions approximate average conditions. Overdraft can be characterized by groundwater levels that decline over a number of years and never fully recover, even in wet years. If overdraft continues for a number of years, significant adverse impacts may occur, including increased extraction costs, costs of well deepening or replacement, land subsidence, water quality degradation, and environmental impacts (DWR, 2003).

sub-basin, and the Petaluma Formation, a shale and sandstone unit that extends beneath much of the deeper portions of the sub-basin, produce variable amounts of water. Groundwater generally flows from recharge areas (e.g., highlands to the east and west of the basin) toward discharge areas (primarily the Laguna de Santa Rosa). Groundwater is removed from the Santa Rosa Plain sub-basin through wells and as both subsurface outflow and groundwater discharge to the Laguna de Santa Rosa.

Water Quality: Groundwater quality within the Santa Rosa Plain watershed is highly variable throughout the study area and generally acceptable. Manganese, iron, boron, and arsenic are potential constituents of concern that occur naturally in groundwater and exceeded secondary or health-based standards for drinking water. While concentrations of chloride and specific conductance are predominantly well below secondary drinking water standards, increases have occurred for chloride in two-thirds and for specific conductance in three-quarters of the wells evaluated for the study, respectively.

Groundwater Levels and Movement: Monitoring of groundwater levels over time indicates a general pattern of groundwater movement from the highlands towards the axis of the sub-basin to the location of the Laguna de Santa Rosa, which historically was the main location of natural groundwater discharge. In addition, groundwater moves toward and discharges into stream channels, sustaining stream baseflow in many parts of the sub-basin. Historically, as more wells were added to the sub-basin and agricultural, domestic, and urban pumpage increased over time, groundwater levels dropped, less groundwater discharge occurred in the Laguna De Santa Rosa and more discharge resulted from well pumpage. As pumping increased, two pumping depressions formed, one in the west part of the sub-basin and the other in the Rohnert Park-Cotati area of the sub-basin in the early 1990s, with increased urban pumping considered largely responsible. Since the early 2000s, increases in imported surface water from the Russian River and water conservation have greatly reduced groundwater demand. More recent monitoring and groundwater level contour maps show significant groundwater recovery in both the Rohnert Park-Cotati area and western areas of the sub-basin, with the depressions largely recovered.

Other key findings of the USGS and GMP include:

- Groundwater levels in the shallow aquifer range from close to ground surface near the Laguna de Santa Rosa to about 15 to 30 feet below ground surface along the eastern basin boundary, and to about 50 feet below ground surface near the southern end of the Santa Rosa Plain, and are relatively stable over time.
- Groundwater levels in intermediate and deeper wells in southern Santa Rosa Plain exhibit seasonal fluctuations and a decline in groundwater levels in the late 1970s and 1980s. The declines reached a maximum in the early 1990s, followed by recovery in the early 2000s. The recovered groundwater levels coincide with increased conservation, reduced groundwater pumping, and increased deliveries of Russian River supplies from Sonoma Water to the City of Rohnert Park.
- Groundwater within shallow aquifers of the Santa Rosa Plain also supports stream flows.

Water supply in the Santa Rosa Plain is primarily met by combinations of deliveries of water by Sonoma Water from the Russian River (for municipal water supplies) and ground water from water wells (for rural residential, agricultural irrigation, and a portion of municipal water supplies), in addition to local surface water and recycled water to a lesser extent.

As part of the study, the USGS developed a state-of-the-art computer model for the Santa Rosa Plain watershed area that couples surface water with groundwater flows, called GSFLOW. The model has recently been updated by Sonoma Water and is being used to complete required elements of the GSP, including: (1) developing the historical, current, and projected water budgets for the Santa Rosa Plain; (2) evaluating sustainable management criteria; and (3) assessing projects and actions that may be needed to achieve or maintain sustainability.

In addition to the model, data, and information developed as part of the USGS study, the GSP is also integrating and building on information from previous voluntary groundwater management planning, which was led by Sonoma Water between 2010 and 2017. The Santa Rosa Plain Watershed GMP was formally adopted by Sonoma Water's Board of Directors in late 2014 after being recommended for adoption by a Basin Advisory Panel of diverse stakeholder interests.

The GMP covered the entire Santa Rosa Plain watershed, including the Santa Rosa Plain sub-basin, the Rincon Valley groundwater basin, portions of other groundwater basins and sub-basins, and upland areas that are outside of DWR-defined groundwater basins and sub-basins.

The GMP identified a range of voluntary water-management actions, including groundwater recharge, groundwater banking, increased water-use efficiency, and greater use of recycled water to reduce demand for groundwater. The GMP was implemented between 2015 and 2017, prior to its dissolution following formation of the Santa Rosa Plain GSA which assumed management responsibilities for the sub-basin under SGMA. Key information, tools, and outcomes from the GMP, which are being integrated and/or leveraged in developing the GSP include:

- Technical information on the sub-basin hydrology, hydrogeologic framework, water chemistry and source, surface water and groundwater interaction monitoring, and records of groundwater levels;
- Significant expansion of monitoring activities;
- Initiation of studies for groundwater banking and stormwater recharge;
- Initial scoping of projects and actions to sustain groundwater resources in the Santa Rosa Plain; and
- Engagement of local stakeholders in local groundwater planning and management.

5.2.2.2 Sonoma Water Groundwater Facilities, Historical Groundwater Production, and Monitoring

Sonoma Water's three groundwater supply wells are located along Sonoma Water's aqueduct in the Santa Rosa Plain at Occidental Road, Sebastopol Road, and Todd Road. The wells were initially constructed in 1977, as emergency supply wells in response to the 1976-1977 drought. Two of the wells (Occidental and Sebastopol) were replaced in 1998. The three production wells range in depth from 794 to 1,060 feet with pumping capacities ranging from 1,300 to 2,200 gallons per minute (gpm). The locations of the wells are depicted on Figure 3-1 and their operational history is described below.

Relatively continuous operations of the Todd, Sebastopol, and Occidental Road water supply wells began in April 1999, June 2001, and July 2003, respectively, and continued through 2008. The annual groundwater quantities pumped by Sonoma Water between 2006 and 2010 ranged from a high of 3,922 ac-ft in 2008 to a low of 52 ac-ft in 2010 and averaged 2,514 ac-ft/yr. Beginning in 2009, the use of the wells was shifted to a seasonal and as-needed basis to better balance the conjunctive management of Russian River and groundwater supplies (during years when sufficient supplies are available from the Russian River, use of the groundwater wells are is limited). Annual production from the three wells has ranged from 172 to 1,271 ac-ft from 2011 to 2015, averaging 643 ac-ft/yr and has declined further for the most recent five years (2016-2020) to an average of 20 ac-ft/yr.

Sonoma Water conducts a groundwater monitoring program of water levels in seventeen dedicated monitoring wells in the vicinity of its three water supply wells to assess the effects of these wells on local groundwater conditions. The monitoring wells are instrumented with pressure transducers, which record groundwater elevations from the wells at intervals ranging from every 1 to 4 hours. Data collection near the Occidental and Sebastopol Road wells began in 2001, while semiannual manual groundwater level measurements from the Todd Road monitoring wells was initiated in 1978. In general, the data document normal seasonal fluctuations and initial declines in water levels when pumping begins for the monitoring wells near the three water supply wells. A pump test of Sonoma Water's three wells in 1979 found that "deep wells near the three emergency wells and some of the shallow wells near the Occidental and

Sebastopol wells were influenced" by pumping Sonoma Water wells (Sonoma Water, 1979). In general, the data collected as part of Sonoma Water's groundwater monitoring program document:

- Normal seasonal fluctuations in groundwater levels;
- Rapid drawdown and recovery in response to pumping cycles within the deeper monitoring wells perforated across the same horizon as the groundwater supply wells;
- No discernable short-term responses to pumping cycles within shallower monitoring wells;
- An overall trend of lowering of deeper zone groundwater levels between approximately 2000 and 2009 when the groundwater supply wells were operating relatively continuously followed by subsequent recovery of groundwater levels between 2009 and 2020; and
- General stability of shallow zone groundwater levels, with the exception of shallow zone monitoring wells located near the Occidental Road well which exhibited declines ranging between 15 to 30 feet between approximately 2000 and 2009 followed by subsequent recovery or stabilization of groundwater levels between 2009 and 2020.

The groundwater quantities pumped by Sonoma Water in the last five years are shown on Table 5-8, while Sonoma Water's projected future production through 2045 is shown in Table 5-12. As indicated in Table 5-8 and consistent with the projections from the 2015 UWMP, the amount of groundwater pumped from the last five years has ranged from 0 to 73 ac-ft/yr, reflecting Sonoma Water's strategy of not utilizing groundwater from the three wells as a normal year source of supply. Rather, groundwater from the Santa Rosa Plain wells will be utilized on an as-needed basis during periods of drought or when Russian River supplies are otherwise constrained.

Table 5-8. Wholesale: Groundwater Volume Pumped, ac-ft (DWR Table 6-1 W)

Groundwater Type	Location or Basin Name	2016	2017	2018	2019	2020
Alluvial Basin	Santa Rosa Plain Sub-basin (1-55.01)	73	27	2	0	0
Total		73	27	2	0	0

5.2.3 Sonoma Water Groundwater-Related Studies/Programs

Due to the importance of groundwater resources within the region, history of conjunctive management practiced by Sonoma Water and many of its contractors and customers, and hydrologic connection between surface water and groundwater, Sonoma Water is involved in or has led many other groundwater related studies and initiatives described in this section.

5.2.3.1 Groundwater Studies and Management

Based on direction received in January 2000 from its Board of Directors, Sonoma Water has developed and implemented a program (Groundwater Basin Assessment and Management Program) intended to enhance the knowledge and local management of groundwater resources within Sonoma County. The approach for the program is to conduct scientific basin-wide studies of the four larger and more developed groundwater basins in Sonoma County (Alexander Valley, Petaluma Valley, Santa Rosa Plain and Sonoma Valley) to provide a basis for subsequent groundwater management planning activities which emphasize local and regional coordination and collaboration (if basin stakeholders and Sonoma Water's Board support development of a management planning process). To implement the groundwater characterization program, Sonoma Water staff have worked with scientists from USGS to develop cooperative technical study programs that evaluate groundwater resources in the four basins and sub-basins. The Sonoma Valley and Alexander Valley groundwater studies were completed in 2006 (USGS, 2006a and b) and, as described in Section 5.2.2.1, the Santa Rosa Plain groundwater study was completed in 2014 (USGS, 2013 and 2014). The USGS technical study for Petaluma Valley has been completed and is pending publication in 2021.

Summaries of the groundwater studies and management activities in the Alexander Valley, Sonoma Valley and Petaluma Valley are described below.

Alexander Valley Groundwater Basin. The Alexander Valley sub-basin includes the Alexander Area sub-basin (1-54.01) and the Cloverdale Area sub-basin (1-54.02). The USGS study of the hydrogeology and water chemistry of the Alexander Valley provides an improved scientific basis for addressing emerging water-management issues, including potential increases in water demand and potential changes in flows in the Russian River to improve conditions for listed fish species under the State California and federal ESA. The USGS study tasks included: (1) evaluation of existing hydrogeological, geophysical, and geochemical data; (2) collection and analysis of new hydrogeologic data, including subsurface lithologic data, ground-water levels, and streamflow records; and (3) collection and analysis of new water-chemistry data. The estimated total water use for the Alexander Valley for 1999 was approximately 15,800 ac-ft. About 13,500 ac-ft of this amount was estimated to be for agricultural use, primarily vineyards, and about 2,300 ac-ft was for municipal/industrial use. Groundwater was reported to be the main source of water supply (estimated to meet 78% of the total water demands) in the basin, although the estimate may include some diversions made through wells under surface water rights (USGS, 2006b). Sonoma Water has no water supply wells in the Alexander Valley.

Russian River Watershed Study. In 2015, the USGS, in cooperation with the SWRCB, Sonoma Water, and other Mendocino County agencies, initiated a hydrologic study that will refine understanding of the hydrologic system, and provide an integrated watershed/groundwater-flow model of the Russian River watershed. This cooperative project will provide hydrologic information needed by Sonoma Water, the SWRCB, and other Russian River watershed stakeholders to better understand the potential impacts of climate variability and change, and associated changes in groundwater use on groundwater levels, stream discharge, stream-aquifer interaction, and water quality. The study includes development of an integrated hydrologic and reservoir/river operations model for the to facilitate better management of all water resources in the watershed. The study is anticipated to be completed in 2022.

Sonoma Valley Groundwater Sub-basin. The Sonoma Valley groundwater sub-basin (2-2.02) is a sub-basin of the Napa-Sonoma Valley groundwater basin. The sub-basin drains southeast and is thus part of the San Francisco Bay Hydrologic Region (DWR, 2003). The 44,700-acre Sonoma Valley Groundwater sub-basin is located within the larger 106,680-acre Sonoma Creek watershed. Sonoma Water has no water supply wells in the Sonoma Valley Groundwater sub-basin. The Sonoma Valley sub-basin has also been the subject of technical studies and voluntary groundwater management programs, which provide a strong technical and institutional foundation for the ongoing GSP development required by SGMA. The USGS completed studies and modeling of the sub-basin in 2006 and Sonoma Water lead development and implementation of a voluntary Sonoma Valley GMP between 2006 and 2017.

The Sonoma Valley GMP aimed to locally and voluntarily manage, protect, and enhance groundwater resources for all beneficial uses in a sustainable, environmentally sound, economical and equitable manner for generations to come. The Sonoma Valley GMP identified a range of voluntary water management actions, including groundwater recharge, groundwater banking, increased water-use efficiency, and greater use of recycled water to reduce demand for groundwater. Notable findings from studies conducted under the GMP include the following:

- Groundwater level declines within deep zone aquifers (primarily in the southwestern and southeastern Sonoma Valley) have persisted for the last decade or more and appear to be expanding. Groundwater levels in many wells in these two areas are declining at rates of several feet per year and have locally fallen below sea level.
- While groundwater quality within the Sonoma Valley is generally good, brackish groundwater present beneath the southernmost Sonoma Valley has historically affected water wells located in this area and represents a threat to groundwater resources should groundwater declines continue to persist.

- Groundwater within shallow aquifers of Sonoma Valley plays a significant role in supporting streamflows in Sonoma Creek and its tributaries.
- The groundwater budget for Sonoma Valley (amount and sources of water entering versus the amounts and sources of water exiting) has been estimated using computer models of groundwater flow. The results indicate that more water is exiting than entering, resulting in average annual losses of groundwater storage ranging from approximately 600 to 1,400 ac-ft/yr. This estimate is currently being updated for the sub-basin as part of the Sonoma Valley GSP development.

Key tools and outcomes from recent groundwater planning efforts include:

- Technical information on the sub-basin hydrology, hydrogeologic framework, water chemistry and source, surface water and groundwater interaction monitoring, and records of groundwater levels, including historical trends and documentation of groundwater depletion in southern Sonoma Valley;
- Significant expansion of monitoring activities;
- Initiation of studies and pilot programs for groundwater banking and stormwater recharge;
- Development of a MODFLOW groundwater-flow model of surface water and groundwater systems in the sub-basin and contributing watershed area;
- Initial scoping of projects and actions needed to address ongoing groundwater depletion and sustain groundwater resources in Sonoma Valley; and
- Engagement of local stakeholders in local groundwater planning and management.

Data and information obtained through the GMP and recommendations developed by local stakeholders is being integrated into the GSP for the Sonoma Valley.

Petaluma Valley Groundwater Basin. The 46,000-acre Petaluma Valley groundwater basin is located within the larger 93,440-acre Petaluma Valley watershed. In 2014, Sonoma Water and City of Petaluma partnered with the USGS to conduct a three-year groundwater study of the Petaluma Valley, which is has been completed and is pending publication in 2021. The objective of the study is to develop an updated assessment of the hydrogeology, geochemistry, and geology of the Petaluma Valley, including development of a geographical information system database, collection, and interpretation of water quality data and streamflow measurements, estimates of groundwater recharge and annual groundwater pumping, and development of a computer model to simulate groundwater flow. Sonoma Water has no water supply wells in the Petaluma Valley groundwater basin. A GMP has not been developed for the Petaluma Valley; a GSP is underway.

5.2.3.2 Groundwater Banking Feasibility Study

California's 2020 Water Resilience Portfolio emphasizes the role of groundwater storage as a viable means for water supply. Additionally, evaluating the feasibility of groundwater banking was recommended in the GMPs for both the Santa Rosa Plain and Sonoma Valley. In an effort to improve the region's water supply reliability, Sonoma Water and its partners (Cities of Cotati, Rohnert Park, and Sonoma, Valley of the Moon Water District, and the Town of Windsor) began investigating the viability of conjunctively managing surface water and groundwater resources by conducting a feasibility study for a regional groundwater banking program. The conjunctive management of Russian River supplies and groundwater is reflected in several of the strategies contained in Sonoma Water's Water Supply Strategies Action Plan, summarized in Section 5.8.1. Conceptually, the groundwater banking program would involve the diversion and transmission of surplus Russian River water produced at Sonoma Water's existing production facilities for storage in the Santa Rosa Plain Groundwater sub-basin and/or Sonoma Valley Groundwater sub-basin during wet weather conditions (i.e., the winter and spring seasons) for subsequent recovery and use during dry weather conditions (i.e., the summer and fall seasons) or emergency situations. Primary findings from the Groundwater Banking Feasibility Study, which was completed in 2012, indicate the following:

- A groundwater banking program would provide enhanced reliability of the regional water supply during droughts, natural hazard events (e.g., earthquakes), and periods of peak seasonal water demands.
- Additional potential benefits within the Russian River watershed include improved habitat conditions by enhancing tributary base flows from reducing groundwater pumping, or in the case of Dry Creek, reducing summer releases from Warm Springs Dam (due to reduced peak demands) thus improving flow conditions for Endangered Species Act-listed salmonids.
- Facilities owned and operated by the study participants, including drinking water production facilities along the Russian River and groundwater supply wells within the groundwater basins, are well suited for further testing and developing a groundwater banking program in an incremental and phased manner.
- In evaluating methods for implementing a groundwater banking program, Aquifer Storage and Recovery (ASR) was deemed to be more practical than surface spreading for near term implementation based on: (1) the ability to incrementally establish an ASR program; (2) the ability to pilot test ASR in a phased manner; (3) the relatively lower costs associated with ASR; and (4) uncertainties related to the ability of surface spreading alternatives to convey water to aquifers suitable for storage and subsequent recovery.

Based on the findings from the study, pilot studies to further assess the technical feasibility of ASR as a method for groundwater banking were recommended. Sonoma Water and the City of Sonoma partnered on a pilot study and currently are being pursued in the City of Sonoma, where a 6-month pilot project was completed in Fall of 2018. The ASR pilot test was conducted under a permit issued by the San Francisco Bay Regional Water Quality Control Board and involved several cycles of recharge, storage, and recovery of drinking water through a confined aquifer system of the Sonoma Volcanics in the Sonoma Valley underlying the City of Sonoma. A total of approximately 13 ac-ft of potable drinking water were recharged, stored, and recovered from a test well located adjacent to an existing inactive municipal well in the City of Sonoma. Extensive groundwater level and water quality monitoring performed during the pilot project resulted in the empirical verification of specific hydrogeologic and water-quality factors. The next steps are a technical and economic viability assessment of ASR technology in the region. If deemed feasible, the pilot project results could be used to complete environmental documentation and design for a full scale or permanent ASR project in the region. Results from the pilot project also provided information on the technical feasibility for ASR in Sonoma Valley to other local agencies, including Sonoma Water's contractors and the GSAs.

5.2.3.3 California Statewide Groundwater Elevation Monitoring (CASGEM) Compliance

All 14 groundwater basins and sub-basins in Sonoma County have designated lead Monitoring Entities responsible for complying with requirements of the California Statewide Groundwater Elevation Monitoring (CASGEM) Program. Sonoma Water is designated as the lead Monitoring Entity for the Kenwood Valley groundwater basin and the Sonoma Valley groundwater sub-basin where Sonoma Water served as the lead agency for the previous Sonoma Valley GMP, which encompassed these two basins. In 2019, the City of Petaluma Valley GSA assumed responsibility of reporting CASGEM data for the City of Petaluma, which was designated as Monitoring Entity for the Petaluma Valley groundwater basin. The County of Sonoma is the lead Monitoring Entity for the following 11 groundwater basins and sub-basins: Annapolis Ohlson Ranch Formation Highlands Groundwater Basin, Bodega Bay Area Groundwater Basin, Fort Ross Terrace Deposits Groundwater Basin, Knights Valley Groundwater Basin, the Wilson Grove Formation Highlands Groundwater Basin, Alexander Area Groundwater Sub-basin, Cloverdale Area Groundwater Sub-basin, Healdsburg Area Groundwater Sub-basin, Lower Russian Groundwater Basin, Rincon Valley Groundwater Sub-basin, and Santa Rosa Plain Groundwater Sub-basin.

To comply with CASGEM requirements, the designated Monitoring Entities have prepared monitoring plans and coordinate with other local entities involved in collecting groundwater-level measurements to compile and report groundwater-level data to DWR on a semiannual basis, as required by DWR. For the Santa Rosa Plain and Sonoma Valley sub-basins, the respective GSAs will assume responsibility for reporting

groundwater-level data to DWR through the GSP implementation program following submittal of the GSPs in January 2022.

5.3 Stormwater

Sonoma Water is responsible for managing eight flood control zones throughout Sonoma County. In three of the zones, Sonoma Water is working with local stakeholders to identify opportunities to better manage stormwater and alleviate flooding, while possibly recharging groundwater aquifers or providing other benefits. The "*Stormwater Management-Groundwater Recharge*" studies are currently assessing the feasibility of projects in the Laguna-Mark West watershed, the Sonoma Creek Watershed, and the Upper Petaluma River watershed. In the Sonoma Valley, Sonoma Water and its partners are implementing a regionally integrated, multi-benefit flood management project in a sub-watershed that includes the City of Sonoma. The *City Watersheds* project is the first project being implemented in a suite of integrated projects in the watershed envisioned to effectively manage stormwater to improve water supply and water quality. The objectives include: stormwater management/flood alleviation, targeted stormwater drainage and culvert enhancements to the municipal storm drain system, improving channel capacity through strategic vegetative and habitat enhancement, removing barriers to fish passage, enhancing groundwater recharge, and enhancing recreational and educational opportunities for the public. In addition, Storm Water Resource Plans, compliant with California Water Code Section 10565 and Proposition 1 Water Bond funds are being developed for the three watersheds to guide effective implementation of stormwater and dry weather runoff capture projects.

5.4 Wastewater and Recycled Water

Sonoma Water does not supply recycled water to its customers and does not provide supplemental treatment to recycled water prior to its distribution; however, recycled water is supplied to some of Sonoma Water's customers by other agencies. This section describes recycled water coordination and identifies the wastewater and recycled water agencies within the service area.

5.4.1 Recycled Water Coordination

The use of recycled water reduces peak demands on Sonoma Water's water supply system and the need to construct additional water storage facilities. Sonoma Water is involved with coordinating recycled water programs including funding for projects that offset Sonoma Water deliveries.

Sonoma Water and its water contractors encourage recycled water use by funding recycled water projects. Funds are collected as part of Sonoma Water rates, for the Local Supply/Recycled Water/Tier 2 Conservation Fund known, also known as LRT2. A total of $13,000,000 has been disbursed for recycled water projects between the program's inception on July 1, 2000 and June 30, 2020. There are no funds or projects remaining in the program. DWR Tables 6-4 and 6-5 are not included since Sonoma Water does not directly supply recycled water, nor was recycled water projected for use or distribution in 2020.

Recognizing the growing need for an integrated and regional approach to water management, Sonoma Water helped form the North Bay Water Reuse Authority (Authority). The Authority consists of water and wastewater agencies in Sonoma, Marin, and Napa counties. These agencies joined forces to plan and promote projects that would considerably expand the use of recycled water region-wide, including areas in Sonoma Valley and North Marin. Projects would build on commitments to long-term inter-agency cooperation to address common needs related to reliable water supplies and enhanced environmental restoration. The Authority provides a model for maximizing the benefits of limited water resources in the west.

Some of Sonoma Water's customers have developed recycled water plans in coordination with the wastewater treatment facilities within their local service areas. Sonoma Water is involved with planning potential future recycled water projects with the Town of Windsor and in the Sonoma Valley with the City of

Sonoma and the Valley of the Moon Water District. Sonoma Water would not be the agency that would supply these potential future recycled water supplies, so these future supply amounts are not included in this Plan.

5.4.2 Wastewater Collection, Treatment, and Disposal

Sonoma Water does not directly collect, treat, or discharge any wastewater within its service area and thus DWR Table 6-3 is not included. The agencies that collect, treat, or discharge municipal wastewater generated and treated within the service area are identified in Table 5-9. There are eight smaller wastewater agencies in the Marin Water area that are not included in Table 5-9 that provide wastewater collection service. The collection, treatment, and disposal of treated wastewater (i.e., non-recycled) is discussed in each of the customers' individual urban water management plans.

Table 5-9. Wastewater and Recycled Water Agencies

Name of Agency	Wastewater Role	Recycled Water Role
Santa Rosa Subregional Reclamation System (Subregional System)	Provides wastewater collection and treatment for Santa Rosa, Cotati, Rohnert Park, Sebastopol, and Windsor areas.	Recycled water provided to the Geysers Recharge Project and to Rohnert Park and Santa Rosa areas.
City of Petaluma	Provides wastewater collection and treatment.	Provides recycled water to agricultural, landscape, and industrial customers.
Town of Windsor	Provides wastewater collection and treatment for Windsor area.	Provides recycled water to Windsor area and to Geysers Project.
Sonoma Valley County Sanitation District	Provides wastewater collection and treatment for Valley of the Moon and Sonoma Valley areas.	Provides recycled water for urban, environmental and agricultural use near Sonoma.
Airport-Larkfield-Wikiup Sanitation Zone (ALWSZ)	Provides wastewater collection and treatment for the Larkfield and Wikiup areas in Sonoma County, including the Airport Business Park	Provides recycled water for agricultural use
Novato Sanitary District	Provides wastewater collection and treatment for NMWD area.	Provides recycled water for agricultural use and landscape use in the Novato area of NMWD.
Marin Water		Distributes recycled water.
Las Gallinas Valley Sanitary District	Provides wastewater collection and treatment in Marin Water area.	Provides treated recycled water to Marin Water area.
Central Marin Sanitation Agency	Provides wastewater treatment in Marin Water area.	
Sanitary District No. 5 (Tiburon)	Provides wastewater collection and treatment in Marin Water area.	
Sausalito-Marin City Sanitary District	Provides wastewater collection and treatment in Marin Water area.	
Sewerage Agency of Southern Marin	Provides wastewater collection and treatment in Marin Water area.	

The Santa Rosa Subregional Reclamation System and the Town of Windsor Water Reclamation Division both export some of their treated wastewater to the Geysers Recharge Project, which is located outside of the service area. The wastewater facilities owned by the Sonoma Valley County Sanitation District are operated

and maintained under contract by Sonoma Water. Sonoma Water also owns and operates other wastewater treatment facilities in the region including the Airport-Larkfield-Wikiup Sanitation Zone (ALWSZ).

Within Sonoma Water's service area, discharge of treated wastewater is regulated by the North Coast Regional Water Quality Control Board and the San Francisco Bay Regional Water Quality Control Board depending on the point of discharge.

5.4.3 Recycled Water Systems

Table 5-9 identifies the agencies involved in recycled water within Sonoma Water's service area. As stated earlier, Sonoma Water does not supply recycled water and does not provide supplemental treatment. Individual customers' urban water management plans provide information related to the amount of recycled water used and projected to be used.

In general, the majority of the wastewater generated and treated during the summer months that is not delivered to the Geysers Recharge Project is used for alternative beneficial uses such as wetland habitat and restoration and irrigation for agriculture, pastures, vineyards, urban uses and golf courses. The use of the recycled water helps offset part of the potable and agricultural water demand during the peak summer months.

Some of Sonoma Water's customers have developed recycled water system master plans and programs. Current programs include using recycled water for irrigation of agricultural areas, parks, commercial properties, residential landscapes, golf courses and vineyards to offset potable and non-potable water demands.

The wastewater facilities and their current and planned use of recycled water for the wastewater systems operated and maintained under contract by Sonoma Water are described below. These wastewater systems are not owned by Sonoma Water.

5.4.3.1 Sonoma Valley County Sanitation District

Municipal wastewater services in the Sonoma Valley are provided by the Sonoma Valley County Sanitation District (SVCSD), which is managed and operated by Sonoma Water. SVCSD collects, treats, and disposes of wastewater generated from within the service areas of the Valley of the Moon Water District and the City of Sonoma. The SVCSD reclamation facility provides a tertiary level of treatment. The facility has a permitted average dry weather flow capacity of 3 million gallons per day (mgd) and is capable of treating up to 16 mgd. From 2016 to 2020, the annual volume of wastewater treated by the plant ranged from approximately 2,800 (in 2020) to 4,600 (in 2016) to 2,800 (in 2020) ac-ft.

Treated wastewater is currently either discharged to the San Pablo Bay via Schell and Hudeman Slough or is reused by dairy operations, vineyard irrigation and wetland enhancement/restoration in the southern part of the Sonoma Valley and in the southwest portion of Napa County. On average in the last five years, approximately 1,200 ac-ft of recycled water was reused, thus offsetting groundwater pumping by this amount. In recent years, the SVCSD has explored the feasibility of expanding recycled water use to offset local groundwater pumping or imported Russian River water in addition to reducing or eliminating discharges to San Pablo Bay.

The City of Sonoma and Valley of the Moon Water District meet the water supply needs of their customers by importing water into the valley from Sonoma Water, pumping local groundwater within the valley, and implementing water conservation programs. A recent USGS study has found that saline water intrusion in the southern part of the valley could be occurring in the vicinity of a groundwater depression within and to the southeast of the City of Sonoma's service area. The use of recycled water to offset Valley of the Moon Water District, City of Sonoma, and agricultural groundwater pumping can help alleviate the potential for saline water migration into the Sonoma Valley, thus enhancing the reliability of their water supply.

5.4.3.2 Airport-Larkfield-Wikiup Sanitation Zone

Sonoma Water owns and operates the ALWSZ, which includes the Airport Business Park in its service area and California American's Larkfield District. The ALWSZ facility produces disinfected tertiary recycled water for agricultural irrigation (pastures, orchards, vineyards/frost control, and cannabis grow sites) and other uses (construction and dust control, sanitary sewer cleaning, street sweeping and fire suppression). The ALWSZ also occasionally produces disinfected secondary-23 recycled water for irrigation of grassland (pasture grasses) at the Sonoma County Airport. Operation of the ALWSZ Recycled Water Program is authorized under the Statewide Water Reclamation Requirements for Recycled Water Use Order WQ 2016-0068-DDW.

Three ponds are used for storage of tertiary quality recycled water: Storage Pond No. 1 (North Pond), Storage Pond No. 2 (South Pond), and Storage Pond No. 3 (also known as Oceanview Reservoir). All recycled water storage ponds are operated and maintained by Sonoma Water. The ALWSZ facility has a permitted average dry weather flow capacity of 0.9 mgd and a peak wet weather flow of 5.0 mgd. From 2016 to 2020, the annual volume of wastewater treated by the plant ranged from approximately 225 MG (in 2015) to 321 MG (in 2017). Secondary treated recycled water is used for pasture irrigation on restricted access land at the Sonoma County Airport. Tertiary treated recycled water is used for agricultural irrigation, landscape irrigation, and frost control.

The Town of Windsor supplies potable water to the Airport Business Park. In 2013 Sonoma Water and the Town conducted a feasibility study to evaluate the use of ALWSZ and Town of Windsor recycled water in the business park and other areas of the Town of Windsor's water service area to offset use of the Russian River water for landscaping purposes. The study identified several projects that could be implemented to offset potable water usage within the Airport Business Park. Sonoma Water is researching funding opportunities that could assist in the implementation of one of these projects. In addition, ALWSZ and the Town of Windsor operations and maintenance staff have been discussing ways to mutually move recycled water between each agency, making both efficient at supplying recycled water to users that are served by both facilities.

5.5 Desalinated Water Opportunities

Desalination of sea water is not currently an economically viable option for use as a Sonoma Water supply. Additionally, Sonoma Water's wells produce neither brackish nor impaired groundwater that would require desalination.

While Sonoma Water does not foresee pursuing desalination as a potential water supply, some of its water contractors or customers may explore the option in the future. Marin Water has constructed a pilot-scale desalination plant (the Seawater Desalination Pilot Plant). The status of Marin Water's desalination program is provided in their its urban water management plan.

5.6 Exchanges or Transfers

Currently, Sonoma Water does not transfer and/or exchange water with other entities, and it is not anticipated that transfers or exchanges will occur in the future. Water transfers between Sonoma Water's customers have been necessary in the past and may be necessary in the future to improve water reliability. The Restructured Agreement authorizes water transfers between water contractors in certain limited circumstances.

5.7 Future Water Projects

Sonoma Water evaluated the projected demands requested by its customers and Russian River customers through 2045. Based on this assessment, additional water supply projects will be needed to meet these projected demands. The types of projects and their estimated schedule are summarized in Table 5-10.

These projects consist of new water supply diversion facilities and certain transmission system projects necessary to convey these additional supplies to portions of the transmission system where the demands are anticipated to occur. The schedule shown in Table 5-10 assumes that Sonoma Water's customers will determine these projects are prudent and support their financing. The following describes how these projects were identified.

Based on the water demand projections described in Section 4, Sonoma Water estimates the existing overall annual diversion and re-diversion limit of 75,000 ac-ft in Sonoma Water's water rights permits will be adequate to meet future demands through 2045. Consequently, the need for Sonoma Water to make filings with SWRCB to increase its annual diversion and re-diversion limit of Russian River water by 1,000 acre-feet as identified in the 2015 Plan is no longer necessary during the planning horizon of the 2020 Plan, due to increased water conservation by Sonoma Water's customers and resulting lower projected future water demands. The need to increase the 75,000 ac-ft/yr diversion and re-diversion limit in Sonoma Water's water rights permits and the schedule for requesting any new permit or changes to Sonoma Water's existing permits will be reevaluated in Sonoma Water's 2025 Plan.

Although Sonoma Water anticipates the overall annual diversion and re-diversion limit will be adequate through 2035, additional water diversion facilities will be needed to meet future demands. To estimate the additional capacity and schedule for these new facilities, the projected annual deliveries were translated to peak system demands based on analyses of recent historical peaking factors under normal water supply conditions. These estimated peak demands were then compared to the estimated firm capacity of the existing production facilities to determine if additional production capacity will be necessary to meet projected demands. Based on this evaluation, Sonoma Water estimates that approximately 3 mgd of additional diversion capacity will be needed to meet demands out to 2040 with additional capacity required online by about 2035. This additional production capacity can likely be developed by installing new wells (or perhaps retrofitting existing wells) in the Wohler and Mirabel areas. Additional studies will be necessary to refine this future project and to examine alternatives. Sonoma Water will need to comply with CEQA to implement such a project.

As discussed in Section 1.4.2, Sonoma Water assumes that the Russian River Biological Opinion will be successfully implemented, including the Dry Creek habitat enhancement work. The Russian River Biological Opinion directed Sonoma Water to build habitat along six miles of Dry Creek to reduce the impacts of high velocities caused by releases from Warm Springs Dam for water supply and flood control. The Russian River Biological Opinion included a check-in after the first three miles of habitat work was completed. If the habitat work was considered to be successful at providing additional habitat for the listed species, then the final three miles of habitat work would be implemented. If the habitat work was considered not to be successful at providing additional habitat for the listed species, then it would be necessary for Sonoma Water to construct a bypass pipeline to convey flows for water supply purposes without using Dry Creek. To be prepared for the bypass pipeline option, the Russian River Biological Opinion required Sonoma Water to prepare a feasibility study while continuing to work towards implementing the habitat efforts in Dry Creek. The bypass pipeline feasibility study was completed in 2011. Meanwhile, as the bypass pipeline feasibility study was being prepared, Sonoma Water staff began conceptual design work on the Dry Creek habitat projects and began outreaching to find landowners willing to allow Sonoma Water to build habitat projects on their property. In 2012, the first habitat project along Dry Creek was constructed. This was followed up by additional habitat construction in 2013 and 2014 to complete a little over the first mile of habitat work. Design and construction efforts continued for the implementation of two additional miles of habitat work with the majority of this next phase of work occurring in the 2016, 2017, and 2018 construction seasons. With additional projects completed in summer 2019 and 2020, a total of 3.25 miles of habitat have been enhanced in Dry Creek.

Based on the progress and successful functioning of the habitat efforts constructed through 2020, NMFS and CDFW staff have abandoned the bypass pipeline alternative and support continued habitat

enhancement to achieve the six-mile objective in the Russian River Biological Opinion. Sonoma Water has been working in partnership with the USACE to obtain federal cost-share funds. In 2020, Sonoma Water and the USACE entered into an agreement to provide $28 million in federal funds towards the final three miles of Dry Creek habitat effort. These federal funds are expected to be utilized for construction efforts during the 2021 through 2024 construction seasons.

Additional transmission system facilities will be needed to ensure that future peak demands can be met in all portions of the water transmission system. Similar to the water supply facilities, the timing of completing these facilities is dictated by the projected peak demands. Sonoma Water simulated the transmission system operation under these peak demands using its hydraulic model to identify capacity constraints and evaluate which transmission system projects are necessary and when those projects are needed. In Sonoma Water's transmission system, using the sustained levels in the storage facilities is one of the key criteria to determine sufficient capacity. For this analysis, a pipeline or group of pipelines would be identified with a capacity deficiency if the downstream storage facility was unable to maintain storage levels above 50% of the total storage capacity after five consecutive days of projected peak day demands.

Based on the modeling results, the South Transmission Main Project that will provide a secondary pipeline from the Cotati Tanks to the Kastania Meter Station will be needed as early as 2030 with at least the first phase (Cotati Tanks to Ely Booster Station) to alleviate capacity deficits during periods of peak demand projected to occur in the southern portion of the Petaluma Aqueduct. Phase 2 of the South Transmission Main Project (Ely Booster Station to Kastania Meter Station) is expected to be needed by 2035.

Additionally, although Table 5-10 does not specify any transmission system projects in the Sonoma Valley, modeling results indicate that between 2030 and 2035, the Sonoma Aqueduct will begin to exhibit capacity deficiencies. While the deficiency does not exceed the criteria for identifying a capacity constraint, deliveries to Sonoma Valley are dependent on non-redundant facilities and hence system reliability is a concern. Further analysis is recommended for consideration of infrastructure projects that would improve the system's reliability.

The project schedule described in Table 5-10 is based on the demand projections provided by the water contractors and Marin Water. Sonoma Water coordinated with its water contractors and Marin Water as they developed population and water demand projections through 2045 as part of their urban water management plans. If water demands increase at a slower rate than projected, the dates when the transmission system projects (including the South Transmission Main Project) are needed may be extended. Sonoma Water will continue to work with its water contractors and other customers to monitor actual water demands relative to their demand projections. Also, Sonoma Water will assist the water contractors' evaluation of local projects (e.g., new storage, additional conservation, or recycled water projects) to help mitigate or delay the need for the transmission system projects identified in Table 5-10. Sonoma Water will also continue to monitor demands on the Sonoma Aqueduct and update its hydraulic analysis as new information regarding demand projections become available from the Valley of the Moon Water District and the City of Sonoma.

Table 5-10. Wholesale: Expected Future Water Supply Projects or Programs (DWR Table 6-7 W)						
	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format. LOCATION OF THE NARRATIVE_____					
Name of Future Projects or Programs	Joint Project with other agencies?		Description (if needed)	Planned Implementation Year [c]	Planned for Use in Year Type	Expected Increase in Water Supply to Supplier, ac-ft/yr
South Transmission Section 1 (Cotati to Ely) [a]	No			2030	All year types	
South Transmission Section 2 (Ely to Kastania) [a]	No			2035	All year types	
Mirabel West Wells [b]	No			2035	Average Year and Multiple-Dry Years	7,800

a. *Transmission system projects are scheduled to provide water deliveries to specific portions of Sonoma Water's transmission system per the projection of net water demands by Sonoma Water's customers and therefore do not represent on their own an additional water supply.*

b. *Additional annual water supply is based on increased peak capacity from the new facilities using historical correlation of peak capacities to annual diversions.*

c. *Year project needs to be ready for use.*

5.8 Summary of Existing and Planned Sources of Water

This section provides projections of the future water supply quantities available for delivery by Sonoma Water to its customers. Future water supply projections are dependent upon planned infrastructure improvements being approved and constructed as summarized in Table 5-10 and upon the assumptions discussed in Section 1.4.

Table 5-11 summarizes Sonoma Water's use of 2020 water supplies. Table 5-12 summarizes the projected water supplies available to Sonoma Water, for delivery to the customers.

Table 5-11. Wholesale: Water Supplies — Actual (DWR Table 6-8 W)				
Water Supply	Additional Detail on Water Supply	2020		
		Actual Volume, ac-ft	Water Quality	Total Right or Safe Yield, ac-ft
Purchased or Imported Water		0		
Supply from Storage		0		
Groundwater (not desalinated)	Sonoma Water does not plan to utilize groundwater as a normal year source of supply. Rather, groundwater from the Santa Rosa Plain wells will be utilized on an as-needed basis during periods of drought or when Russian River supplies are otherwise constrained.	0	Drinking Water	2,300
Surface Water (not desalinated)		52,793	Drinking Water	75,000
Recycled Water		0		0
Desalinated Water – Groundwater		0		0
Desalinated Water – Surface Water		0		0
Stormwater Use		0		0
Transfers		0		0
Exchanges		0		0
Other		0		0
Total		52,793		77,300

Table 5-12. Wholesale: Water Supplies — Projected (DWR Table 6-9 W)

Water Supply	Additional Detail on Water Supply	Projected Water Supply Reported to the Extent Practicable, ac-ft									
		2025		2030		2035		2040		2045 (opt)	
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)
Purchased or Imported Water											
Supply from Storage											
Groundwater (not desalinated)		2,300	(a)	2,300	(a)	2,300	(a)	2,300	(a)	2,300	(a)
Surface Water (not desalinated)		75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
Recycled Water											
Desalinated Water – Groundwater											
Desalinated Water – Surface Water											
Stormwater Use											
Transfers											
Exchanges											
Other											
Total		77,300	75,000	77,300	75,000	77,300	75,000	77,300	75,000	77,300	75,000

a. Safe yield not defined at this time.

5.8.1 Water Supply Strategies

Sonoma Water's commitment to providing a reliable water supply to its customers in future years prompted development of new water supply strategies. In September 2010, following 16 months of community outreach and involvement Sonoma Water's Board of Directors (Board) approved nine Water Supply Strategies developed to increase water supply system reliability, resiliency and efficiency in the face of limited resources, regulatory constraints and climate change uncertainties.

Under Board direction, the 2010 Water Supply Strategies Action Plan (Action Plan) described how each strategy was being carried out through specific activities and projects, identified involved parties and provided the state and budget information for each activity or project. The Board recognized that the plan is a living document and requested regular updates. The Action Plan was updated in 2011, 2013, and most recently in 2018. The original nine Water Supply Strategies have been updated to seven strategies, as presented in Table 5-13, which directly align with Sonoma Water's Internal Strategic Plan.

The strategies and Action Plan are based on the following considerations:

- No entity can do it alone: Coordination and partnerships are essential to achieving reliable, efficient, and sustainable water resource management.
- None of the strategies stand alone: The strategies are interconnected.
- The Action Plan is a living document: The plan is a snapshot and should be modified as progress is made, and conditions change.
- Public education and input: Transparency is critical to success.

For each of the seven strategies, the Action Plan defines specific activities and projects, involved parties, activity/project status, budget, and timing. The timing of each activity is categorized as either immediate, near term, or long term. This Action Plan continues Sonoma Water's commitment to an open, transparent, and inclusive water supply planning process. Sonoma Water staff continues to coordinate with the water contractors' TAC to develop the updated Action Plan. The Action Plan is available on Sonoma Water's website (http://www.scwa.ca.gov/water-supply-strategy/).

Table 5-13. Water Supply Strategies

Strategy 1	Protect Drinking Water Supply & Promote Water-Use Efficiency
Strategy 2	Maintain & Improve the Reliability of the Water Transmission System
Strategy 3	Utilize Regional Planning to Increase Water Supply Resiliency
Strategy 4	Respond & Adapt to Climate Change
Strategy 5	Improve the Energy Efficiency of the Water Transmission System & Increase Renewable Power Use
Strategy 6	Increase Emergency Preparation & Improve Response to Natural Disasters
Strategy 7	Seek Federal & State Funding

5.9 Climate Change Impacts to Supply

This section provides an overview of the recent direction that has been developed for California water agencies regarding climate change planning and a description of Sonoma Water's current related activities.

In April 2019, Governor Gavin Newsom issued Executive Order # N-10-19 directing the California Natural Resources Agency, California Environmental Protection Agency, and California Department of Food and Agriculture to develop a comprehensive strategy to build a climate resilient water system and ensure healthy waterways through the 21st Century. To that end, the state agencies developed and the Governor released

the Water Resilience Portfolio in July 2020. Development of the portfolio required the state agencies to conduct an inventory and assessment of key aspects of California water, which included soliciting input from tribes, agencies, individuals, groups, and leaders across the state. Because no single solution can fully address the state's water challenges, the portfolio embraces a broad, diversified approach. Goals and actions are organized into four categories:

- **Maintain and Diversify Water Supplies.** Help regions reduce reliance on any one water source and diversify supplies to enable flexibility as conditions change.
- **Protect and Enhance Natural Systems.** Establish effective standards, continue investments, and look for more adaptive, holistic environmental management.
- **Build Connections.** Look for physical infrastructure improvements that allow regions to better store, move, and share water and integrate water management.
- **Be Prepared.** Prepare for new threats (e.g., flashier floods, longer droughts, and hotter temperatures) through protective actions and adaptive management.

Overall, the portfolio is a water policy roadmap to guide state efforts to meet the water needs of California's communities, economy, and environment as the climate changes. Sonoma Water is familiar with climate change planning guidance that has been provided by state agencies and is incorporating climate change planning into its water planning activities. Sonoma Water's Water Supply Strategy 4 is to respond and adapt to climate change. The strategy defines immediate actions that consist of investing in climate science and technology, evaluating climate risk and vulnerabilities to operations and infrastructure, and implementing climate change adaptation strategies once the climate change predictive modeling is completed. As part of these efforts, Sonoma Water developed the Sonoma Water Climate Vulnerability Assessment and Adaptation Plan (CAP). The CAP is a forward-looking climate adaptation plan to serve as a roadmap for Sonoma Water's assessment of climate risks and potential adaptation strategies related to its water supply, sanitation, and flood control infrastructure and operations. The adaptation plan will serve to guide Sonoma Water in terms of prioritizing and allocating resources towards practices and projects that will improve resiliency of its operations and facilities to climate variability and change.

As part of Strategy 4, Sonoma Water is funding ongoing studies with the USGS, NOAA, and Scripps Center for Western Weather and Water Extremes on the potential effects of climate change on Sonoma Water's water supply. Potential changes in air temperature and precipitation due to changes in climate are likely to result in changes in hydrology in the Russian River drainage basin. Sonoma Water is interested in understanding how runoff and streamflow may change and hopes to obtain scientifically defensible information upon which to base infrastructure planning and approaches for resource management.

The objectives of this work are to:

(1) Continue to refine and update the downscaled future climate scenarios necessary for hydrologic modeling of the Russian River Water System;

(2) Develop and calibrate a regional-scale hydrologic model to provide daily inputs for future climate ensembles for Sonoma Water's water management models of the Russian River Water System;

(3) Prepare future climate inputs for groundwater models in Sonoma Valley and the Santa Rosa Plain.

The results of these efforts may allow Sonoma Water to assess the impact of climate changes in future years on the water demands of its customers and the water supply available to Sonoma Water. This new information will form the basis of future Plans. In the interim, customers of Sonoma Water, local planning agencies, and other persons relying on this Plan as a reference for analysis of water supply availability are encouraged to check with Sonoma Water for updated information regarding activities on this issue. In addition, Sonoma Water, Scripps Institute for Western Weather Extremes and the USGS have partnered on research to evaluate how climate change may impact extreme weather events such as floods and droughts.

5.10 Energy Intensity

Water energy intensity is the total amount of energy on a per ac-ft basis associated with water management processes occurring within Sonoma Water's operational control. Sonoma Water has selected to report its energy intensity using the total utility approach, or DWR Option B. Table 5-14 presents the energy intensity of Sonoma Water's water supplies for the year 2018. Energy is used to divert surface water from the Russian River and to convey it to Sonoma Water's customers.

In 2011, Sonoma Water's Board adopted its Energy Policy which established the goal of achieving Carbon Free Water by 2015. The goal was reached by increased water-use efficiency, water system operational efficiency, and development and purchase of fossil fuel free electricity sources. Ongoing water use efficiency efforts resulted in Sonoma Water reducing its total energy use by 26 percent since 2005. Through a combination of constructing its own power sources and contracting for renewable and carbon free sources, such as hydroelectric, geothermal, wind, and solar electricity, Sonoma Water supplies 100% of its electricity needs through non-fossil fuel sources.

Table 5-14. Energy Reporting-Total Utility Approach (DWR Table O-1B)

Urban Water Supplier:	**Sonoma Water**
Water Delivery Product:	**Wholesale Potable Deliveries**

Table O-1B: Recommended Energy Reporting - Total Utility Approach

Enter Start Date for Reporting Period	1/1/2018	Urban Water Supplier Operational Control		
End Date	12/31/2018			
Is upstream embedded in the values reported? (If so, check box)		Sum of All Water Management Processes	Non-Consequential Hydropower	
		Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (ac-ft)		51,166	23,414	51,166 (see notes below)
Energy Consumed (kilowatt-hour [kWh])		37,719,177	-3,162,000	34,557,177
Energy Intensity (kWh/ac-ft)		737	-135	675
Energy Intensity (converted to kWh/MG)		2,262	-414	2,073

Quantity of Self-Generated Renewable Energy

2,357,331	kWh

Data Quality

Metered Data

Data Quality Narrative:

Energy data comes from aggregating annual kilowatt hours as measured with utility scale meters used for billing on both the consumed side and the hydropower generation side.

Due to electrical issues, the hydroturbine was offline nearly 50 percent of the time in 2018. Had it been functional year-round, the volume of water entering the process and hydropower generated would have likely been greater. As reference, in 2015 the volume of water that went through the hydroturbine was nearly 65,000 ac-ft and the amount of hydropower generated was nearly 9.5 million kWh.

Table 5-14. Energy Reporting-Total Utility Approach (DWR Table 0-1B)

Narrative:

Sonoma Water has 21 electric power accounts from Power and Water Resources Pooling Authority (PWRPA). Sonoma Water has 72 electric power accounts from Sonoma Clean Power, two Marin Clean Energy accounts, and one PG&E account.

Non-consequential hydropower – Not all water passing through the hydropower system is withdrawn from the water way downstream for delivery to customers. So, hydropower water volume is greater than water delivered/processed. "Net Utility" value is therefore not applicable. Hydropower from Warm Springs Dam is sold to PWRPA. Sonoma Water then purchases the same hydropower from PWRPA. The balance of power purchases from PWRPA and Sonoma Clean Power are from non-fossil fuel sources, making Sonoma Water's power sources "carbon free."

Self-Generated Renewable Energy only includes solar PV generated at four Sonoma Water facilities, as suggested for reporting in Appendix O of the UWMP Guidebook. It does not include the power from our own Warm Springs Dam hydropower system, from PWRPA's WAPA hydropower sources, PWRPA's solar sources, Sonoma Clean Power's geothermal source, or from Marin Clean Energy's solar and wind sources.

Section 6

Water Supply Reliability and Drought Risk Assessment

This section describes the constraints on water supplies, reliability by type of year, the supply and demand assessment, and regional supply reliability. During short-term periods of water supply shortages, or in the event of a temporary impairment of transmission system capacity, Sonoma Water would implement its WSCP, which is described in Section 7.

6.1 Constraints on Water Sources

The availability of water in the Russian River presents the most prominent potential physical constraint on the delivery of water to Sonoma Water's customers, particularly during high demand periods in the summer months. As previously described in Section 5.1.6, Sonoma Water uses the ResSim program developed by the Hydrologic Engineering Center of the USACE to evaluate the amount of water available for diversion from the Russian River, and a transmission system hydraulic model to evaluate transmission capacity constraints on delivering water. While no immediate constraints in the transmission system have been identified, conditions into the future need to be monitored to mitigate any constraints that may arise. Delivery of projected future water supplies depends on planned infrastructure improvements being approved and constructed, as discussed in Section 5.7.

The water quality of Sonoma Water's water deliveries is regulated by the SWRCB's Division of Drinking Water, which requires regular collection and testing of water samples to ensure that the quality meets Federal and state regulatory standards and does not exceed maximum contaminant levels (MCLs). Sonoma Water's water quality testing has consistently yielded results well within the acceptable regulatory limits since the late 1950s.

Sonoma Water treats its water supplies by chlorination for residual disinfection. Sonoma Water also adds sodium hydroxide for pH adjustment to prevent copper plumbing corrosion. Sonoma Water's water is of high quality, due to the natural filtration processes that occur at Sonoma Water's diversion facilities.

Based on existing data, water quality issues are not anticipated to have significant impact on water supply reliability. The quality of Sonoma Water's surface water and groundwater supply sources over the next 25 years is expected to continue to meet state and federal regulatory standards. Surface and groundwater will continue to be treated to meet drinking water standards and no impacts to water supplies due to water quality deficiencies are foreseen to occur in the next 25 years. Although there is no current evidence of groundwater contamination or constituents being close to current drinking water standards, if chemical contamination occurs in the future or if MCLs for constituents are lowered, new treatment facilities could be constructed. These treatment facilities could have a significant cost.

As noted in Section 1.4, the Plan is based upon reasonable assumptions about Sonoma Water's sources of water supply. There are a number of actions and projects Sonoma Water could undertake to mitigate any adverse water supply impacts resulting from future changes in those assumptions.

6.2 Reliability by Type of Year

Sonoma Water's surface water supply is subject to reductions during dry years. When the Lake Sonoma water volume is less than 100,000 ac-ft before July 15, a 30 percent reduction of diversions compared to the same time period the previous year is required, as dictated by Sonoma Water's water rights permits and Decision 1610 and as described in Section 5.1.6.1. Sonoma Water's groundwater supply capacity is assumed to not be impacted by single-dry years given the short duration and low frequency of occurrence and Sonoma Water staff analysis of existing pumping data.

Consistent with the Water Supply Strategies Action Plan and state plans (e.g., California Water Plan 2018), Sonoma Water will continue to work with its customers to conjunctively manage Russian River and groundwater supplies to promote sustainability of these resources. These strategies may include using groundwater supplies during hydrologic dry years for the Russian River (e.g., 2013 -- 2015, 2020 – 2021) or conversely, reducing groundwater pumping from non-Russian River aquifers during years when there are high Russian River flows (e.g., 2010, 2011, 2012 and 2019).

In addition, Sonoma Water and its partners are exploring opportunities to enhance groundwater recharge of stormwater in the Sonoma Valley, Petaluma Valley, and Santa Rosa Plain watersheds (Section 5.3). As discussed in Section 5.2.3.2, Sonoma Water and its partners also recently completed an ASR pilot. As next steps, the partners plan on assessing the technical and economic viability of ASR technology in the region. If deemed feasible, the pilot project results could be used to complete environmental documentation and design for a full scale or permanent ASR project in the region. Furthermore, Sonoma Water and its retail customers are currently developing a decision support tool as part of a regional water supply resiliency study in an effort to improve the regions water supply resiliency and reliability. The decision support tool will be used to evaluate strategies and water supply projects to improve integrated water resources management and make the region more resilient to potential short- and long-term water shortages. The decision support tool will be a planning level model framework that will consider the built infrastructure, water supplies, and operations of Sonoma Water and its surplus customers. These strategies, either individually or in combination with conservation and recycled water projects, provide enhanced reliability of the regional water supply during droughts, natural hazard events (e.g., earthquakes), and periods of peak seasonal water demands. These measures can also help improve habitat conditions by enhancing tributary base flows by reducing groundwater pumping, or in the case of Dry Creek, reducing summer releases from Warm Springs Dam (due to reduced peak demands), thus improving flow conditions for ESA-listed salmonids.

The reliability of Sonoma Water's two water supply sources (Russian River surface water and groundwater) to demands for average, single- and five consecutive-dry water years is summarized in Table 6-1, as well as the years upon which the supplies are based. Sonoma Water's supply modeling incorporates potential impacts of climate change, as described in Section 5.9.

6.3 Supply and Demand Assessment

This section provides a comparison of the projected water supply and demand for Sonoma Water from 2025 through 2045. The demand for Sonoma Water represents the demand by Sonoma Water's customers for wholesale water from the transmission system and Russian River customers diverting water under Sonoma Water's water rights. It does not include the portion of the customers' retail demand met by water conservation, recycled water, and local supplies. Water supply to demand comparisons are also provided for single-dry year and multiple-dry year scenarios. Table 6-1 lists the years identified as the historical average, single driest and driest multi-year period, along with the available supply if the year type hydrology was to repeat. The water demands are developed in Section 4, and water supplies are defined in Section 5. As noted in Section 5.1.6.2, water supply identified in the Plan represents the water demand that can be met while maintaining adequate storage in Lake Mendocino and Lake Sonoma. With the exception of Lake

Mendocino in a single dry year condition, the water stored in the reservoirs is typically greater than the supply needed to meet demands (especially Lake Sonoma).

The overall conclusion is that Sonoma Water has adequate water supply through the 2045 planning horizon of this Plan, except for single-dry years, starting after 2025. For single-dry years, the model simulations predict that storage levels in Lake Sonoma will drop below 100,000 ac-ft prior to July 15th, thus requiring demand curtailments by Sonoma Water customers per Decision 1610 (Section 5.1.6.1) for some portion of the year. In these circumstances, Sonoma Water will work with its customers to reduce water demands as described in the WSCP (Appendix C), or to utilize additional local sources, or both. Based on efforts over the last five years during dry conditions, Sonoma Water does not anticipate any difficulty in maintaining an adequate water supply during the single-dry year. The magnitude of these single-dry year potential shortfalls is estimated to be about 19 percent of average annual demand by 2045.

Table 6-1. Wholesale: Basis of Water Year Data (Reliability Assessment) (DWR Table 7-1 W)

Year Type	Base Year	Available supplies if year type repeats	
			Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP.
		✓	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume available, ac-ft	% of average supply
Average Year	2002	65,020	100%
Single-Dry Year	1977	65,020	100%
Multiple-Dry Years 1st Year	1987	65,020	100%
Multiple-Dry Years 2nd Year	1988	65,020	100%
Multiple-Dry Years 3rd Year	1989	65,020	100%
Multiple-Dry Years 4th Year	1990	65,020	100%
Multiple-Dry Years 5th Year	1991	65,020	100%

The comparison of projected water supply and demand for normal years is presented in Table 6-2. As Table 6-2 shows, there is adequate water supply in normal years to meet demands through 2045. For this analysis, if a projected Sonoma Water demand can be met while maintaining adequate storage in Lakes Mendocino and Sonoma, that demand is considered the supply for that scenario. See section 5.1.6.2.

Table 6-2 Wholesale: Normal Year Supply and Demand Comparison, ac-ft (DWR Table 7-2)

	2025	2030	2035	2040	2045 (Opt)
Supply totals[a]	65,020	69,177	70,725	72,588	74,547
Demand totals	65,020	69,177	70,725	72,588	74,547
Difference	0	0	0	0	0

a. In the electronic submittal tables, DWR Table 7-2 autofills the supply totals with the "reasonably available volume" from DWR Table 6-9. However, there is no reason for Sonoma Water to divert more water than is needed to meet demands. Therefore, when excess supply is available, the projected supply is shown as equal to the demand.

Table 6-3 provides a comparison of a single dry year water supply with projected total water use over the next 25 years, in five-year increments. When simulating the single dry year (1977), the model assumes that Lake Sonoma and Lake Mendocino levels at the start of 1977 are at the levels estimated by the model at the end of 1976 rather than assuming a full reservoir (a more conservative approach). As shown in Table 6-3, in single dry years starting in 2030, water demands will exceed water supplies due to Lake Sonoma declining below 100,000 ac-ft before July 15 and the requirement by Sonoma Water's water rights to decrease diversions by 30 percent. During these single dry years, Sonoma Water would work with its customers to reduce water demands as described in Section 7 and also look to utilize local supplies. Sonoma Water does not anticipate any difficulty in so doing. In addition, Sonoma Water would work with the SWRCB and other Russian River water users to reduce water demands, as occurred in 2015, as well as in 2007, 2009, 2013 and 2014. In 2015, Sonoma Water's customers were ordered as a result of the Governor's drought mandate to reduce water use. It is possible that similar demand reductions will be required in future dry years. These dry year demand reductions are not included in the demands presented in Table 6-3. Additionally, if storage levels in Lake Sonoma and Lake Mendocino were to decline to critically low levels, it is anticipated that Sonoma Water would likely file a TUCP to help preserve storage and provide relief from drought conditions, as discussed in Section 5.1.6. The model results reflected in Table 6-3 do not include filing a TUCP.

Table 6-3. Wholesale: Single Dry Year Supply and Demand Comparison, ac-ft (DWR Table 7-3)

	2025	2030	2035	2040	2045 (Opt)
Supply totals	65,020	58,168	58,897	59,789	60,656
Demand totals	65,020	69,177	70,725	72,588	74,547
Difference	0	(11,009)	(11,828)	(12,799)	(13,891)

Table 6-4 compares the total water supply available in multiple dry water years with projected total water use over the next 25 years, in five-year increments. As these tables show, there is adequate water supply during multiple dry years to meet demands through 2045.

Table 6-4. Wholesale: Multiple Dry Years Supply and Demand Comparison, ac-ft (DWR Table 7-4)

		2025	2030	2035	2040	2045 (Opt)
First year	Supply totals	65,020	69,177	70,725	72,588	74,547
	Demand totals	65,020	69,177	70,725	72,588	74,547
	Difference	0	0	0	0	0
Second year	Supply totals	65,020	69,177	70,725	72,588	74,547
	Demand totals	65,020	69,177	70,725	72,588	74,547
	Difference	0	0	0	0	0
Third year	Supply totals	65,020	69,177	70,725	72,588	74,547
	Demand totals	65,020	69,177	70,725	72,588	74,547
	Difference	0	0	0	0	0

Table 6-4. Wholesale: Multiple Dry Years Supply and Demand Comparison, ac-ft (DWR Table 7-4)						
		2025	2030	2035	2040	2045 (Opt)
Fourth year	Supply totals	65,020	69,177	70,725	72,588	74,547
	Demand totals	65,020	69,177	70,725	72,588	74,547
	Difference	0	0	0	0	0
Fifth year	Supply totals	65,020	69,177	70,725	72,588	74,547
	Demand totals	65,020	69,177	70,725	72,588	74,547
	Difference	0	0	0	0	0

6.4 Regional Supply Reliability

Sonoma Water utilizes water management tools to maximize the efficient use of water resources. Sonoma Water does not import water.[12] Sonoma Water has been working with its water contractors and other water transmission system customers to implement water conservation measures and supports implementation of recycled water projects by its water contractors and Marin Water. Sonoma Water is also developing a forward-looking study of the resilience of the regional water system (Resiliency Study). The Resiliency Study seeks to identify the key factors impacting regional water supply resiliency, evaluate the current levels of resiliency, develop a decision support framework model and process, and identify promising opportunities for Sonoma Water and its retail customers to improve regional resilience in the future. Specifically, the Resiliency Study seeks to:

- Improve understanding of regional vulnerabilities due to water shortages;
- Gain insights for new operational strategies and projects to improve regional resiliency;
- Develop and apply a regional decision support model (DSM) to evaluate a range of water supply options to make the region more resilient to potential short- and long-term water shortages;
- Continue DSM application on an ongoing basis to support regional and local water supply planning efforts;
- Improve regional position for grant funding opportunities; and
- Increase coordination between Sonoma Water and its retail customers.

The Resiliency Study has three phases, with Phase 1 development of a Work Plan and Scoping Document, Phase 2 development and implementation of the DSM tool, and Phase 3 for ongoing modification and maintenance of the DSM tool with periodic updates to assess evolving resiliency challenges. Phase 1 is complete and Phase 2 began in December 2020, with anticipated completion in spring 2022.

In addition, Sonoma Water is working with the USGS to conduct groundwater basin studies in Sonoma County. Sonoma Water is also involved in groundwater management activities with stakeholder groups and is evaluating conjunctive use strategies to further improve water resources sustainability. To comply with SGMA requirements, Sonoma Water is working closely with the GSAs and other local stakeholders in the process of developing, adopting, and implementing the basin specific GSPs as described in Section 5.2. The GSPs will be required to demonstrate that groundwater resources in the local basins are sustainable by 2042. Sonoma Water has been an active supporter and participant in the integrated regional water management planning process for the North Coast Hydrologic Region (Region 1) and the San Francisco Bay

[12] As noted in Section 4.1, however, Pacific Gas and Electric Company's Potter Valley Project uses water from the Eel River watershed for hydroelectric power generation, and discharges water into the East Fork of the Russian River.

Hydrologic Region (Region 2), because Sonoma Water provides water supply within both hydrologic regions. By working to integrate water resources planning across jurisdictional boundaries, Sonoma Water maximizes water resources.

6.5 Drought Risk Assessment

This DRA includes a description of the data and methods used, basis for the supply shortage conditions, determination of the reliability of each source, and comparison of the total water supplies and uses during the drought.

6.5.1 Basis for Water Shortage Condition

The DRA is based on simulating the five driest consecutive years on record paired to the current 2020 watershed hydrologic condition. For Sonoma Water, the five driest consecutive years were 1987 through 1991. To estimate water supply available for downstream demands and minimum instream flows for the DRA, Sonoma Water used the RR ResSim model, and a separate transmission system hydraulic model to evaluate transmission capacity constraints on delivering water. The RR ResSim model simulates reservoir operations of Lake Mendocino and Lake Sonoma for different the hydrologic periods of interest to determine the water supply available for demands on the Russian River, including Sonoma Water diversions. A detailed description of the model is provided in Section 5.1.6.

To assess the impact of a potential upcoming long-term drought, the DRA modeling was initialized with October 1, 2020 observed Lake Mendocino and Lake Sonoma storage levels. Since 2020 was a below average hydrologic year, the reservoir storages levels on this initialization date were also below average, resulting in conservative starting conditions. To make the simulation more conservative for the DRA, the Sonoma Water demands on the system were assumed to be equal to the 2025 projected annual demands, which are about 13,000 ac-ft higher than the 2020 Sonoma Water annual demands, creating more draw on the water supply. Using this higher demand assumption reflects, conservatively, potential increased demand under climate change conditions.

6.5.2 Drought Risk Assessment Individual Water Source Reliability

As previously discussed, Sonoma Water's surface water supply is subject to reductions during dry years. When the Lake Sonoma water volume is less than 100,000 ac-ft before July 15, a 30 percent reduction of diversions is required.

Sonoma Water does not plan to utilize groundwater as a normal year source of supply. Rather, groundwater from the Santa Rosa Plain wells will be utilized on an as-needed basis during periods of drought or when Russian River supplies are otherwise constrained. Sonoma Water's groundwater supply capacity is assumed to not be impacted by single-dry years given the short duration and low frequency of occurrence and Sonoma Water staff analysis of existing pumping data.

6.5.3 Total Water Supply and Use Comparison

The gross water use used in the DRA was based on projections developed for 2025. These demands were developed in coordination with the water contractors and Marin Water and represent the demand from the transmission system and Russian River customers diverting water under Sonoma Water's water rights. These demands do not include the portion of the customers' retail demand met by local supplies, conservation, and recycled water.

The results of the model analysis shown in Table 6-5 indicate that in all DRA years Sonoma Water has adequate water supplies from Lake Mendocino and Lake Sonoma to meet in-stream flows, system losses, and demands. These results are conservative given some of the underlying assumptions included in the RR ResSim model. While the model assumes that Sonoma Water will reduce its diversions by 30 percent to

account for diversion reductions required when Lake Sonoma storage falls below 100,000 ac-ft before July 15 (as described above), the model does not assume any other reductions in water demands during dry periods. Because it is likely that water demands from other Russian River water users would be reduced during drought periods, the RR ResSim model likely overestimates the drawdown of Lake Sonoma and especially Lake Mendocino during such periods.

Table 6-5. Wholesale: Five Year Drought Risk Assessment, ac-ft (DWR Table 7-5)

2021	Total
Gross Water Use	65,020
Total Supplies	65,020
Surplus/Shortfall without WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP – Supply Augmentation Benefit	0
WSCP – Use Reduction Benefit	0
Revised Surplus/Shortfall	0
Resulting Percentage Use Reduction from WSCP Action	0%
2022	**Total**
Gross Water Use	65,020
Total Supplies	65,020
Surplus/Shortfall without WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP – Supply Augmentation Benefit	0
WSCP – Use Reduction Benefit	0
Revised Surplus/Shortfall	0
Resulting Percentage Use Reduction from WSCP Action	0%
2023	**Total**
Gross Water Use	65,020
Total Supplies	65,020
Surplus/Shortfall without WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP – Supply Augmentation Benefit	0
WSCP – Use Reduction Benefit	0
Revised Surplus/Shortfall	0
Resulting Percentage Use Reduction from WSCP Action	0%

Table 6-5. Wholesale: Five Year Drought Risk Assessment, ac-ft (DWR Table 7-5)	
2024	Total
Gross Water Use	65,020
Total Supplies	65,020
Surplus/Shortfall without WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP – Supply Augmentation Benefit	0
WSCP – Use Reduction Benefit	0
Revised Surplus/Shortfall	0
Resulting Percentage Use Reduction from WSCP Action	0%
2025	Total
Gross Water Use	65,020
Total Supplies	65,020
Surplus/Shortfall without WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP – Supply Augmentation Benefit	0
WSCP – Use Reduction Benefit	0
Revised Surplus/Shortfall	0
Resulting Percentage Use Reduction from WSCP Action	0%

Note: The DRA is modeled after the five driest consecutive years on record (1987-1991). However, actual hydrologic conditions in 2021 have been closer to the driest single year on record (1977).

Section 7

Water Shortage Contingency Planning

Sonoma Water's WSCP is included as Appendix C. The WSCP describes Sonoma Water's plan to forecast and respond to a water shortage. A water shortage means that the water supply available is insufficient to meet the normally expected customer water use at a given point in time.

The items in the WSCP are listed below.

- Water Supply Reliability Analysis
- Annual Water Supply and Demand Assessment Procedures
- Water Shortage Levels
- Shortage Response Actions
- Communication Protocols
- Legal Authorities
- Financial Consequences
- WSCP Refinement Procedures
- Plan Adoption, Submittal, and Availability

Section 8

Demand Management Measures

Sonoma Water has a long history of proactive demand management measures dating back to the late 1990's when it became the first wholesale water agency in California to have all its water contractors sign on to the California Urban Water Conservation Council's (CUWCC) MOU Regarding Urban Water Conservation. Today, Sonoma Water and all its contractors are members of the California Water Efficiency Partnership (CalWEP), which is the successor agency to the CUWCC following its dissolution in 2018. The decision to allow the CUWCC to sunset was the result of many factors, but primarily due to the passage of new mandatory regulations from the state of California, including a new statewide framework to "Make Water Conservation a California Way of Life". Water saving goals and implementation timelines previously defined through the CUWCC MOU, which stipulated good faith implementation of cost-effective best management practices, are now stipulated through regulation and new water use objectives being developed by the state.

These new water use objectives are the next step toward water use efficiency for urban retail water suppliers to meet beyond the year 2020, which is the final compliance year for gallon per capita targets set by the 2009 Water Conservation Act, or SB X7-7. As a wholesale water provider, Sonoma Water has worked closely with its retail water contractors over the last ten years to exceed the 20 percent reduction in per capita water use by 2020 that was required by SB X7-7. To help accomplish this, Sonoma Water, along with the cities of Santa Rosa, Rohnert Park, Sonoma, Cotati, and Petaluma, the Town of Windsor, and North Marin, Marin Municipal and Valley of the Moon Water Districts, formed the Sonoma-Marin Saving Water Partnership (Partnership) in 2010.

The purpose of the Partnership is to establish the contributing financial obligation for the eight local water retailers, Marin Water and Sonoma Water, and to identify, recommend and implement regional water conservation projects in a manner that maximizes cost effectiveness and achieves greater impact than would otherwise be realized individually. Sonoma Water, as the Partnership's administrator and lead agency, coordinates all water use efficiency focused media buys in the region and provides support to members that need additional assistance meeting conservation targets. A water conservation subcommittee of the Partnership meets quarterly to address ongoing program needs, evaluate effectiveness of current programs, and discuss and plan for new programming opportunities to meet the developing water use efficiency regulations for California.

Like the changing regulation, the Partnership MOU has also changed, being amended in May 2018 to extend the term another ten years and add language to streamline the addition of new members. Two new partners have subsequently joined, with California American Water-Larkfield joining in January 2019 and the City of Healdsburg joining in August 2019. The subsections that follow provide additional detail about Sonoma Water's ongoing demand management efforts, as well as information about wholesale supplier assistance programs that support the Partnership's compliance with the state regulatory efforts to achieve a more reliable water supply.

8.1 Metering

All of Sonoma Water's potable water and irrigation customers have a system connection with a flow meter for volumetric billing. As of 2021, there are approximately 165 active billing meters. On an annual basis, each of these meters is switched out and replaced with a thoroughly tested and calibrated meter. In the water supply agreement with its contractors, Sonoma Water is required to conduct this annual testing and replace any meters that are found to have less than a 2% accuracy.

Sonoma Water's transmission system also has approximately ten fire service connections and 19 fire hydrants connected. Each fire service connection is fitted with a flow detector meter. While fire hydrants are not fitted with any metering equipment, each fire district customer is responsible for reporting water use at their individual hydrants.

8.2 Public Education and Outreach

As described above, Sonoma Water works with its retail water agencies to promote water conservation through the Partnership, including a Water and Energy Education Program and a Public Outreach Program.

8.2.1 Water and Energy Education Program

The Water and Energy Education Program utilizes a multifaceted approach to help students learn the value of water as an important natural resource. The program teaches inquiry-based, exploratory science and provides classroom visits, field trips, and curriculum materials for teachers and their students. The goal is for students to become environmental stewards and informed citizens who can examine the world through an inquisitive, scientific lens. All programs are free and are aligned to the California State Frameworks and Next Generation Science Standards. In 2017 the education program partnered with Sonoma Clean Power to develop and deliver climate change and energy education programs. The Water and Energy Education Program is offered to over 250 schools in Sonoma, northern Marin, and Mendocino counties.

8,030 students received direct instruction in classroom and field trip programs in 2019/2020. 2,388 students were signed up for classes that were canceled due to COVID-19. In 2018/2019 13,058 students participated in a field trip or classroom visit. An additional 325 adults participated in the field study program while serving as adult chaperones with the participating classes each year. The Water and Energy Education Program has responded to remote learning by developing 17 synchronous and asynchronous virtual lessons so students can continue to learn about water and energy conservation, climate change, storm drain pollution, and engendered salmon.

8.2.2 Public Outreach Program

Sonoma Water, on behalf of the Partnership, undertakes an annual outreach campaign during the summer peak-demand months of June through September to reinforce water-saving behavior and to encourage awareness of and participation in the programs available to help customers reduce water use. The campaign is bilingual (English/Spanish) and includes paid broadcast radio, print, and digital multi-media advertising covering both Sonoma and Marin counties. The 2020 campaign presented a unique challenge in light of the COVID-19 pandemic and the need for additional conservation because of low winter rainfall. The issuance of Shelter-in-Place Orders at the time the campaign was being developed required recognition of and sensitivity to the stressors customers were experiencing due to loss of work and income, disruptions to schools and daycare, and very real health concerns. Nonetheless, a call to action was warranted to ensure continued reductions in water use. Over the last five years, the campaigns have included the following:

- Saving Water Ensures Water for What You Love. (2020)
- Together Making Water Conservation a California Way of Life. (2019)
- There's Never Enough to Waste. (2017 & 2018)

- Thank You for Doing Your Part. (2016)

Additional public outreach occurs throughout the year as timely promotion of specific programs, events, trainings, workshops, or water supply conditions warrant. This is accomplished in a variety of ways, including paid media placements, earned media, writing and submitting news articles to local papers, press releases, and more regular reliance on the following:

E-News. The Partnership publishes monthly E-Newsletters containing articles about water saving practices, available programs, and upcoming event reminders for workshops, trainings, and classes. A separate E-Newsletter maintained by Sonoma Water is also distributed monthly and frequently contains water use efficiency content. As appropriate, special edition E-Newsletters are published to address specific water supply conditions and emergency conservation needs, such as occurred in 2020 when a wildland fire threatened Sonoma Water production facilities and prompted a call for immediate conservation to preserve stored water for health and public safety.

Social Media. Although the Partnership does not currently have a dedicated social media site, all of the partner agencies use Facebook, Twitter, Instagram, YouTube, and other social media platforms for outreach. A high level of saturation is achieved from the collaborative efforts of Sonoma Water and the other partners to actively message on these platforms. In addition, frequent cross-promotion of water use efficiency messages and programs from other affiliated partners occurs on a regular basis, providing additional amplification of social media messages.

Website. The Partnership's website (http://www.savingwaterpartnership.org) includes detailed information about available regional programs, practical tips and information about ways to reduce water use, information regarding training programs, workshops and events, and links to Partner websites for programs specific to individual Partner agencies. Although the current website has served its function well over the last several years, a project to redesign the website is currently underway to make improvements to the site. The goal is to provide customers an easier path to obtaining water use efficiency information specific to them and reduce the current need to navigate away from the Partnership website as much as is possible. The new website has a planned launch date of May 2021.

EPA WaterSense Program. Sonoma Water and the Partnership are EPA WaterSense Promotional Partners and are active participants in co-promoting EPA WaterSense events, such as the annual Fix-a-Leak Week, labeled products, and certified training programs such as Sonoma Water's Qualified Water Efficient Landscaper program. The Partnership has received notable recognition from the EPA WaterSense program for effective collaboration, outreach, and program implementation. Below are the awards the Partnership has received in the last five years:

- EPA Water Sense Excellence Award 2020 and Sustained Excellence Award 2020
- EPA Water Sense Excellence Award 2019 and Sustained Excellence Award 2019
- EPA Water Sense Excellence Award 2018 and Sustained Excellence Award 2018
- EPA Water Sense Excellence Award 2017 and Sustained Excellence Award 2017
- EPA Water Sense Partner of the Year 2016

8.3 Water Conservation Program Coordination and Staffing Support

Sonoma Water coordinates the work of the Partnership in conjunction with the Water Advisory Committee (WAC) which provides input to Sonoma Water and holds certain powers and responsibilities enumerated in the Restructured Agreement for Water Supply between Sonoma Water and the Partnership. The Partnership is committed to continued water conservation under the new statewide conservation framework and has achieved greater than a 20 percent reduction in regional water use by 2020 as stipulated by SB X7-7. The contact information for the Conservation Coordinator is:

Paul Piazza
Principal Programs Specialist
Sonoma Water
paul.piazza@scwa.ca.gov
Office: 707-547-1968

8.4 Asset Management

Wholesale water agencies are required to describe their distribution system asset management program in the Plan. Asset management is typically considered to include asset information, level of service and performance measures, risk management, condition assessment, maintenance management, and asset needs.

Currently, Sonoma Water uses a computerized maintenance management system to help manage the ongoing maintenance of the transmission system and sets annual budgets that provide the funding necessary to adequately operate and maintain the system as well as providing funding to cover the cost of depreciation. Sonoma Water has a comprehensive inventory of all of its infrastructure assets that is maintained in a database that can be accessed using GIS mapping tools.

Sonoma Water's strategic plan includes strategies to improve the reliability of transmission system by completing projects that reduce hazards to the transmission system and improve its reliability, evaluating the condition of the transmission system, updating the local hazard mitigation plan, evaluating the performance of the collector wells, and initiating a comprehensive asset management program.

At Sonoma Water, asset management is defined as the coordinated set of activities needed to realize the overall value of its water, wastewater, and flood control infrastructure, processes, systems, facilities, and personnel. A robust asset management program combines management, finance, economics, engineering, and other practices to take a comprehensive approach towards defining three key elements: the risks associated with the assets, the levels of service that must be met, and the optimal costs for managing the system.

Sonoma Water's Asset Management Program (AMP) is being developed in a three-phased approach. Phase 1 includes reviewing Sonoma Water's current asset management practices, developing an AMP vision and charter, identifying and prioritizing projects for business improvement that support asset management, and establishing an enterprise-wide AMP implementation schedule. In Phase 2, the asset management practices and principles defined during Phase 1 will be applied toward a subset of Sonoma Water assets, such as wastewater and/or water production facilities. In addition, Sonoma Water will look at how the AMP interacts with its Local Hazard Mitigation Plan, Climate Adaptation Plan, and other related planning documents or studies to inform needed modifications. Phase 3 will involve integrating any modifications recommended in Phase 2 into the full roll-out of the enterprise-wide AMP. Currently, Phase 1 has been completed and Phase 2 is expected to begin in the spring of 2021.

8.5 Wholesale Supplier Assistance Programs

As mentioned earlier, Sonoma Water assists its retailers with regional program implementation where appropriate to help the retailers meet their per capita water use targets and newly developing water use objectives of the statewide conservation framework. This includes offering staff support to interested partner agencies as a cost-effective way to offer local programs to customers of smaller agencies. The following is a list of key programs offered over the last five years:

- High Efficiency Clothes Washer Rebate – A rebate for replacing a top-loading clothes washer with a qualifying front-loading clothes washer.
- Green Business Program – Certification for local businesses that are going green.

- Qualified Water Efficient Landscaper Training Program – A low-cost professional certification program that educates landscapers about irrigation system auditing, while providing customers with a trusted source for knowledgeable hired help that can save them water.
- Eco-Friendly Garden Tour – An annual self-guided garden tour in Sonoma County and North Marin that promotes sustainable landscaping practices. This tour transitioned to an online video format in 2020 to adapt to the COVID-19 pandemic.
- Garden Sense – A free garden consultation program open to all Sonoma County residents. Consultants provide site-specific advice on lawn removal, sprinkler conversion to drip irrigation, and low water use plant selection.
- DIY Energy and Water Savings Toolkit – The Do-It-Yourself (DIY) Home Energy and Water Saving Toolkits are stocked with energy and water saving supplies that can help measure how much energy or water is being consumed in the home and make easy upgrades to your home to help save money on the utilities bills.
- Landscape Design Templates – These free, front yard designs are scalable to fit landscaped areas up to 2,500 square feet, ready-to-permit, and in compliance with local Water Efficient Landscape Ordinances.
- Water Smart Plant Label – A free water smart plant labeling program to local nurseries. The water smart plant label highlights low water use plants to nursery customers and promotes sustainable landscaping practices in Sonoma and Marin counties.
- Water-Energy Rebates for Restaurants and Food Service Facilities – A rebate program for replacing inefficient commercial kitchen equipment with new water and energy efficient models.

8.5.1 Funding

Sonoma Water's wholesaler water conservation programs are funded by the Partnership annually through a WAC recommended budget that allocates a Water Conservation sub-charge for each acre-foot of water sold. Members of the Partnership have agreed to expend $15 million dollars on water conservation implementation from July 2018 through June 2028.

Sonoma Water pursues grant funding on behalf of the Partnership to offset some of the programmatic costs associated with water use efficiency programs and to test new technology. In the last five years, Sonoma Water was awarded over $1.46 million dollars for implementing water use efficiency programs in the region.

8.5.2 Annual Report

Members of the Partnership are also committed to remaining members in good standing of the CalWEP and implement any water conservation requirements added as terms or conditions of Sonoma Water's appropriative water rights or other regulation or law. The Partnership will implement or use best efforts to secure the implementation of any water conservation requirements and will publish an Annual Report to track progress. The Annual Report will track program implementation, highlight program milestones, and reinforce the importance of protecting and preserving water resources for future generations. Copies of the Partnership's annual reports over the last five years are available at: http://www.savingwaterpartnership.org/about-us/annual-report/.

8.5.3 Future Water Use Objectives

Sonoma Water and the Partnership are actively participating in the state's 2018 Water Conservation Legislation Workgroups formed for public and stakeholder input on the development of future water use objectives. Although much work is still to be done, new programs such as the Partnership's Regional Water Loss Control Working Group are already underway to support Sonoma Water's retail customers in meeting these objectives. Additional new programs are likely to be implemented once a clearer understanding of the

final objectives is known and the challenges of Sonoma Water's customers to meet them can be better assessed.

What is clear today is that Sonoma Water and the Partnership continue to build on the water savings and efficiency gains already achieved in an effort to ensure continued leadership in water supply reliability in the face of climate concerns and a growing population.

Section 9

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Appendix A: Documentation of City/County Notification and Water Supplier Coordination

Coordination mailing list

Notification letters

Sonoma Water webpage, E-News, and Facebook announcements

FirstName	LastName	Title	Organization	Division	Address1	Address2	City	State	Zipcode
Margaret	DiGenova	Operations Supervisor, Manager	Cal-American Water Company		4787 Old Redwood Highway		Santa Rosa	CA	95403
Matt	Wells	Chief	Californiia Dept of Fish & Wildlife	Watershed Restoration Branch	PO Box 944209		Sacramento	CA	94244-2090
Gary	Helfrich	Director	Camp Meeker Rec & Park District	Board of Directors	PO Box 461		Camp Meeker	CA	95419
Kelley	David	City Manager	City of Cloverdale		124 N Cloverdale Boulevard		Cloverdale	CA	95425
Damien	O'Bid	City Manager	City of Cotati		201 West Sierra Avenue		Cotati	CA	94931-4217
Jeff	Kay	City Manager	City of Healdsburg		401 Grove Street		Healdsburg	CA	95448
Adam	McGill	City Manager	City of Novato		922 Machin Ave.		Novato	CA	94945
Peggy	Flynn	City Manager	City of Petaluma		11 English St		Petaluma	CA	94952
Darrin W.	Jenkins	City Manager	City of Rohnert Park		130 Avram Avenue		Rohnert Park	CA	94928
Sean	McGlynn	City Manager	City of Santa Rosa		100 Santa Rosa Avenue, Room 10		Santa Rosa	CA	95404
Larry	McLaughlin	City Manager	City of Sebastopol		PO Box 1776		Sebastopol	CA	95473
Dave	Kiff	City Manager	City of Sonoma		No. 1 The Plaza		Sonoma	CA	95476
Sage	Sangiacomo	City Manager	City of Ukiah		300 Seminary Avenue		Ukiah	CA	95482
Matthew	Hymel	County Administrator	County of Marin	County Administrator's Office	3501 Civic Center Drive, Suite 325		San Rafael	CA	94903
Carmel J.	Angelo	Chief Executive Officer	County of Mendocino Administrative Office		501 Low Gap Road		Ukiah	CA	95482
Caryl	Hart	Interim General Manager	County of Sonoma	AG Preservation & Open Space District	747 Mendocino Ave #100		Santa Rosa	CA	95401-4850
Tennis	Wick	Director	County of Sonoma	Permit Sonoma	2550 Ventura Ave.		Santa Rosa	CA	95403
Sheryl	Bratton	County Administrator	County of Sonoma	County Administrator's Office	575 Administration Drive, Suite 104A		Santa Rosa	CA	95403
Frank	Blackett	Regional Engineer	Federal Energy Regulatory Commission	San Francisco Regional Office	100 1st. Street, Ste. 2300		San Francisco	CA	94105-3084
Tony	Lopes	General Manager	Forestville Water District		6530 Mirabel Road		Forestville	CA	95436
Bill	Mellana	President	Lawndale Mutual Water Company	Jim (Vice President) and Patti Geib (707) 484-	PO Box 221		Kenwood	CA	95452-0221
Ben	Horenstein	General Manager	Marin Municipal Water District	General Manager	220 Nellen Avenue		Corte Madera	CA	94925-1105
Elizabeth	Salomone	General Manager	Mendocino County Russian River Flood Control	& Water Conservation Improvement District	151 Laws Avenue, Suite D		Ukiah	CA	95482
Chris	Yates	Assistant Regional Administrator fo	National Marine Fisheries Service		1201 Northeast Lloyd Blvd. Ste. 1100		Portland	OR	97232
Matthias	St. John	Executive Officer	North Coast Regional Water Quality Control Board		5550 Skylane Blvd. Ste. A		Santa Rosa	CA	95403-1072
Drew	McIntyre	General Manager/Chief Engineer	North Marin Water District		PO Box 146		Novato	CA	94948-0146
Ray	Lunardi	Director	Occidental Community Service District		3800 Bohemian Hwy		Occidental	CA	95465
Randy	DeCaminada	Executive Manager, North Coast	Pacific Gas and Electric Company		111 Stony Circle		Santa Rosa	CA	95401-9507
Julie	Cavaz	Manager	Penngrove/Kenwood Water Co.		4982 Sonoma Hwy		Santa Rosa	CA	95409-4247
Steven	Elliott	Superintendent	Potter Valley Irrigation District		PO Box 186, 10170 Main Street		Potter Valley	CA	95469
Jarod	Walker	General Manager	Redwood Valley County Water District		PO Box 399		Redwood Valley	CA	95470
James	Dunton	President	Russian River Utility		PO Box 730		Forestville	CA	95436
Jim	McGrath	Board Chair	San Francisco Bay Regional Water Quality Control Board		1515 Clay St., Ste. 1400		Oakland	CA	94612
Mark	Bramfitt	Executive Officer	Sonoma Local Agency Formation Commission		111 Santa Rosa Avenue, Suite 240		Santa Rosa	CA	95404
Eileen	Sobeck	Executive Director	State Water Resources Control Board		PO Box 100		Sacramento	CA	95812
Ed	Fortner	General Manager	Sweetwater Springs Water District		PO Box 48		Guerneville	CA	95446-0048
Ken	MacNab	Town Manager	Town of Windsor		PO Box 100		Windsor	CA	95492-0100
James	Handura	Colonel	U S Army Corps of Engineers	Commander Sacramento District	1325 J Street Room 1420		Sacramento	CA	95814
Matt	Fullner	Interim General Manager	Valley of the Moon Water District	General Manager	19039 Bay Street, PO Box 280		El Verano	CA	95433-0280

Sonoma Water

February 24, 2021

Margaret DiGenova
Cal-American Water Company
4787 Old Redwood Highway
Santa Rosa, CA 95403

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Margaret DiGenova:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

Sonoma Water's updated UWMP will discuss and describe the following:

- Existing water supplies and transmission system facilities;
- Projected water demands in Sonoma Water's service area over the next 25 years;
- Projected water supplies available to Sonoma Water over the next 25 years, the reliability of that supply, and general schedules for water supply projects;
- Climate change impacts to water supply;
- Energy intensity;
- Current and planned Sonoma Water water conservation activities;
- An updated and separately adopted Water Shortage Contingency Plan;
- And a comparison of water supply and water demand over the next 25 years under different hydrological assumptions (normal year, single dry year, multiple dry years).

Schedule for preparation and approval of the Plan:

- Coordinate with water retailers, city planners, other external stakeholders: Through April 2021
- Complete Draft Urban Water Management Plan: April 2021
- Hold Public Hearing: May 2021 (exact date and time to be announced)
- Board of Directors Adopt UWMP and WSCP: May 2021 (exact date and time to be announced)
- Submit Final Plan to DWR: By July 1, 2021

If you have any questions about Sonoma Water's UWMP update process, please contact me at (707) 547-1968, paul.piazza@scwa.ca.gov or learn more online at www.sonomawater.org/uwmp.

Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Matt Wells
Californinia Dept of Fish & Wildlife
PO Box 944209
Sacramento, CA 94244-2090

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Matt Wells:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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- Energy intensity;
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- An updated and separately adopted Water Shortage Contingency Plan;
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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Gary Helfrich
Camp Meeker Rec & Park District
PO Box 461
Camp Meeker, CA 95419

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Gary Helfrich:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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- Submit Final Plan to DWR: By July 1, 2021

If you have any questions about Sonoma Water's UWMP update process, please contact me at (707) 547-1968, paul.piazza@scwa.ca.gov or learn more online at www.sonomawater.org/uwmp.

Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Kelley David
City of Cloverdale
124 N Cloverdale Boulevard
Cloverdale, CA 95425

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Kelley David:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Lauren Berges
City of Cotati
201 West Sierra Avenue
Cotati, CA 94931-4217

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Lauren Berges:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Jeff Kay
City of Healdsburg
401 Grove Street
Healdsburg, CA 95448

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Jeff Kay:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Adam McGill
City of Novato
922 Machin Avenue
Novato. CA 94945

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Adam McGill:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Peggy Flynn
City of Petaluma
11 English St
Petaluma, CA 94952

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Peggy Flynn:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Darrin W. Jenkins
City of Rohnert Park
130 Avram Avenue
Rohnert Park, CA 94928

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Darrin W. Jenkins:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Sean McGlynn
City of Santa Rosa
100 Santa Rosa Avenue, Room 10
Santa Rosa, CA 95404

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Sean McGlynn:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Larry McLaughlin
City of Sebastopol
PO Box 1776
Sebastopol, CA 95473

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Larry McLaughlin:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Dave Kiff
City of Sonoma
No. 1 The Plaza
Sonoma, CA 95476

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Dave Kiff:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Sage Sangiacomo
City of Ukiah
300 Seminary Avenue
Ukiah, CA 95482

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Sage Sangiacomo:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Matthew Hymel
County of Marin
3501 Civic Center Drive, Suite 325
San Rafael. CA 94903

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Matthew Hymel:

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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Carmel J. Angelo
County of Mendocino Administrative Office
501 Low Gap Road
Ukiah, CA 95482

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Carmel J. Angelo:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Caryl Hart
County of Sonoma
747 Mendocino Ave #100
Santa Rosa, CA 95401-4850

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Caryl Hart:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Tennis Wick
County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 94403

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Tennis Wick:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Principal Programs Specialist

Sonoma Water

February 24, 2021

Sheryl Bratton
County of Sonoma
575 Administration Drive, Suite 104A
Santa Rosa, CA 94403

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Sheryl Bratton:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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If you have any questions about Sonoma Water's UWMP update process, please contact me at (707) 547-1968, paul.piazza@scwa.ca.gov or learn more online at www.sonomawater.org/uwmp.

Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Frank Blackett
Federal Energy Regulatory Commission
100 1st. Street, Ste. 2300
San Francisco, CA 94105-3084

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Frank Blackett:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Tony Lopes
Forestville Water District
6530 Mirabel Road
Forestville, CA 95436

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Tony Lopes:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Julie Cavaz
Kenwood Water Company
4982 Sonoma Hwy
Santa Rosa, CA 95409

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Julie Cavaz:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Matt Fullner
Valley of the Moon Water District
19039 Bay Street, PO Box 280
El Verano, CA 95433-0280

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Matt Fullner:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Bill Mellana
Lawndale Mutual Water Company
PO Box 221
Kenwood, CA 95452-0221

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Bill Mellana:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Ben Horenstein
Marin Municipal Water District
220 Nellen Avenue
Corte Madera, CA 94925-1105

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Ben Horenstein:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Elizabeth Salomone
Mendocino County Russian River Flood Control
151 Laws Avenue, Suite D
Ukiah, CA 95482

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Elizabeth Salomone:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Chris Yates
National Marine Fisheries Service
1201 Northeast Lloyd Blvd. Ste. 1100
Portland, OR 97232

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Chris Yates:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Matthias St. John
North Coast Regional Water Quality Control Board
5550 Skylane Blvd. Ste. A
Santa Rosa, CA 95403-1072

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Matthias St. John:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Paul Piazza

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Principal Programs Specialist

Sonoma Water

February 24, 2021

Drew McIntyre
North Marin Water District
PO Box 146
Novato, CA 94948-0146

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Drew McIntyre:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Chris Martin
Occidental Community Service District
3800 Bohemian Hwy
Occidental, CA 95465

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Chris Martin:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Randy DeCaminada
Pacific Gas and Electric Company
111 Stony Circle
Santa Rosa, CA 95401-9507

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Randy DeCaminada:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Julie Cavaz
Penngrove/Kenwood Water Co.
4984 Sonoma Hwy
Santa Rosa, CA 95409-4247

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Julie Cavaz:

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Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Steven Elliott
Potter Valley Irrigation District
PO Box 186, 10170 Main Street
Potter Valley, CA 95469

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Steven Elliott:

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If you have any questions about Sonoma Water's UWMP update process, please contact me at (707) 547-1968, paul.piazza@scwa.ca.gov or learn more online at www.sonomawater.org/uwmp.

Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Jarod Walker
Redwood Valley County Water District
PO Box 399
Redwood Valley, CA 95470

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Jarod Walker:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

Sonoma Water's updated UWMP will discuss and describe the following:

- Existing water supplies and transmission system facilities;
- Projected water demands in Sonoma Water's service area over the next 25 years;
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- Energy intensity;
- Current and planned Sonoma Water water conservation activities;
- An updated and separately adopted Water Shortage Contingency Plan;
- And a comparison of water supply and water demand over the next 25 years under different hydrological assumptions (normal year, single dry year, multiple dry years).

Schedule for preparation and approval of the Plan:

- Coordinate with water retailers, city planners, other external stakeholders: Through April 2021
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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

James Dunton
Russian River Utility
PO Box 730
Forestville, CA 95436

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear James Dunton:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Jim McGrath
San Francisco Bay Regional Water Quality Control Board
1515 Clay St., Ste. 1400
Oakland, CA 94612

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Jim McGrath:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Eileen Sobeck
State Water Resources Control Board
PO Box 100
Sacramento, CA 95812

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Eileen Sobeck:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Ed Fortner
Sweetwater Springs Water District
PO Box 48
Guerneville, CA 95446-0048

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Ed Fortner:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

Ken MacNab
Town of Windsor
PO Box 100
Windsor, CA 95492-0100

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear Ken MacNab:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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Thank you,

Paul Piazza

Paul Piazza
Principal Programs Specialist

Sonoma Water

February 24, 2021

James Handura
U S Army Corps of Engineers
1325 J Street Room 1420
Sacramento, CA 95814

RE: Notice of Preparation and Public Hearing for Urban Water Management Plan and Water Shortage Contingency Plan – 2020 Update

Dear James Handura:

In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) the Sonoma County Water Agency (Sonoma Water) is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be announced online at www.sonomawater.org/uwmp.

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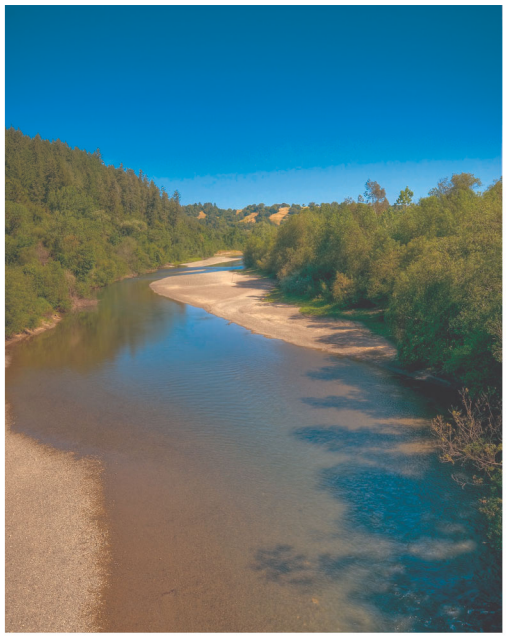
Thank you,

Paul Piazza
Principal Programs Specialist

Sonoma Water (/)

Urban Water Management Plan

2020 Urban Water Management Plan Update



Sonoma Water is a wholesaler of potable water, serving nine primary municipal customers in Sonoma and Marin Counties. In accordance with the Urban Water Management Planning Act (California Water Code §10608-10656) Sonoma Water is updating its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) for 2020 in coordination with community stakeholders. Sonoma Water will hold a public hearing in May 2021 to receive public comment on the updated plans. The hearing will take place virtually in accordance with Executive Orders N-25-20 and N-29-20. The exact date and time will be updated below.

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- An updated and separately adopted Water Shortage Contingency Plan; and
- A comparison of water supply and water demand over the next 25 years under different hydrological assumptions (normal year, single dry year, multiple dry years).

Schedule for preparation and approval of the Plan:

- Coordinate with water retailers, city planners, other external stakeholders: Through April 2021

- Complete Draft Urban Water Management Plan: Link to PDF to be provided April 27, 2021
- Hold Public Hearing: May 11, 2021 at 3:30 p.m. (Link to meeting information (https://sonoma-county.legistar.com/Calendar.aspx))
- Board of Directors Adopt UWMP and WSCP: May 11, 2021 (Planned, Link to meeting information (https://sonoma-county.legistar.com/Calendar.aspx))
- Submit Final Plan to DWR: By July 1, 2021

Documents

- **Final 2015 Urban Water Management Plan (PDF) (https://evogov.s3.amazonaws.com/media/185/media/164720.PDF)**
- Final 2010 Urban Water Management Plan (PDF) (https://evogov.s3.amazonaws.com/media/185/media/164719.pdf)
- Final 2005 Urban Water Management Plan (PDF) (https://evogov.s3.amazonaws.com/media/185/media/164718.pdf)

Resources:

- Department of Water Resources - Urban Water Management Plan (https://water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Urban-Water-Management-Plans)
- Department of Water Resources - Guidebook to Assist Water Suppliers in the Preparation of an Urban Water Management Plan (https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Urban-Water-Management-Plans/Final-2020-UWMP-Guidebook/UWMP-Guidebook-2020---Final-032921.pdf) (Published March 2021)

Contact Information

Comments or questions regarding the UWMP may be addressed to:

Paul Piazza
UWMP Project Manager
Phone: 707-547-1900 (tel:707-547-1900) or paul.piazza@scwa.ca.gov (mailto:paul.piazza@scwa.ca.gov)

Quick Links

Frequently Asked Questions (/faq)
E-News Email Newsletter (/e-news)
Employment (/current-job-openings)
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Contact Us

404 Aviation Boulevard
Santa Rosa, CA 95403
Administration Office: 707-526-5370
Operations Desk (24 Hours): 707-523-1070

SHARE:

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Sonoma Water

Sonoma Water E-News | March 2021

Water Supply Update – Second Dry Year in a Row

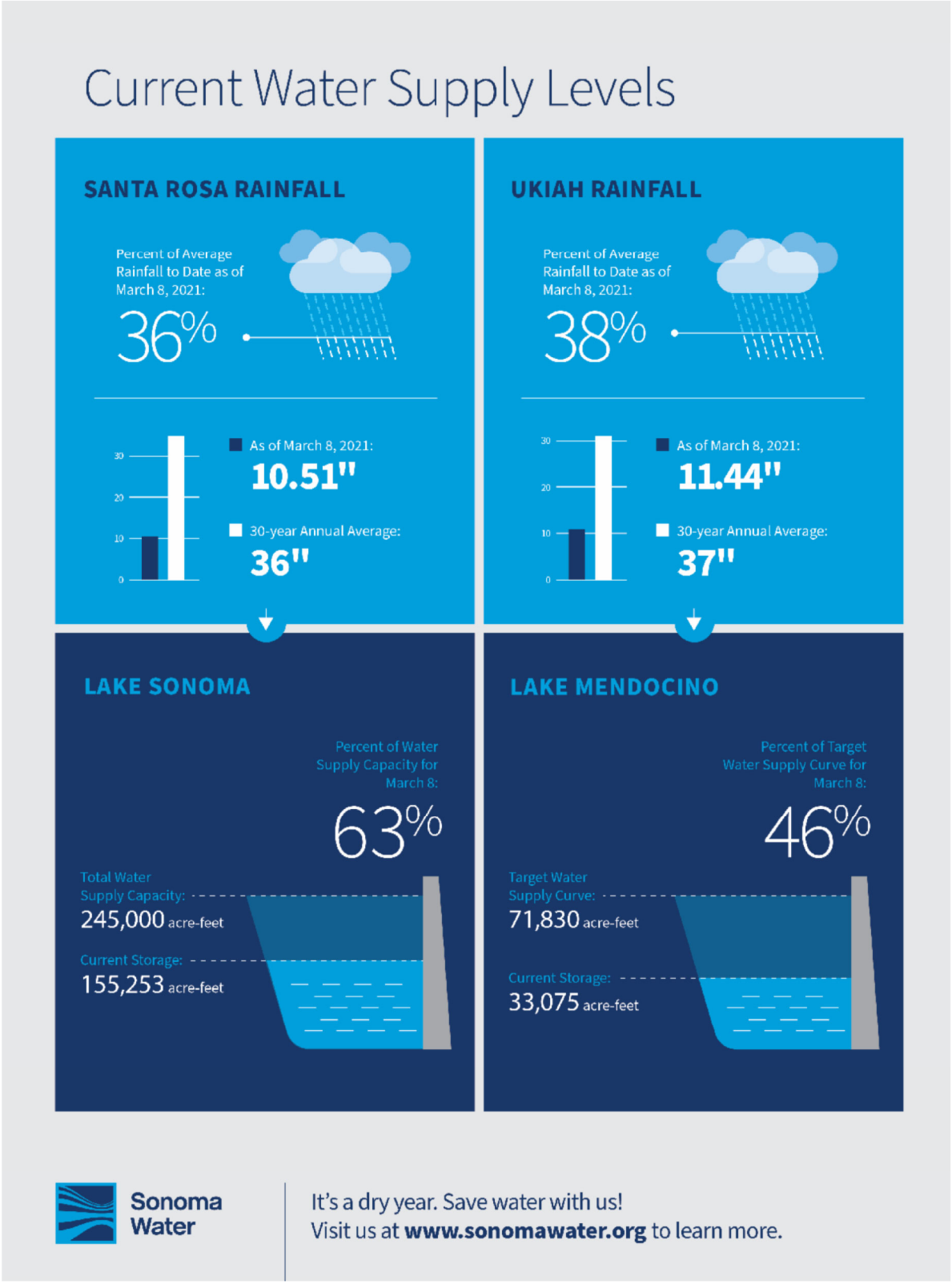
As a region we are experiencing a second dry year, and rainfall and water storage are well below average for this time of year. Sonoma Water and its partners in the Sonoma Marin Saving Water Partnership (SMSWP) encourage all of our 600,000 drinking water customers to continue to save water (see tips below).

Our region just experienced the third driest water year (October 2019 - September 2020) on record over the last 127 years. We all need to make changes to our everyday

habits to eliminate water waste and preserve water supply. Every drop saved helps maintain water flows in the Russian River and extend reservoir storage levels should the current dry period continue.

To help raise awareness of water supply conditions, Sonoma Water is unveiling a new water supply graphic (below) that provides a snapshot of the rainfall and water storage for our two main reservoirs, Lake Sonoma and Lake Mendocino. We will be updating this regularly on the Sonoma Water website (www.sonomawater.org) and on the SMWSP website (www.savingwaterpartnership.org).

Learn more about Water Supply



It's A Dry Year. Save Water With Us.

The Sonoma-Marin Saving Water Partnership has launched a public outreach campaign to encourage water conservation in the North Bay. To support this message, we've adopted a regional tag line : "It's A Dry Year. Save Water With Us." Water is a resource that our community shares, and it is critical that we all protect and conserve this valuable resource.

These are a few of the water-wasting activities that are **prohibited** year-round in cities in Sonoma and Marin county:

- Washing sidewalks, walkways, driveways or other hard surfaced areas with a hose. Use a broom instead.
- Irrigation runoff to streets and storm drains from overwatering or sprinkler-overspray of landscapes.
- Using a hose without a self-closing shutoff nozzle to wash cars, boats, or trailers.
- Irrigating outdoors during and within 48 hours following measurable rainfall.
- Using potable water in decorative water features that do not recirculate the water.

It's a Dry Year. Save Water With Us.
For additional water saving tips and resources, please visit the Sonoma-Marin Saving Water Partnership website: http://www.savingwaterpartnership.org/

Learn more about the Sonoma-Marin Saving Water Partnership

Equity Working Group Organizes at Sonoma Water

The mission of Sonoma Water is to effectively manage the water resources in our care for the benefit of people and the environment. A reliable water supply system and healthy watershed benefits our entire community and engaging and including all stakeholders in decision making is crucial to the success of Sonoma Water's mission.

The county of Sonoma created the Office of Equity in June 2020. In October the Office of Equity gave a presentation to the entire agency, outlining its mission and

highlighting the government's role in overlooked inequities. Twenty-eight staff from divisions across Sonoma Water joined to form an Equity Work Group. This working group is actively participating in training and discussion to learn more about structural and systemic inequities and intends to identify best practices and strategies developed and implemented by other government organizations and the Office of Equity to address inequities within our organization and in our communities. By working proactively and deliberately to be equitable and inclusive, Sonoma Water will be more successful in our work.

Additionally, Sonoma Water has created a Hispanic Community Advisory Group to expand and improve communications with the Hispanic community on water-related topics to enhance livability through water conservation and a healthy watershed. Having diverse perspectives in organizational decision-making will increase our organizational strength and relevance. We will be better able to identify and address the priorities of diverse communities by engaging directly to ensure messages and programs are meaningful and accessible. We seek to welcome, engage, and better serve our county and marginalized communities in all facets of our organization, activities, and programs.

2020 Urban Water Management Plan Update

Sonoma Water, in collaboration with its retail water contractors, is working on the 2020 update to its Urban Water Management Plan, which will be available for public review and input later this spring. The Plan is updated every five years to assess Sonoma Water's water supply reliability to meet customer demands for the next 25 years.

More information about this regional water supply planning document and how to comment is available on Sonoma Water's website at www.sonomawater.org/uwmp.

Learn more about the 2020 Update

Rainfall and Water Storage Update

Current water supply conditions as of 3/8/2021:

Lake Mendocino Target Water Supply Curve: 71,830 acre-feet
Current Storage: 33,075 acre-feet (46.05% of Target Water Supply Curve)

Lake Sonoma
Target Storage Curve: 245,000 acre-feet
Current Storage: 155,253 acre-feet (63.37% of Water Supply Pool)

Current rainfall conditions (10/1/20 – 3/7/21)

Ukiah:
Average (1894-2020 water years): 28.94”
Current Water Year: 10.97” which is 37.9% of average

Santa Rosa:
Average (1950-2020 water years): 24.19"
Current Water Year: 10.51” which is 43.4% of average

Learn more about Water Supply Levels

Upcoming Events

The Board normally holds its regular meetings on Tuesdays, beginning at 8:30 a.m. and will be facilitated virtually through Zoom

Board of Directors Meetings
•March 16, 2021
•March 19, 2021 Closed Session
•March 23, 2021

Board Agendas:
View upcoming Agenda items

Please visit SoCoEmergency.org for additional information on Coronavirus and fire recovery from Sonoma County.

Groundwater Sustainability Agency Board Meetings

Fact of the Month

Household leaks can waste nearly 1 trillion gallons of water annually nationwide, so each year we identify the drips during Fix a Leak Week.

Mark your calendars for the annual Fix a Leak Week, March 15 through 21, 2021.

Employment Opportunities

We invite you to explore the career opportunities available with Sonoma Water.

- Water Agency Department Information Systems Technician II - Extra Help (Closes March 18, 2021)

Sonoma Valley - March 22, 2021, 4:00 pm
Petaluma Valley - March 25, 2021, 4:00 pm
Santa Rosa Plain - March 11 , 2021 1:00 pm

sonomagroundwater.org

Sonoma Water Events Calendar

- Operations Maintenance Assistant - Extra Help (Closes March 17, 2021)
- Water Agency Coordinator - Maintenance Mechanic Services (Continuous)
- Water Agency Maintenance Worker I - Extra-Help (Continuous)
- Fish and Wildlife Technician I - Extra-Help (Continuous)
- Water Agency Supervising Right of Way Agent (Continuous)
- Licensed Land Surveyor - Water Agency (Continuous)

Employment Opportunities

Sonoma Water | 404 Aviation Blvd, Santa Rosa, CA 95403 | sonomacountywater.org

STAY CONNECTED

Sonoma Water

Contact Us | Liked

[En Español abajo] Watch a new video a...

9

69 Views · 2 weeks ago

Page Transparency

See All

Facebook is showing information to help you better understand the purpose of a Page. See actions taken by the people who manage and post content.

Page created - June 22, 2009

Page manager location: United States

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Magazine
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ROC Sonoma County
Nonprofit Organization
Like

Add Your Business to Facebook

Showcase your work, create ads and connect with customers or supporters.

Sonoma Water
March 4 ·

[En Español abajo]
Urban Water Management Plan - 2020 Update that is underway 💧
Sonoma Water, in collaboration with its retail water contractors, is working on the 2020 update to its Urban Water Management Plan, which will be available for public review and input later this spring.

The Plan is updated every five years and provides a water supply reliability assessment to meet customer demands for the next 25 years.

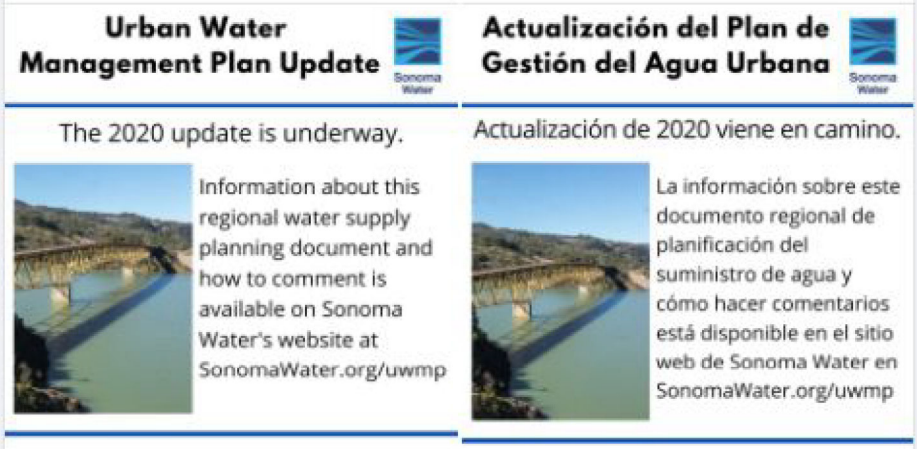
To learn more about this regional water supply planning document visit www.sonomawater.org/uwmp
💧
Plan de Gestión del Agua Urbana -
Actualización de 2020 que está en curso 💧

Sonoma Water, en colaboración con sus contratistas comerciantes de agua, está trabajando en la actualización de 2020 de su Plan de Gestión del Agua Urbana, que estará disponible para revisión pública y comentarios finales esta primavera.

El Plan se actualiza cada cinco años y proporciona una evaluación de la confiabilidad del suministro de agua para satisfacer las demandas de los clientes durante los próximos 25 años.

Para obtener más información sobre este documento regional de planificación del suministro de agua, visite www.sonomawater.org/uwmp

See Translation



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Appendix B: Notice of Public Hearing and Adoption Resolution No. 21-0208

Sonoma Water

NOTICE OF PUBLIC HEARING

The Sonoma County Water Agency (Sonoma Water) will hold a public hearing to review its 2020 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) on May 11, 2021. The draft 2020 UWMP and WSCP may be found online at www.sonomawater.org/uwmp or at Sonoma Water's administration building located at 404 Aviation Blvd, Santa Rosa, CA.

Comments or questions regarding the UWMP and WSCP may be addressed to:

Paul Piazza, UWMP Project Manager
Sonoma County Water Agency
404 Aviation Blvd, Santa Rosa, CA 95403
Phone: 707-547-1900 or paul.piazza@scwa.ca.gov

Public hearing details:

Date: May 11, 2021

Location: In accordance with **Executive Orders N-25-20 and N-29-20 Board of Directors meetings** will be held virtually.
MEMBERS OF THE PUBLIC MAY NOT ATTEND MEETINGS IN PERSON

Board of Directors meetings will be facilitated virtually through Zoom. Members of the public can watch or join the meeting using the following two methods:

WATCH LIVESTREAM: https://sonoma-county.legistar.com/Calendar.aspx
Once the meeting has started, click the "In Progress" hyperlink to begin viewing

JOIN THE ZOOM MEETING: Participate in the Zoom meeting by computer, tablet, smartphone application, or by calling in. Participation information is on the first page of each agenda. For published agendas go to:
https://sonoma-county.legistar.com/Calendar.aspx

PUBLIC COMMENT: Public Comment may be made via email or during the live zoom meeting. To submit an emailed public comment to the Board email bos@sonoma-county.org. Please provide your name, the agenda number(s) on which you wish to speak, and your comment. These comments will be emailed to all Board members. Public comment during the meeting can be made live by joining the Zoom meeting using the above provided information. Available time for comments is determined by the Board Chair based on agenda scheduling demands and total number of speakers.

Time: 3:30 p.m.

Sonoma Water is a wholesaler of potable water, serving nine primary municipal customers in Sonoma and Marin Counties. Sonoma Water's UWMP discusses and describes:

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- An updated and separately adopted Water Shortage Contingency Plan; and
- A comparison of water supply and water demand over the next 25 years under different hydrological assumptions (normal year, single dry year, multiple dry years).

Urban Water Management Plans are important tools for reporting water agencies' long-term planning efforts to meet future demands and tracking progress toward achieving state-mandated water conservation targets. They also support state laws linking approval for large developments to water supply availability. In 1983, the California Legislature enacted the Urban Water Management Planning Act (Water Code §10608 - 10656). It requires that every urban water supplier that provides water to 3,000 or more customers, or that provides more than 3,000 acre-feet of water annually ensure the appropriate level of reliability to meet the needs of its customers during normal, dry and multiple dry years. The Act describes the contents of the UWMP as well as how urban water suppliers should adopt and implement the plans. Plan updates are required every five years, and updates maintain the Sonoma Water's eligibility for state grants.

Learn more about Sonoma Water's UWMP at www.sonomawater.org/uwmp.

PUBLIC NOTICE ▪▪▪ PUBLIC NOTICE ▪▪▪ PUBLIC NOTICE

NOTICE OF PUBLIC HEARING

Notice is hereby given that the City Council of the City of Sonoma, at a Regular Meeting on **May 17, 2021**, via an electronic meeting platform, will conduct public hearings on the projects described below at 6:00 p.m., or as soon thereafter as the matter may be reached:

1. Introduction of an Ordinance Amending the Sonoma Municipal Code Title 19, Section 19.44 (Affordable Housing and Density Bonuses) to modify inclusionary affordable unit housing requirements. The Planning Commission recommended approval of the proposed amendments to City Council. The proposed amendments are exempt from the California Environmental Act (CEQA) pursuant to Section 15061(b)(3) - General Rule - of the CEQA Guidelines. Project Planner: Kristina Tierney, Associate Planner

Public Response: Interested parties are invited to address any comments directly to the City Council, via email to publiccomment@sonomacity.org by 5 p.m. on **May 17, 2021**. Public Comment will only be received by email to the email listed above. Please refer to the meeting agenda for details. A staff report will normally be available on the Thursday prior to the City Council meeting.

SPECIAL PUBLIC COMMENT INSTRUCTIONS DURING COVID-19 PANDEMIC Consistent with Executive Orders No.-25-20 and No. N-29-20 from the Executive Department of the State of California and the Sonoma County Health Official's March 17, 2020 Shelter in Place Order, the City Council Chambers will not be physically open to the public and City Council Members will be teleconferencing into the meeting via an electronic meeting platform. The meetings will continue to be live streamed on the City's CivicWeb Portal (sonomacity.civicweb.net) and YouTube Channel (https://www.youtube.com/channel/UChZjUrg2rNLYxTqQHhFy-Tg).

The City of Sonoma has, by resolution, adopted the time limits set forth in California Civil Procedure Section 1094.6. Pursuant to these time limits and those set forth in Cal. Gov't Code Section 65009, should any member of the public seek judicial review of a decision on the project, such action must be filed and served no later than the ninetieth day following the date of the administrative decision.

If you challenge any action taken at a public hearing on any of the above applications in court, you may be limited to raising only those issues you or someone else raised at the public hearing(s) described in this notice, or in written correspondence delivered to the City at, or prior to, the public hearing.

Date of Notice: **May 5, 2021 and May 12, 2021**

David A. Storer, AICP
Planning & Community Services Director

88026 – Pub May 5, 12, 2021 2ti.

NOTICE OF PUBLIC HEARING

The Sonoma County Water Agency (Sonoma Water) will hold a public hearing to review its 2020 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) on May 11, 2021. The draft 2020 UWMP and WSCP may be found online at www.sonomawater.org/uwmp or at Sonoma Water's administration building located at 404 Aviation Blvd, Santa Rosa, CA.

Comments or questions regarding the UWMP and WSCP may be addressed to:

Paul Piazza, UWMP Project Manager
Sonoma County Water Agency
404 Aviation Blvd, Santa Rosa, CA 95403
Phone: 707-547-1900 or paul.piazza@scwa.ca.gov

Public hearing details:

Date: May 11, 2021

Location: In accordance with **Executive Orders N-25-20 and N-29-20 Board of Directors meetings** will be held virtually.
MEMBERS OF THE PUBLIC MAY NOT ATTEND MEETINGS IN PERSON

Board of Directors meetings will be facilitated virtually through Zoom. Members of the public can watch or join the meeting using the following two methods:

WATCH LIVESTREAM: https://sonoma-county.legistar.com/Calendar.aspx
Once the meeting has started, click the "In Progress" hyperlink to begin viewing

JOIN THE ZOOM MEETING: Participate in the Zoom meeting by computer, tablet, smartphone application, or by calling in. Participation information is on the first page of each agenda. For published agendas go to: https://sonoma-county.legistar.com/Calendar.aspx

PUBLIC COMMENT: Public Comment may be made via email or during the live zoom meeting. To submit an emailed public comment to the Board email bos@sonoma-county.org. Please provide your name, the agenda number(s) on which you wish to speak, and your comment. These comments will be emailed to all Board members. Public comment during the meeting can be made live by joining the Zoom meeting using the above provided information. Available time for comments is determined by the Board Chair based on agenda scheduling demands and total number of speakers.

Time: 3:30 p.m.

Sonoma Water is a wholesaler of potable water, serving nine primary municipal customers in Sonoma and Marin Counties. Sonoma Water's UWMP discusses and describes:

- Existing water supplies and transmission system facilities;
- Projected water demands in Sonoma Water's service area over the next 25 years;
- Projected water supplies available to Sonoma Water over the next 25 years, the reliability of that supply, and general schedules for water supply projects;
- Climate change impacts to water supply;
- Energy intensity;
- Current and planned Sonoma Water water conservation activities;
- An updated and separately adopted Water Shortage Contingency Plan; and
- A comparison of water supply and water demand over the next 25 years under different hydrological assumptions (normal year, single dry year, multiple dry years).

Urban Water Management Plans are important tools for reporting water agencies' long-term planning efforts to meet future demands and tracking progress toward achieving state-mandated water conservation targets. They also support state laws linking approval for large developments to water supply availability. In 1983, the California Legislature enacted the Urban Water Management Planning Act (Water Code §10608 - 10656). It requires that every urban water supplier that provides water to 3,000 or more customers, or that provides more than 3,000 acre-feet of water annually ensure the appropriate level of reliability to meet the needs of its customers during normal, dry and multiple dry years. The Act describes the contents of the UWMP as well as how urban water suppliers should adopt and implement the plans. Plan updates are required every five years, and updates maintain the Sonoma Water's eligibility for state grants.

Learn more about Sonoma Water's UWMP at www.sonomawater.org/uwmp.

85249 – Pub Apr 26, May 6, 2021 2ti.

SUMMONS
(CITACION JUDICIAL)
Case Number: (Numero del Caso):
SCV-267028

NOTICE TO DEFENDANT (AVISO AL DEMANDADO): Aaron Fisher and DOES 1-10
YOU ARE BEING SUED BY PLAINTIFF (LO ESTA DEMANDANDO EL DEMANDANTE): Amy Rose

NOTICE! You have been sued. The court may decide against you without your being heard unless you respond within 30 days. Read the information below.

You have 30 CALENDAR DAYS after this summons and legal papers are served on you to file a written response at this court and have a copy served on the plaintiff. A letter or phone call will not protect you. Your written response must be in proper legal form if you want the court to hear your case. There may be a court form that you can use for your response. You can find these court forms and more information at the California Courts Online Self-Help Center (www.courtinfo.ca.gov/selfhelp), your county law library, or the courthouse nearest you. If you cannot pay the filing fee, ask the court clerk for a fee waiver form. If you do not file your response on time, you may lose the case by default, and your wages, money, and property may be taken without further warning from the court. There are other legal requirements. You may want to call an attorney right away. If you do not know an attorney, you may want to call an attorney referral service. If you cannot afford an attorney, you may be eligible for free legal services from a nonprofit legal services program. You can locate these nonprofit groups at the California Legal Services Web site (www.lawhelpcalifornia.org), the California Court Online Self-Help Center (www.courtinfo.ca.gov/selfhelp), or by contacting your local court or county bar association. NOTE: The court has a statutory lien for waived fees and costs on any settlement or arbitration award of $10,000 or more in a civil case. The court's lien must be paid before the court will dismiss the case.

AVISO! Lo han demandado. Si no responde dentro de 30 dias, la corte puede decidir en su contra sin escuchar su version. Lea la information a continuacion.

Tiene 30 DIAS DE CALENDARIO después de que le entreguen esta citación y papeles legales para presentar una respuesta por escrito en esta corte y hacer que se entregue una copia al demandante.

Una carta o una llamada telefónica no lo protegen. Su respuesta por escrito tiene que estar en formato legal correcto si desea que procesen su caso en la corte. Es posible que haya un formulario que usted pueda usar para su respuesta. Puede encontrar estos formularios de la corte y más información en el Centro de Ayuda de las Cortes de California (www.courtinfo.ca.gov/selfhelp/espanol/), en la biblioteca de leyes de su condado o en la corte que le quede más cerca. Si no puede pagar la cuota de presentación, pida al secretario de la corte que le dé un formulario de exención de pago de cuotas. Si no presenta su respuesta a tiempo, puede perder el caso por incumplimiento y la corte le podrá quitar su sueldo, dinero y bienes sin más advertencia.

Hay otros requisitos legales. Es recomendable que llame a un abogado inmediatamente. Si no conoce a un abogado, puede llamar a un servicio de remisión a abogados. Si no puede pagar a un abogado, es posible que cumpla con los requisitos para obtener servicios legales gratuitos de un programa de servicios legales sin fines de lucro. Puede encontrar estos grupos sin fines de lucro en el sitio web de California Legal Services, (www.lawhelpcalifornia.org), en el Centro de Ayuda de las Cortes de California, (www.courtinfo.ca.gov/selfhelp/espanol/) o poniéndose en contacto con la corte o el colegio de abogados locales. AVISO: Por ley, la corte tiene derecho a relamar las cuotas y los costos exentos por imponer un gravamen sobre cualquier recuperacion de $10,000 o mas de valor recibida mediante un acuerdo o una concesion de arbitraje en un caso de derecho civil. Tiene Que pager el gravamen de la corte antes de que la corte pueda desechar el caso.

The name and address of the court is (El nombre y dirección de la corte es):
Sonoma County Superior Court
600 Administration Dr, Room 107J
Santa Rosa, CA 95403

The name, address and telephone number of plaintiff's attorney, or plaintiff without an attorney, is (El nombre, la dirección y el número de teléfono del abogado del demandante, o del demandante que no tiene abogado, es):
Joel E. Fleck.,
Law Office of Joel E. Fleck
200 B. Street, Suite 204
Santa Rosa, CA 95401
707-757-9962
DATE (Fecha): 9/9/2020
ARLENE D. JUNIOR,
Clerk
By ANGELA RUBIANO,
Deputy

85469 - Pub. Apr 15, 22, 29, May 6, 2021 4ti.

ORDER TO SHOW CAUSE FOR CHANGE OF NAME
SUPERIOR COURT OF CALIFORNIA FOR THE COUNTY OF SONOMA
3055 Cleveland Ave.
Santa Rosa, CA 95403
Case No. SCV-268136

Petition of: Anna Caroline Fargo for change of name

TO ALL INTERESTED PERSONS Petitioner Anna Caroline Fargo filed a petition with this court for a decree changing names as follows: Anna Caroline Fargo to Anna Caroline Fargo-Gordon. 2: Anna Caroline Gordon to Anna Caroline Fargo-Gordon.

THE COURT ORDERS that all persons interested in this matter appear before this court at the hearing indicated below to show cause, if any, why this petition for change of name should not be granted. Any person objecting to the name changes described above must file a written objection that includes the reasons for the objection at least two court days before the matter is scheduled to be heard and must appear at the hearing to show cause why the petition should not be granted. If no written objection is timely filed, the court may grant the petition without a hearing.

NOTICE OF HEARING

6/4/21 at 1:30PM in Dept 18, located at 600 Administration Dr, Santa Rosa, CA 95403/Zoom.
Zoom.us/join
Meeting ID: 838 5609 8726
Password: 000169
Phone Number: *67 1 669 900 6833

A copy of this Order to Show Cause shall be published at least once each week for four successive weeks prior to the date set for hearing on the petition in the following newspaper of general circulation, printed in this county: Press Democrat.

Dated: 4/6/2021
Hon. Jennifer V. Dollard
Judge of the Superior Court
W0031438 - April 29, May 6, 13, 20 2021 4ti.

NOTICE OF PETITION TO ADMINISTER ESTATE OF
Julie A. McDowell
CASE NO. SPR-095626

To all heirs, beneficiaries, creditors, contingent creditors, and persons who may otherwise be interested in the will, or estate or both, of:
Julie A. McDowell

A Petition for Probate has been filed by: Warren Donald in the Superior Court of California, County of Sonoma.

The Petition for Probate requests that: Waren Donald be appointed as personal representative to administer the estate of the decedent.

X The Petition requests authority to administer the estate under the Independent Administration of Estates Act. (This authority will allow the personal representative to take many actions without obtaining court approval. Before taking certain very important actions, however, the personal representative will be required to give notice to interested persons unless they have waived notice or consented to the proposed action.) The independent administration authority will be granted unless an interested person files an objection to the petition and shows good cause why the court should not grant the authority.

A hearing on the petition will be held in this court as follows: 6-04-2021, at 9:30 a.m. in Probate Dept. 18, located at 3055 Cleveland Ave., Santa Rosa, CA 95403.
To join online: Zoom.us/join
Meeting ID: 838 5609 8726
Password: 000169
Phone Number: *67 1 669 900 6833

If you object to the granting of the petition, you should appear at the hearing and state your objections or file written objections with the court before the hearing. Your appearance may be in person or by your attorney.

If you are a creditor or a contingent creditor of the decedent, you must file your claim with the court and mail a copy to the personal representative appointed by the court within the later of either (1) four months from the date of first issuance of letters to a general personal representative, as defined in section 58(b) of the California Probate Code, or (2) 60 days from the date of mailing or personal delivery to you of a notice under section 9052 of the California Probate Code.

Other California statues and legal authority may affect your rights as a creditor. You may want to consult with an attorney knowledgeable in California law.

You may examine the file kept by the court. If you are a person interested in the estate, you may file with the court a formal Request for Special Notice (FORM DE-154) of the filing of an inventory and appraisal of estate assets or of any petition or account as provided in Probate Code §1250. A Request for Special Notice form is available from the court clerk.

FILED: 4/27/2021
Tate Birnie
Birnie Law Office, Inc.,
7182 Healdsburg Avenue
Sebastopol, CA 95472
707-823-8593
Attorney for Petitioner

88079 - Pub. May 6, 9, 12, 2021 3ti.

FICTITIOUS BUSINESS NAME STATEMENT
FILE NO. 202101453

The following person (persons) is (are) doing business as:

Camion located at 841 Petaluma Blvd N , Petaluma , CA, 94952; Sonoma County, is hereby registered by the following owner(s): Table Culture Provisions LLC 841 Petaluma Blvd N , Petaluma , CA, 94952

A CA Limited Liability Company

The registrant commenced to transact business under the fictitious name or names above on N/A.

I declare that all information in this statement is true and correct.

Signed: Stephane Saint Louis

This statement was filed with the County Clerk of SONOMA COUNTY on 04/09/2021

I hereby certify that this copy is a correct copy of the original statement on file in my office.

DEVA MARIE PROTO
Sonoma County Clerk
By /s/
Betsy Penn
Deputy Clerk
SEAL
W0031392 - April 29, May 6, 13, 20 2021 4ti.

NOTICE OF AVAILABILITY OF ANNUAL RETURN

Pursuant to Section 6104(d) of the Internal Revenue Code, notice is hereby given that the annual report for the calendar year 2020 of the MARGARET K. SLOSS FOUNDATION, a private foundation, is available at the foundation's principal office for inspection during regular business hours from 9 a.m. to 12:30 p.m. by any citizen who requests it within 180 days after the date of this publication.

The foundation's principal office is located at 6760 Giovanetti Rd., Forestville, CA 95436, telephone (707) 887-1318

The name of the principal manager of the foundation is Karen Sloss.

88147 – Pub May 6, 2021 1ti.

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
NOTICE TO BIDDERS
CONTRACT NO. M21502

Electronic bids for the work shown on the plans entitled:

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
CONSTRUCTION PLANS FOR:

2020 THERMOPLASTIC RE-STRIPING PROJECT

Contract No. M21502

The County of Sonoma Department of Transportation and Public Works is soliciting bids for the 2020 THERMOPLASTIC RE-STRIPING PROJECT. The County requires that bidders submit their bids electronically on the County's Supplier Portal, until 2:00 p.m., as determined by the time and date stamp on the Supplier Portal on May 28, 2021. Bidders shall submit an electronic copy of the entire bid book and all other required documents in the bid submission. Bid Openings are being virtually conducted with Cisco Webex. The County will open all Bids promptly following the deadline for receiving Bids and initially evaluate them for responsiveness, and determine an Apparent Low Bidder as specified herein. The Sonoma County Director of Transportation and Public Works will review the bids and refer the bids to the Board of Supervisors to consider awarding the project within 60 to 90 days of the bid opening.

Bid forms for this work are included in a separate book entitled:

COUNTY OF SONOMA
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
BID BOOK FOR:

2020 THERMOPLASTIC RE-STRIPING PROJECT

Contract No. M21502

General Work Description:

Project Description: The project involves removing existing thermoplastic and pavement markings. The project also consists of re-striping existing painted and thermoplastic stripes, markings, and legends. All pavement is more than 6 months old. The project involves flagging and traffic control. Locations are throughout Sonoma County.

Contractor shall provide traffic control compliant with MUTCD, as necessary.

Contractor shall provide all materials and labor necessary to complete the work, including disposal of removed existing thermoplastic.

In flowing conditions or where runoff is otherwise in potential contact with uncured trench backfill, the Contractor is to comply with the County standard dewatering/water bypass plan.

Contractor to determine staging locations, unless otherwise noted in Plan sheets.

General Information:

Engineer's Estimate: **$444,955.00**

Working Days: **40**

This shall include any and all alternates, should alternate award occur.

Bids are required for the entire work described herein.

THIS PROJECT IS SUBJECT TO THE "BUY AMERICA" PROVISIONS OF THE SURFACE TRANSPORTATION ASSISTANCE ACT OF 1982 AS AMENDED BY THE INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991.

REGISTRATION PURSUANT TO LABOR CODE SECTION 1725.5 REQUIRED. As of March 1, 2015, all Contractors submitting a bid proposal for this project, and any Subcontractors listed therein, must be currently registered and qualified to perform public work pursuant to Labor Code section 1725.5. County requires proof of current registration by contractor and all listed subcontractors as a condition to bid on this project, subject only to the allowances of Labor Code section 1771.1.

The Contractor shall possess a Class A or a Class 32 license at the time of bid submittal and at the time of award.

This contract is subject to state contract nondiscrimination and compliance requirements pursuant to Government Code, Section 12990.

Plans, specifications, and bid forms for bidding this project may be reviewed by logging into the Supplier Portal at any time prior to 2:00PM on the date of the bid opening. Bidders must obtain Bidding Documents, at no charge, by registering at Sonoma County's Supplier Portal, the County's online procurement system: (https://esupplier.sonomacounty.ca.gov/psp/FNPRD/SUPPLIER/ERP/h/?tab=DEFAULT).

Bidders must submit: An electronic copy of the entire Bid Book and other required documents as attachments in you bid submission within the Supplier Portal.

Inquiries or questions based on alleged patent ambiguity of the plans, specifications or estimate must be communicated as a bidder inquiry prior to bid opening. Any such inquiries or questions, submitted after bid opening, will not be treated as a bid protest.

Technical questions should be emailed to tpwbidinquiries@sonoma-county.org. Only questions received no later than May 14, 2021 will receive a response.

A final Addendum, if necessary, will post on the County's Supplier Portal on May 25, 2021.

The bid opening will be held online via Cisco Webex. Please copy and paste this weblink into your internet browser window:

https://sonomacounty.webex.com/sonomacounty/j.php?MTID=m4fbf1ac815e7c277701ff0a0b50dc3c2

The meeting number (access code): 187 273 2192

Meeting password: QTbvVJQi334

To join by Phone please call +1-408-418-9388 United States Toll

Access code: 187 273 2192

The successful bidder shall furnish both a performance bond for the full amount of the contract and a payment bond in accordance with California Civil Code Section 3247, as set forth in the Instructions to Bidders.

The County of Sonoma affirms that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, sex, national origin or other prohibited basis in consideration for an award.

Liquidated damages in the amount of $3,200 will be assessed for each and every calendar days delay in finishing the work in excess of the number of working days prescribed in the contract.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. The successful Bidder must comply with all prevailing wage laws applicable to the Project, and related requirements contained in the Contract Documents.

Pursuant to Section 1773 of the Labor Code, the general prevailing wage rates in the county, or counties, in which the work is to be done have been determined by the Director of the California Department of Industrial Relations. These wages are set forth in the General Prevailing Wage Rates for this project, available from the California Department of Industrial Relations' Internet web site at: http://www.dir.ca.gov/DLSR/PWD

The Federal minimum wage rates for this project as predetermined by the United States Secretary of Labor are available at the website below: http://www.wdol.gov

If there is a difference between the minimum wage rates predetermined by the Secretary of Labor and the general prevailing wage rates determined by the Director of the California Department of Industrial Relations for similar classifications of labor, the Contractor and subcontractors must pay not less than the higher wage rate. The Department will not accept lower State wage rates not specifically included in the Federal minimum wage determinations. This includes "helper" (or other classifications based on hours of experience) or any other classification not appearing in the Federal wage determinations. Where Federal wage determinations do not contain the State wage rate determination otherwise available for use by the Contractor and subcontractors, the Contractor and subcontractors must pay not less than the Federal minimum wage rate, which most closely approximates the duties of the employees in question.

The Contractor must post the applicable prevailing wage rates at the Project Site, in addition to all other job site notices prescribed by regulation.

The U.S. Department of Transportation (DOT) provides a toll-free "hotline" service to report bid rigging activities. Bid rigging activities can be reported Mondays through Fridays, between 8:00 a.m. and 5:00 p.m., Eastern Time, Telephone No. 1-800-424-9071. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report these activities. The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

The Board of Supervisors of Sonoma County reserves the right to reject any or all bids and to waive any defect or irregularity in bidding.

NOTICE OF TRUSTEE'S SALE

File No.: 16-12040 APN: 146-072-046 NOTICE OF TRUSTEE'S SALE YOU ARE IN DEFAULT UNDER LINCOLN MANOR ASSOCIATION (ASSOCIATION) COVENANTS, CONDITIONS AND RESTRICTIONS AND A NOTICE OF DELINQUENT ASSESSMENT (LIEN) DATED 12-27-2016. UNLESS YOU TAKE ACTION TO PROTECT YOUR PROPERTY, IT MAY BE SOLD AT A PUBLIC SALE. IF YOU NEED AN EXPLANATION OF THE NATURE OF THE PROCEEDINGS AGAINST YOU, YOU SHOULD CONTACT A LAWYER. On 05-26-2021 at 10:00 AM, In the Plaza at Fremont Park located at 860 5th Street, Santa Rosa, CA 95404, ALLIED TRUSTEE SERVICES (Trustee), 990 Reserve Drive, Suite 208, Roseville, CA 95678, (877) 282-4991, under and pursuant to Lien, recorded 01-03-2017 as Instrument 2017-000258 Book - - Page - - of Official Records in the Office of the Recorder of SONOMA County, CA, WILL CAUSE TO BE SOLD AT PUBLIC AUCTION to the highest bidder for cash, cashier's check/cash equivalent or other form of payment authorized by 2924h(b), (payable at time of sale) the property owned by ANA FERNANDEZ, situated in said County, describing the land therein: APN: 146-072-046 The street address and other common designation, if any, of the real property described above is purported to be: 945 W 8TH STREET , SANTA ROSA, CA 95401 The undersigned Trustee disclaims any liability for any incorrectness of the street address and other common designation, if any, shown herein. Said sale will be made, but without covenant or warranty, expressed or implied, regarding title, possession, or encumbrances, to satisfy the sums due under the Lien. The estimated total unpaid balance at the time of the initial publication of this Notice of Trustee's Sale is $11,131.78. THE PROPERTY WILL BE SOLD SUBJECT TO THE 90-DAY POST-SALE RIGHT OF REDEMPTION AS SET FORTH IN CALIFORNIA CIVIL CODE SECTION 5715(B). Association heretofore executed and delivered to the undersigned a written Declaration of Default. The undersigned caused a Notice of Default and Election to Sell to be recorded in the county where the real property is located and more than three months have elapsed since such recordation. NOTICE TO POTENTIAL BIDDERS: If you are considering bidding on this property lien, you should understand that there are risks involved in bidding at a trustee auction. You will be bidding on a lien, not on the property itself. Placing the highest bid at a trustee auction does not automatically entitle you to free and clear ownership of the property. You should also be aware that the lien being auctioned off may be a junior lien. If you are the highest bidder at the auction, you are or may be responsible for paying off all liens senior to the lien being auctioned off, before you can receive clear title to the property. You are encouraged to investigate the existence, priority, and size of outstanding liens that may exist on this property by contacting the county recorder's office or a title insurance company, either of which may charge you a fee for this information. If you consult either of these resources, you should be aware that the same lender may hold more than one mortgage or deed of trust on the property. NOTICE TO PROPERTY OWNER: The sale date shown on this notice of sale may be postponed one or more times by the Association, trustee, or a court, pursuant to Section 2924g of the California Civil Code. The law requires that information about trustee sale postponements be made available to you and to the public, as a courtesy to those not present at the sale. If you wish to learn whether your sale date has been postponed, and, if applicable, the rescheduled time and date for the sale of this property, you may call (844) 477-7869, or visit this Internet Web site WWW.STOXPOSTING.COM for information, using the file number assigned to this case: 16-12040. Information about postponements that are very short in duration or that occur close in time to the scheduled sale may not immediately be reflected in the telephone information or on the Internet Web site. The best way to verify postponement information is to attend the scheduled sale. NOTICE TO TENANT: You may have a right to purchase this property after the trustee auction pursuant to Section 2924m of the California Civil Code. If you are an 'eligible tenant buyer,' you can purchase the property if you match the last and highest bid placed at the trustee auction. If you are an 'eligible bidder,' you may be able to purchase the property if you exceed the last and highest bid placed at the trustee auction. There are three steps to exercising this right of purchase. First, 48 hours after the date of the trustee sale, you can call (844) 477-7869, or visit this Internet Web site WWW.STOXPOSTING.COM for information, using the file number assigned to this case: 16-12040 to find the date on which the trustee's sale was held, the amount of the last and highest bid, and the address of the trustee. Second, you must send a written notice of intent to place a bid so that the trustee receives it no more than 15 days after the trustee's sale. Third, you must submit a bid so that the trustee receives it no more than 45 days after the trustee's sale. If you think you may qualify as an 'eligible tenant buyer' or 'eligible bidder,' you should consider contacting an attorney or appropriate real estate professional immediately for advice regarding this potential right to purchase. DATE: April 26, 2021 ALLIED TRUSTEE SERVICES, Trustee KARI FLESHMAN, Authorized Signature

87095 – Pub May 6, 13, 20, 2021 3ti.

FICTITIOUS BUSINESS NAME STATEMENT
FILE NO. 202101748

The following person (persons) is (are) doing business as:

Cassel Vintners located at 150 Cavedale Rd., Sonoma, CA, 95476; Sonoma County, is hereby registered by the following owner(s): RCY United Inc. 50 Nicholl Ave., Point Richmond, CA, 94801

A CA Corporation

The registrant commenced to transact business under the fictitious name or names above on N/A.

I declare that all information in this statement is true and correct.

Signed: /Maria Cassel

This statement was filed with the County Clerk of SONOMA COUNTY on 04/29/2021

I hereby certify that this copy is a correct copy of the original statement on file in my office.

DEVA MARIE PROTO
Sonoma County Clerk
By /s/
Amanda King
Deputy Clerk
SEAL
W0031518 - May 6, 13, 20, 27 2021 4ti.

FICTITIOUS BUSINESS NAME STATEMENT
FILE NO. 2021-01683

The following person (persons) is (are) doing business as:

Shell Energy Solutions located at 21 Waterway Avenue, Suite 450, The Woodlands, TX, 77380; Mailing Address 150 N. Dairy Ashford Houston, TX 77079 Montgomery County, is hereby registered by the following owner(s): MP2 Energy NE LLC 21 Waterway Avenue, Suite 450, The Woodlands, TX, 77380

A TX Limited Liability Company

The registrant commenced to transact business under the fictitious name or names above on N/A.

I declare that all information in this statement is true and correct.

Signed: Lynn S. Borgmeier, Secretary

This statement was filed with the County Clerk of SONOMA COUNTY on 04/26/2021

I hereby certify that this copy is a correct copy of the original statement on file in my office.

DEVA MARIE PROTO
Sonoma County Clerk
By /s/
Betsy Penn
Deputy Clerk
SEAL
W0031561 - May 6, 13, 20, 27 2021 4ti.

FICTITIOUS BUSINESS NAME STATEMENT
FILE NO. 202101401

The following person (persons) is (are) doing business as:

Focused Growth Tree Solutions located at 205 Stony Point Rd Unit H, Santa Rosa, CA, 95405; Sonoma County, is hereby registered by the following owner(s): Marcus Baker 205 Stony Point rd Unit H, Santa Rosa, CA, 95405 ; 2) Matthew Wade 621 Oak st, Santa Rosa, CA, 95404

A General Partnership

The registrant commenced to transact business under the fictitious name or names above on N/A.

I declare that all information in this statement is true and correct.

Signed: Marcus Baker

This statement was filed with the County Clerk of SONOMA COUNTY on 04/06/2021

I hereby certify that this copy is a correct copy of the original statement on file in my office.

DEVA MARIE PROTO
Sonoma County Clerk
By /s/
Betsy Penn
Deputy Clerk
SEAL
W0031328 - April 22, 29, May 6, 13 2021 4ti.

ORDER TO SHOW CAUSE FOR CHANGE OF NAME
SUPERIOR COURT OF CALIFORNIA FOR THE COUNTY OF SONOMA
3055 Cleveland Ave.
Santa Rosa, CA 95403
Case No. SCV-267865

Petition of: Juan Yahir Orozco Martinez for change of name

TO ALL INTERESTED PERSONS Petitioner Juan Yahir Orozco Martinez filed a petition with this court for a decree changing names as follows: Juan Yahir Orozco Martinez to Juan Yahir Guzman Orozco.

THE COURT ORDERS that all persons interested in this matter appear before this court at the hearing indicated below to show cause, if any, why this petition for change of name should not be granted. Any person objecting to the name changes described above must file a written objection that includes the reasons for the objection at least two court days before the matter is scheduled to be heard and must appear at the hearing to show cause why the petition should not be granted. If no written objection is timely filed, the court may grant the petition without a hearing.

NOTICE OF HEARING

JUN 16 2021 at 3:00PM in Dept 16, located at 600 Administration Dr, Santa Rosa, CA 95403/Zoom.
Zoom.us/join
Meeting ID: 824 7526 7360
Password: 840359
Phone Number: *67 1 669 900 6833

A copy of this Order to Show Cause shall be published at least once each week for four successive weeks prior to the date set for hearing on the petition in the following newspaper of general circulation, printed in this county: Press Democrat.

Dated: APR 14 2021
Hon. Patrick Broderick
Judge of the Superior Court
W0031326 - April 22, 29, May 6, 13 2021 4ti.

ORDER TO SHOW CAUSE FOR CHANGE OF NAME
SUPERIOR COURT OF CALIFORNIA FOR THE COUNTY OF SONOMA
3055 Cleveland Ave.
Santa Rosa, CA 95403
Case No. SCV-268243

Petition of: Kaitlynn Maria Hochanadel for change of name

TO ALL INTERESTED PERSONS Petitioner Kaitlynn Maria Hochanadel filed a petition with this court for a decree changing names as follows: Kaitlynn Maria Hochanadel to Kaitlynn Maria Cook.

THE COURT ORDERS that all persons interested in this matter appear before this court at the hearing indicated below to show cause, if any, why this petition for change of name should not be granted. Any person objecting to the name changes described above must file a written objection that includes the reasons for the objection at least two court days before the matter is scheduled to be heard and must appear at the hearing to show cause why the petition should not be granted. If no written objection is timely filed, the court may grant the petition without a hearing.

NOTICE OF HEARING

JUN 30 2021 at 3:00PM in Dept 19, located at 600 Administration Dr, Santa Rosa, CA 95403/Zoom.
Zoom.us/join
Meeting ID: 857 0848 8569
Password: 410765
Phone Number: *67 1 669 900 6833

A copy of this Order to Show Cause shall be published at least once each week for four successive weeks prior to the date set for hearing on the petition in the following newspaper of general circulation, printed in this county: Press Democrat.

Dated: APR 13 2021
Hon. Gary Nadler
Judge of the Superior Court
W0031453 - April 29, May 6, 13, 20 2021 4ti.

WARRIORS

CONTINUED FROM B5

and five rebounds.

Tough on Thompson

Klay Thompson is close to beginning to run again as he rehabs from surgery for a torn right Achilles tendon. He stayed home from the recent road trip to work with Warriors director of sports medicine and performance Rick Celebrini.

Coach Steve Kerr spoke to Curry's injured Splash Brother at halftime of Friday's game against the Nuggets on a special night with fans returning to Chase Center. Kerr sensed it was especially hard for Thompson given how badly he wanted to be out on the floor.

Thompson looked emotional on the sideline at one moment and Curry could be seen speaking to him.

"He did have a tough game. I think it was in large part because the fans were back and my observation anyway is just it hit him really hard how much he's missing, and how much he has lost over the last year and half," Kerr said. "It's not an easy thing to deal with. The good news is rehab's going really well. … Klay has had his passion and his love for the game just ripped away from him now for almost two years. It's crazy. That's not easy to deal with."

Tip-ins

■ Kings: Holmes started, though on minutes restriction — the plan had been for him to play about 20 minutes and he wound up at about 22. … The Kings are 5-9 on the road against the West.

■ Warriors: Green had five assists in the first quarter and is leading the NBA at 3.2 assists per game in the opening 12 minutes. Green picked up a technical 3:26 before halftime. … F Eric Paschall (left hip flexor strain) has resumed playing some 3-on-3 in practice. … Golden State also won four in a row at home from Feb. 15-Mar. 14.

Frontline fan

Last spring, Curry placed a FaceTime video call to ICU nurse Shelby Delaney and her colleagues at Oakland's Alta Bates Summit Medical Center after learning she was wearing his No. 30 jersey under her scrubs as inspiration to get through each trying day of the pandemic.

Delaney wore the uniform again — inside it reads 'I Can Do All Things' — as she and husband Robert Crowley sat on the floor for Sunday's game after a season ticket holder who couldn't attend gifted her the seats.

"It really uplifted a lot of folks, like all the other nurses, the other staff members, everyone got a lot of joy out of that," Delaney shared of that call with the two-time MVP. "People told me, they actually said that helped boost morale around here a lot."

Up next

■ Kings: Host Dallas on Monday night having won the last two at home in the series before the Mavericks go to Golden State.

■ Warriors: Host Mavericks on Tuesday night, having lost six of eight to Dallas and the past three at home.

NBA NOTES

Durant scores 33 in return

PRESS DEMOCRAT NEWS SERVICES

Kevin Durant scored 33 points in his latest return from injury, Kyrie Irving had 34 and the Brooklyn Nets beat the Phoenix Suns 128-119 on Sunday in a matchup of two of the NBA's top teams.

Durant missed three games after bruising his left thigh early in a loss to Miami last Sunday and has been limited to just 25 games this season. He played 28 minutes off the bench in his return, shooting 12 for 21.

Blake Griffin scored 15 points to help the Eastern Conference leaders improve to 25-7 at home and 20-6 against West teams.

Durant scored 10 points in the third quarter, then had the first five of the fourth to give Brooklyn its first double-digit lead at 102-92.

With Deandre Ayton getting 10 points and 10 rebounds in his first 14 minutes of the floor, the Suns led throughout the second quarter and went ahead 56-43 with about 3⅓ minutes left. Brooklyn cut it to 61-59 at the break.

Magic coach tests positive for virus

Orlando Magic coach Steve Clifford has tested positive for the coronavirus and will miss multiple games while going through the NBA's health and safety protocols.

Assistant coach Tyrone Corbin will coach in Clifford's absence, starting with Sunday's game against Indiana. Clifford already expected to miss Sunday because of two positive tests in a three-day span, and subsequent testing confirmed that he has the virus.

There is no timetable for his return. Typically, those in the league who have tested positive have missed at least 10 days before being cleared to resume work. That would mean Clifford could miss much of the remainder of the season.

Even if Clifford misses just a week, he would still be out for five games. The Magic host the Los Angeles Lakers on Monday, then are at Cleveland on Wednesday and Memphis on Friday before returning home to meet the Grizzlies again on Saturday.

Hornets close on Celtics for sixth

Devonte Graham had 24 points and nine assists and P.J. Washington added 22 points and 12 rebounds in Charlotte's 125-104 victory over Boston.

Terry Rozier had 21 points and 11 assists, and Miles Bridges stayed hot with 20 points for the Hornets. They pulled within 1½ games of Boston for the sixth spot in the East.

Kemba Walker and Jaylen Brown each had 20 points for Boston.

The Celtics have dropped two straight after winning seven of eight.

PUBLIC NOTICE ··· PUBLIC NOTICE ··· PUBLIC NOTICE

NOTICE OF PUBLIC HEARING

The Sonoma County Water Agency (Sonoma Water) will hold a public hearing to review its 2020 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) on May 11, 2021. The draft 2020 UWMP and WSCP may be found online at www.sonomawater.org/uwmp or at Sonoma Water's administration building located at 404 Aviation Blvd, Santa Rosa, CA.

Comments or questions regarding the UWMP and WSCP may be addressed to:

Paul Piazza, UWMP Project Manager
Sonoma County Water Agency
404 Aviation Blvd, Santa Rosa, CA 95403
Phone: 707-547-1900 or paul.piazza@scwa.ca.gov

Public hearing details:

Date: May 11, 2021

Location: In accordance with **Executive Orders N-25-20 and N-29-20 Board of Directors meetings** will be held virtually.
MEMBERS OF THE PUBLIC MAY NOT ATTEND MEETINGS IN PERSON

Board of Directors meetings will be facilitated virtually through Zoom. Members of the public can watch or join the meeting using the following two methods:

WATCH LIVESTREAM: https://sonoma-county.legistar.com/Calendar.aspx
Once the meeting has started, click the "In Progress" hyperlink to begin viewing

JOIN THE ZOOM MEETING: Participate in the Zoom meeting by computer, tablet, smartphone application, or by calling in. Participation information is on the first page of each agenda. For published agendas go to: https://sonoma-county.legistar.com/Calendar.aspx

PUBLIC COMMENT: Public Comment may be made via email or during the live zoom meeting. To submit an emailed public comment to the Board email bos@sonoma-county.org. Please provide your name, the agenda number(s) on which you wish to speak, and your comment. These comments will be emailed to all Board members. Public comment during the meeting can be made live by joining the Zoom meeting using the above provided information. Available time for comments is determined by the Board Chair based on agenda scheduling demands and total number of speakers.

Time: 3:30 p.m.

Sonoma Water is a wholesaler of potable water, serving nine primary municipal customers in Sonoma and Marin Counties. Sonoma Water's UWMP discusses and describes:

- Existing water supplies and transmission system facilities;
- Projected water demands in Sonoma Water's service area over the next 25 years;
- Projected water supplies available to Sonoma Water over the next 25 years, the reliability of that supply, and general schedules for water supply projects;
- Climate change impacts to water supply;
- Energy intensity;
- Current and planned Sonoma Water water conservation activities;
- An updated and separately adopted Water Shortage Contingency Plan; and
- A comparison of water supply and water demand over the next 25 years under different hydrological assumptions (normal year, single dry year, multiple dry years).

Urban Water Management Plans are important tools for reporting water agencies' long-term planning efforts to meet future demands and tracking progress toward achieving state-mandated water conservation targets. They also support state laws linking approval for large developments to water supply availability. In 1983, the California Legislature enacted the Urban Water Management Planning Act (Water Code §10608 - 10656). It requires that every urban water supplier that provides water to 3,000 or more customers, or that provides more than 3,000 acre-feet of water annually ensure the appropriate level of reliability to meet the needs of its customers during normal, dry and multiple dry years. The Act describes the contents of the UWMP as well as how urban water suppliers should adopt and implement the plans. Plan updates are required every five years, and updates maintain the Sonoma Water's eligibility for state grants.

Learn more about Sonoma Water's UWMP at www.sonomawater.org/uwmp.

85249 – Pub Apr 26, May 6, 2021 2ti.

NOTICE INVITING BIDS

NOTICE IS HEREBY GIVEN that the El Crystal MHP, LLC, herein called OWNER, located in the County of Sonoma, State of California, will receive separate sealed BIDS for the construction of:

Water System Consolidation Project

Such bids shall be received by the OWNER at 3280 Santa Rosa Avenue, Santa Rosa, CA 95407 until 11:00 AM on 27 May 2021, at which time said bids will be publicly opened and read aloud. Bids will be received on the front lawn at the location of the proposed Work.

Each bid must conform and be fully responsive to this invitation, the specifications, and all other documents comprising the pertinent contract documents. Copies of the contract documents are available free of charge in electronic format via email delivery as PDFs. To obtain an electronic copy of contract documents contact yolanda.art@nv5.com.

A non-mandatory pre-bid meeting and site visit are scheduled at 10:00 AM on 05 May 2021, at the El Crystal Mobile Home Park, 3280 Santa Rosa Avenue, Santa Rosa, CA 95407. Bidding documents will not be available at the meeting. The site is located on private property and access outside of this meeting will not be accommodated. All questions regarding this project must be submitted by email to Yolanda Art at yolanda.art@nv5.com no later than 5:00 PM on 19 May 2021. OWNER will supply all answers to all Bidders in the form of an Addendum. No questions will be addressed by OWNER after this date and time.

The Engineer's Opinion of Probable Construction Costs is $140,000. The contract duration shall be sixty (60) calendar days. This project uses public funds and requires the payment of State prevailing wages and the employment and training of apprentices. Minority, women, and disabled veteran contractors are encouraged to submit bids. The bidder shall continuously possess from the time the bid is submitted and throughout the execution of the Work the following classification(s) of Contractor's California State license: Class "A" California Contractor License.

Each bid shall be made out on a Bid Form included in the contract documents. No bid may be withdrawn for a period of sixty (60) days after the date set for the opening for bids. The OWNER reserves the right to reject any and all bids and to waive any informalities or irregularities in the bidding.

EL CRYSTAL MHP, LLC
Steve Hathaway
April 15, 2021

84886 – Pub. Apr 15, 26, 2021 2ti.

CITY OF HEALDSBURG
OFFICE OF THE CITY CLERK
PUBLIC NOTICE

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF HEALDSBURG AMENDING SECTION 8.10.010, 8.10.020 AND 8.10.030 OF THE HEALDSBURG MUNICIPAL CODE RELATED TO PROHIBITING THE USE AND SALE OF DISPOSABLE FOOD SERVICE WARE AND OTHER PRODUCTS CONTAINING POLYSTYRENE FOAM

NOTICE IS HEREBY GIVEN that on April 19, 2021 the City Council of the City of Healdsburg adopted Ordinance No. 1209 reading title of, and waiving further reading of the text, by the following vote:

AYES:	Councilmembers:	Hagele, Jimenez, Kelley, Palacios and Mayor Mitchell
NOES:	Councilmembers:	None
ABSENT:	Councilmembers:	None

The ordinance: (1) regulates and prohibits the use and sale of polystyrene foam products and PFAS to limit non-recyclable and non-compostable single-use food service ware items; and (2) removes the definition for "ASTM standard" which refers to standards for compostable bioplastics not allowed in the local compost stream and adds a definition for "compostable".

A copy of the full text of this ordinance is available at the office of the City Clerk via email at rallan@ci.healdsburg.ca.us.

April 26, 2021

Raina L. Allan, City Clerk

86753 – Pub. Apr 26, 2021 1ti.

DOCUMENT 00 11 16
INVITATION TO BID

1. Notice is hereby given that the governing board ("Board") of the Petaluma City Schools ("District" or "Owner") will receive sealed bids for the following project, Bid No. ("Project" or "Contract"):

   Kenilworth Junior High Buildings G, J & L HVAC Improvements

2. Sealed Bids will be received until 2:00 PM, May 18, 2021, at the District Office, located at 200 Douglas Street, Petaluma, California, at or after which time the bids will be opened and publicly read aloud. Any claim by a bidder of error in its bid must be made in compliance with Section 5100 et seq. of the Public Contract Code. Any bid that is submitted after this time shall be non-responsive and returned to the bidder.
3. The Project consists of:

   Rooftop Mechanical HVAC Upgrades

4. All bids shall be on the form provided by the District. Each bid must conform and be responsive to all pertinent Contract Documents, including, but not limited to, the Instructions to Bidders.
5. To bid on this Project, the Bidder is required to possess one or more of the following State of California Contractor Licenses:

   B General Building Contractor

   The Bidder's license(s) must be active and in good standing at the time of the bid opening and must remain so throughout the term of the Contract.
6. As security for its Bid, each bidder shall provide with its Bid form
   - a bid bond issued by an admitted surety insurer on the form provided by the District,
   - cash, or
   - a cashier's check or a certified check, drawn to the order of the Petaluma City Schools, in the amount of ten percent (10%) of the total bid price. This bid security shall be a guarantee that the Bidder shall, within seven (7) calendar days after the date of the Notice of Award, enter into a contract with the District for the performance of the services as stipulated in the bid.
7. The successful Bidder shall be required to furnish a 100% Performance Bond and a 100% Payment Bond if it is awarded the contract for the Project.
8. The successful Bidder may substitute securities for any monies withheld by the District to ensure performance under the Contract, in accordance with the provisions of Section 22300 of the Public Contract Code.
9. The successful Bidder and its subcontractors shall pay all workers on the Project not less than the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work as determined by the Director of the Department of Industrial Relations, State of California, for the type of work performed and the locality in which the work is to be performed within the boundaries of the District, pursuant to Sections 1770 et seq. of the California Labor Code. Prevailing wage rates are available from the District or on the Internet at: <http://www.dir.ca.gov>. Bidders and Bidders' subcontractors shall comply with the registration and qualification requirements pursuant to Sections 1725.5 and 1771.1 of the California Labor Code.
10. A voluntary pre-bid conference and site visit will be held on Wednesday May 5, 2021 at 3:00 pm at Kenilworth Junior High School 800 Riesling Road Petaluma. Meet in front of the Admin office. The Site Visit is expected to take approximately one hour.
11. Contract Documents will be available for review no later than April 29th at the District Facilities Office. In addition, Contract Documents are available for review at the following builders' exchanges:

North Coast Builders Exchange	(707) 542-9502
(CAL BX) Federation of CA Builders Exchanges	(530) 343-1994
Marin Builder's Association	(415) 462-1220

    Contract Documents are also available for non-refundable purchase at:
    Digitech Reprographics (707)769-0410
    1340 Commerce Street, Suite K order@digitechprints.com
    Petaluma, CA 94952
12. The District's Board reserves the right to reject any and all bids and/or waive any irregularity in any bid received. If the District awards the Contract, the security of unsuccessful bidder(s) shall be returned within sixty (60) days from the time the award is made. Unless otherwise required by law, no bidder may withdraw its bid for ninety (90) days after the date of the bid opening.
13. The District shall award the Contract, if it awards it at all, to the lowest responsive responsible bidder based on base bid amount only.

    The Project Schedule shall be:

RFP/Q Advertise:	April 23 & 30th 2021
Pre-Proposal/Bid Site Walk:	Wednesday May 5, 2021 @ 3 pm
Bid Open:	May 18, 2021
Notice of Award	May 26, 2021
Notice To Proceed:	June 4, 2021
Project Completion:	August 10, 2021

86776 - Pub. Apr 26, May 3, 2021 2ti.

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that, on May 25, 2021, the Board of Supervisors of the County of Sonoma (the "County") will conduct a public hearing as required by Section 147(f) of the Internal Revenue Code of 1986, as amended (the "Code"), at which it will hear and consider information concerning the proposed issuance by the California Municipal Finance Authority (the "Authority") of qualified solid waste disposal facility bonds pursuant to section 142(a)(6) of the Code in an aggregate principal amount not to exceed $703,700,000 (the "Bonds"). The Bonds will be part of a plan of finance, and may be issued in one or more series from time to time over a period of multiple years.

A portion of the proceeds of the Bonds, in an amount not expected to exceed $32,700,000, is intended to finance certain capital projects located in the unincorporated portion of the County at the Sonoma Landfill, 500 Mecham Road, Petaluma, California 94952. The current owner and/or operator of the above facility is Republic Services of Sonoma County, Inc., an affiliate of Republic Services, Inc. (together with their affiliates, the "Borrower").

The projects to be financed at such location (collectively, the "Project") include: (a) improvements to existing landfill facilities, including construction of new disposal cells and liners within currently permitted acreage, (b) additions and improvements to the leachate collection and treatment system, including leachate trenching, (c) additions and improvements to the methane gas systems, (d) installation of new liners for intermittent and final closure of completed sections of the landfill facilities, (e) site improvements, (f) acquisition of equipment to be used at the landfill facilities, and (g) acquisition of other equipment and assets necessary to support the foregoing improvements and to place them into service. The Bonds and the obligation to pay principal of and interest thereon and any redemption premium with respect thereto do not constitute indebtedness or an obligation of the County, the Authority, the State of California or any political subdivision thereof, within the meaning of any constitutional or statutory debt limitation, or a charge against the general credit or taxing powers of any of them. The Bonds shall be a limited obligation of the Authority, payable solely from certain revenues duly pledged therefor and generally representing amounts paid by the Borrower.

The hearing will commence at 8:30 a.m. or as soon thereafter as the matter can be heard. As a public health and safety precaution, no physical location will be available for the hearing. The hearing will be conducted by toll-free teleconference only. Interested persons wishing to express their views on the issuance of the Bonds or on the nature and location of the facilities proposed to be financed may provide public comments during the hearing by dialing (844) 854-2222; then, following the prompt, dialing access code 920111. Please provide your name, the agenda number(s) on which you wish to speak, and your comment. These comments will be emailed to all Board members. Available time for comments is determined by the Board Chair based on agenda scheduling demands and total number of speakers.

Additional information concerning the above matter may be obtained from the Clerk of the Board, County of Sonoma, 575 Administration, Room 100A, Santa Rosa, California 95403.

Dated: April 26, 2021
4/26/21
CNS-3463938#
THE PRESS DEMOCRAT

86646 – PUB APR 26, 2021 1TI.

FICTITIOUS BUSINESS NAME STATEMENT
FILE NO. 202101341

The following person (persons) is (are) doing business as:
Engel & Voelkers Healdsburg located at 328 Healdsburg Ave Unit B, Healdsburg, CA, 95448; Mailing Address PO BOX 680717 Park City UT 84068 Sonoma County, is hereby registered by the following owner(s): SFRE Wine Country 890 Main St Ste 5-101, Park City, UT, 84060
A CA Corporation
The registrant commenced to transact business under the fictitious name or names above on 1/1/20.
I declare that all information in this statement is true and correct.
Signed: Eileen Bailey
This statement was filed with the County Clerk of SONOMA COUNTY on 03/30/2021
I hereby certify that this copy is a correct copy of the original statement on file in my office.
DEVA MARIE PROTO
Sonoma County Clerk
By /s/
Amanda King
Deputy Clerk
SEAL
W0030971 - April 5, 12, 19, 26 2021 4ti.

FICTITIOUS BUSINESS NAME STATEMENT
FILE NO. 2021-01508

The following person (persons) is (are) doing business as:
1985 Software located at 807 Humboldt St., Santa Rosa, CA, 95404; Mailing Address 807 Humboldt St. Santa Rosa, CA 95404 Sonoma County, is hereby registered by the following owner(s): David Vaillancourt 807 Humboldt St., Santa Rosa , CA, 95404
; 2) Scott LaForge 6834 Lantana Bridge Road Apt 201, Naples, FL, 34109
A General Partnership
The registrant commenced to transact business under the fictitious name or names above on N/A.
I declare that all information in this statement is true and correct.
Signed: David Vaillancourt
This statement was filed with the County Clerk of SONOMA COUNTY on 04/15/2021
I hereby certify that this copy is a correct copy of the original statement on file in my office.
DEVA MARIE PROTO
Sonoma County Clerk
By /s/
Amanda King
Deputy Clerk
SEAL
W0031196 - April 19, 26, May 3, 10 2021 4ti.

FICTITIOUS BUSINESS NAME STATEMENT
FILE NO. 202101149

The following person (persons) is (are) doing business as:
Mtz Plumbing located at 1380 Trombetta St , Santa Rosa , CA, 95407; Sonoma County, is hereby registered by the following owner(s): Laurencio Martinez 1380 Trombetta St , Santa Rosa, CA, 95407
; 2) Martha Gomez 1380 Trombetta st , Santa Rosa , CA, 95407
Married Couple
The registrant commenced to transact business under the fictitious name or names above on N/A.
I declare that all information in this statement is true and correct.
Signed: Laurencio Martinez
This statement was filed with the County Clerk of SONOMA COUNTY on 03/18/2021
I hereby certify that this copy is a correct copy of the original statement on file in my office.
DEVA MARIE PROTO
Sonoma County Clerk
By /s/
Nancy Escobar
Deputy Clerk
SEAL
W0031347 - April 26, May 3, 10, 17 2021 4ti.

SONOMA COUNTY HISTORY

In 1865

I.G. Wickersham & Co. of Petaluma operated as a "private bank."

Biggest lower Russian River mill started in Guerneville by J.W. Bagley, George Guerne, Tom Heald and W.H. Willets. Mill closed in 1901.

Rosenberg & Bush Department Store founded in Healdsburg by Wolfe Rosenberg.

SONOMA COUNTY HISTORY

In the 1928

The Gravenstein apple boom saw 1,800 carloads of fruit go to eastern and southern markets.

Star running back Ernie Nevers helped the semi-pro Santa Rosa Bone-crushers football team win three straight state titles (1928-30).

John Greeott bought a large ranch on Chalk Hill Rd. Son George bought the ranch, growing grapes, and became a folk artist and invented a horseshoe known as the Greeott Grabber.

Conductor George Trombley arrived and formed the Santa Rosa Symphony; the first concert was held in April at the Elks Club. He conducted for 30 years, building the group into a 60-piece professional orchestra.

Sonoma Mission Inn Golf and Country Club course opened, taking heavy losses during the Depression but survived when it was purchased by Alma Spreckels.

Penngrove organized its volunteer fire department.

THE WITHIN INSTRUMENT IS A
CORRECT COPY OF THE ORIGINAL
ON FILE IN THIS OFFICE

ATTEST: May 11, 2021
SHERYL BRATTON, Clerk/Secretary
BY

Date: May 11, 2021

Item Number: 58
Resolution Number: 21-0208

☐ 4/5 Vote Required

Resolution Of The Board Of Directors Of The Sonoma County Water Agency Approving The Urban Water Management Plan 2020

Whereas, the Urban Water Management Planning Act, which is codified at California Water Code Section 10610 et seq., requires that every urban water supplier which provides 3,000 acre feet or more of water annually, or which directly or indirectly supplies water for municipal purposes to more than 3,000 customers, shall prepare an Urban Water Management Plan, the primary objective of which is to plan for the conservation and efficient use of water; and

Whereas, the Sonoma County Water Agency (Sonoma Water) has prepared a wholesale Urban Water Management Plan (UWMP 2020) covering Sonoma Water to meet the requirements of Urban Water Management Planning Act (Act); and

Whereas, the UWMP 2020 must be adopted after public review and a public hearing by Sonoma Water's Board of Directors and must be filed with the California Department of Water Resources by July 1, 2021; and

Whereas, Sonoma Water coordinated preparation of the UWMP 2020 with other appropriate agencies in the area; provided notices to cities and counties within its service area; and encouraged the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan as more fully described in the UWMP 2020, in compliance with the requirements of the Act; and

Whereas, on April 27, 2021, Sonoma Water circulated for public review a draft of the UWMP 2020, in compliance with the requirements of the Act; and

Whereas, a copy of the draft UWMP 2020 was made available for public inspection continuously since April 27, 2021, at Sonoma Water's Administration building, the office of the Clerk of Sonoma Water's Board of Directors, and Sonoma Water's website; and

Whereas, on May 11, 2021, this Board of Directors held a duly noticed public hearing on

the UWMP 2020, notice of the time and place of which was published in the Santa Rosa Press Democrat, a newspaper of general circulation, on April 26, 2021 and May 6, 2021; and

Whereas, Sonoma Water reviewed and considered all comments received on the draft UWMP 2020;

Now, Therefore, Be It Resolved that the Board of Directors of the Sonoma County Water Agency hereby finds, determines, and declares as follows:

1. All of the above recitals are true and correct.
2. Sonoma Water's UWMP 2020 is based upon substantial evidence, including reasonable assumptions about future conditions, and meets all requirements of the Urban Water Management Planning Act.
3. The Urban Water Management Plan 2020 is hereby approved and adopted.

Directors:

Gorin: Aye Rabbitt: Aye Coursey: Aye Gore:Aye Hopkins: Aye

Ayes: 5 Noes: 0 Absent: 0 Abstain: 0

So Ordered.

Appendix C: Water Shortage Contingency Plan

Water Shortage Contingency Plan

Prepared for
Sonoma Water
Santa Rosa, CA

FINAL
June 2021

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List of Abbreviations

ac-ft	acre-feet
annual assessment	annual water supply and demand assessment
DWR	Department of Water Resources
EOC	Emergency Operations Center
EOP	Emergency Operation Plan
FEMA	Federal Emergency Management Agency
FIRO	forecast informed reservoir operations
LHMP	local hazard mitigation plan
Marin Water	Marin Municipal Water District
NMFS	National Marine Fisheries Service
Plan	Urban Water Management Plan
RR ResSim	Russian River System Model
Sonoma Water	Sonoma County Water Agency
TAC	Technical Advisory Committee
USACE	United States Army Corps of Engineers
WAC	Water Advisory Committee
WSCP	Water Shortage Contingency Plan

This document presents Sonoma County Water Agency's (Sonoma Water) plan for responding to a water shortage condition. This Water Shortage Contingency Plan (WSCP) is structured as recommended by California Department of Water Resources (DWR) in the 2020 Urban Water Management Plan Guidebook and summarized as follows:

- Section 1 presents purpose and background information.
- Section 2 summarizes the water reliability analysis developed in the 2020 Urban Water Management Plan.
- Section 3 describes the annual water supply and demand assessment procedures.
- Section 4 presents the water shortage levels.
- Section 5 describes shortage response actions.
- Section 6 presents communication protocols.
- Section 7 describes Sonoma Water's legal authority.
- Section 8 describes the financial impact of water shortages.
- Section 9 presents the procedures to refine the WSCP.
- Section 10 describes the adoption, submittal, and availability of the WSCP.

Section 1: Introduction

In response to the drought of 2012 to 2016 that occurred in many parts of California, new legislation in 2018 made substantial changes to the previous requirements for a WSCP. The WSCP must be created, adopted, and able to be amended separately from the Urban Water Management Plan (Plan). The WSCP must be included as part of the 2020 Plan when submitted to DWR. The WSCP is included as an appendix to Sonoma Water's Plan. As such there is the flexibility to be able to separate the WSCP from the Plan document for future needs.

An urban water supplier that indirectly provides water, such as Sonoma Water, is required to not include planning elements in their WSCP that would be applicable to retail water agencies without the consent of the retail agencies. Sonoma Water provides wholesale water to several retail water agencies, some of whom are preparing their own urban water management plans and WSCPs. This WSCP does not include planning elements that are applicable to those retail water agencies. As a water wholesaler, Sonoma Water does not have the ability to monitor end uses or impose restrictions directly on end users in the event of a water shortage; such actions must be taken by Sonoma Water's customers. Accordingly, this WSCP is limited to those actions that Sonoma Water can take vis-à-vis its wholesale customers in the event of a water shortage.

Sonoma Water provides wholesale water to several categories of retail water agencies that consist of eight water contractors, other water transmission system customers, and the Marin Municipal Water District (Marin Water), collectively referred to as Sonoma Water's customers. Sonoma Water routinely meets and coordinates with this category of customers through the Technical Advisory Committee (TAC) and the Water Advisory Committee (WAC). Sonoma Water also supplies small quantities of water (when available) from its transmission system to surplus water customers, and allows other entities known as Russian River customers to divert water from the Russian River under Sonoma Water's water rights using their own facilities. These latter two categories are identified in this WSCP as Sonoma Water's other customers.

Section 2: Water Supply Reliability Analysis

The water supply and demand assessment and the drought risk assessment are presented in Section 6 of the 2020 Plan and summarized below.

2.1 Water Supply and Demand Assessment (2025 – 2045)

The water supply and demand assessment described in Section 6.3 of the Plan provides a comparison of the projected water supply and demand for Sonoma Water from 2025 through 2045. The conclusion of the assessment is that Sonoma Water has adequate water supply through the 2045 planning horizon, except for single-dry years, starting after 2025. In these circumstances, Sonoma Water will work with its customers to reduce water demands, or to utilize additional local water sources, or both.

2.2 Drought Risk Assessment (2021 – 2025)

The drought risk assessment described in Section 6.5 of the Plan compares the estimated water supplies and demands for the next five years assuming that the next five years are similar to the five consecutive driest years on record (1987-1991). The comparison shows that it is anticipated that there would be enough supply to meet demands.

The key issues that may create a water shortage condition include drought conditions and emergencies resulting from events such as earthquakes and contamination.

Section 3: Annual Water Supply and Demand Assessment Procedures

This section presents the procedures that will be used by Sonoma Water to conduct an annual water supply and demand assessment (annual assessment). The annual assessment is required to be submitted annually to DWR beginning on July 1, 2022. The assessment forecasts near-term water supply conditions to ensure shortage response actions are triggered in a timely manner. The annual assessment will provide a description and quantification of each source of Sonoma Water's water supply compared to water demands for the current calendar year, with consideration of one subsequent dry year.

One of the most important functions provided by Sonoma Water is to monitor water supply conditions to gauge the likelihood of water shortages so that Sonoma Water's wholesale customers will be prepared to respond to the shortages. Sonoma Water constantly monitors the reservoir levels at Lake Pillsbury, Lake Mendocino, and Lake Sonoma, and estimates flows in and out of those reservoirs, weather forecasts, and natural flows into and diversions from the Russian River and Dry Creek. By using this data as well as historical data regarding water use in different climatic conditions, Sonoma Water can project when a water shortage may be imminent.

The following subsections describe the decision-making process and data and methodologies. Sonoma Water may modify these procedures based on its experience developing the annual assessment.

3.1 Decision Making Process

This section presents the decision-making process and timeline (see Table 1) that Sonoma Water will use each year to determine its water supply reliability. Sonoma Water may revise this decision-making process based on the experience gained from going through the process.

To develop the supply portion of the annual assessment, Sonoma Water staff will start monitoring water supply conditions in December prior to the January Decision 1610 trigger date for setting instream flow

requirements per the water year classification specified in Decision 1610. Decision 1610 also requires an assessment of the water year classification and instream flow requirements at the beginning of each subsequent month until June 1, when it is set for the remainder of the year. Consequently, Sonoma Water staff will continue to monitor water supply conditions (reservoir levels, stream/river flows, soil moisture, precipitation, etc.) throughout this time period to ensure its assessment of water supply conditions are consistent with watershed hydrologic conditions and reservoir storage levels. The final annual assessment will include the actual supply conditions up to May. If a water shortage is forecast for the subsequent calendar year, the monitoring of water supply conditions would be conducted during the September to December period of the current calendar year.

To develop the demand portion of the annual assessment, the projections of water demand to be supplied by Sonoma Water for the calendar year and subsequent calendar year will be developed and provided by all of Sonoma Water's customers by February 1. Sonoma Water staff will use the most recent demand data to develop demand projections for those customers that do not provide projections. The annual assessment will consider all demands on Sonoma Water's system to establish the supply available for Sonoma Water's customers that must complete and submit their own annual assessments to DWR.

Sonoma Water will present and submit the annual assessment following the steps described below.

1. **Present draft annual assessment to Sonoma Water's customers.** The draft annual assessment will be presented to the TAC ad-hoc committee at the April meeting. The assessment will also be presented to the Sonoma Water's other customers. An initial evaluation will be made regarding the potential for a water shortage condition to occur. If a shortage is forecast for the current calendar year and particularly during the critical months of July to October, the initial implementation of WSCPs will be coordinated with all the customers.
2. **Receive review comments.** Sonoma water's customers will present their review comments including their updated demands and local supply projections at the May TAC meeting. Sonoma Water will communicate directly with Sonoma Water's other customers to obtain their review comments.
3. **Present final annual assessment to the TAC.** The final annual assessment report will be prepared and presented at the June TAC meeting. The annual assessment may be presented to the WAC. Sonoma Water will coordinate through the TAC to identify if any water supply gaps exist for each customer when considering both Sonoma Water supplies and local supplies. The assessment will be provided directly to Sonoma Water's other customers.
4. **Optional presentation of the annual assessment to the Board of Directors.** The annual assessment may be presented to Sonoma Water's Board of Directors during one of their regularly scheduled meetings, particularly if a shortage is anticipated or if an existing shortage condition is to be ended.
5. **Submit annual assessment to DWR.** Sonoma Water will submit the annual assessment report to DWR by July 1 of each year.

Table 1. Annual Assessment Timeline							
Task	Dec	Jan	Feb	Mar	Apr	May	Jun
Monitor and forecast water supply conditions							
Sonoma Water's customers develop and provide water demand forecast by February 1.							
1. Present draft annual assessment to Sonoma Water's customers							
2. Receive review comments							
3. Present final annual assessment to the TAC							
4. Present annual assessment to the Board of Directors							
5. Submit annual assessment to DWR (due July 1st)							

3.2 Data and Methodologies

This section presents the key data inputs and assessment methodology that will be used to evaluate Sonoma Water's water supply. The evaluation criteria, water supply, unconstrained demand, water supply, planned water use, infrastructure considerations, and other factors are described.

3.2.1 Evaluation Criteria

The evaluation criteria that will be relied on for each annual assessment include the key data inputs and the constraints that are imposed on the water supplies.

The key data inputs that are used by Sonoma Water staff to forecast water supply for the remainder of the current year and a subsequent dry year include the items described below.

- **Unconstrained customer demand.** Current and subsequent calendar year unconstrained demand for each of Sonoma Water's wholesale customers considering weather, growth, and other influencing factors.
- **Russian River operations.** Current reservoir releases from Lake Sonoma and Lake Mendocino, including anticipated releases to meet in-stream flow requirements and water demands and based on reservoir curves and forecast informed reservoir operations (FIRO) decision support tools.
- **Hydrology and watershed conditions.** Lake Sonoma and Lake Mendocino inflows and storage levels, and soil moisture.
- **Potter Valley Project inflows.** Lake Pillsbury storage levels and observed and projected project transfers.
- **Weather forecasts and historical hydrological records.** Weather forecasts combined with historical records will be used to evaluate probabilities using statistical methods.

The water supply constraints are due to a variety of agreements and decisions, as follows.

- **Lake Sonoma storage level.** Sonoma Water's water rights permits include a provision that requires Sonoma Water to impose a 30 percent reduction in deliveries from the Russian River to its service area

when Lake Sonoma storage levels drop below 100,000 acre-feet (ac-ft) before July 15 of any year. This provision is described in more detail in Section 5.1.6.1 in the 2020 Plan.

- **Lake Mendocino storage level.** Having a sufficient supply of water in Lake Mendocino in the fall is of critical importance to the salmonid species in the Russian River and to meet municipal and industrial demands and agricultural irrigation needs.
- **Minimum instream flow requirements.** The minimum instream flow schedule varies based on the hydrologic classifications of Normal, Dry, and Critical water supply conditions as defined in Decision 1610. These classifications will be revised using a new hydrologic index. Minimum instream flow requirements for the Russian River and Dry Creek are met by releases from Coyote Valley Dam and Warm Springs Dam.
- **Flood control operations criteria.** The United States Army Corps of Engineers (USACE) determines the schedule and amount of water released from Lake Mendocino and Lake Sonoma during flood control operations when storage levels exceed the water supply storage pool. Rules of the water control manuals of the reservoirs (USACE, 1984 & 2003) require the flood control pool to be empty except during periods of high flows downstream. During high flow events water is temporarily detained in the flood control pool (above the water supply pool), and later released at rates that avoid exceeding downstream flood stage.
- **Maximum flow releases from Warm Springs and Coyote Valley Dams.** The Lake Mendocino and Sonoma water control manuals define maximum release that are a function of reservoir water elevation or storage level. The maximum release schedules typically only apply during flood control operations. Releases from the reservoirs are further constrained by rules that define the maximum rate of change of release (ramping rates) to minimize rapid changes in stage downstream and avoid fish stranding. These ramping rates were defined in a 2016 letter to the USACE from the National Marine Fisheries Service (NMFS) (NMFS, 2016).
- **The Russian River Biological Opinion.** The Russian River Biological Opinion places certain terms and conditions on the Sonoma Water with respect to its water supply operations.

3.2.2 Water Supply

The Russian River provides most of Sonoma Water's water supply with groundwater supply from the Santa Rosa Plain as a secondary source. Sonoma Water diverts water from the Russian River near Forestville and conveys the water via its transmission system to its customers. Sonoma Water's 2020 Plan (Section 5) provides a more detailed description of the water supplies. The method used to forecast the quantify of water supply is described in Section 3.2.4 below.

Almost all of Sonoma Water's customers, surplus customers, and Russian River customers have other water supplies, in addition to those provided by Sonoma Water, which include local surface water, local groundwater, and recycled water. These local supplies will not be included in the assessment. Each customer will develop its own assessment of their available supplies.

3.2.3 Unconstrained Customer Demand

The assessment will present the current year unconstrained demands from Sonoma Water's customers, considering weather, growth, and other influencing factors. The unconstrained water demands will be provided by the customers or developed by Sonoma Water.

3.2.4 Planned Water Use for Current Year Considering Dry Subsequent Year

The assessment will present an evaluation of the amount of anticipated water supplies for the current calendar year as well as how the supplies will be used, while anticipating that the following calendar year will be dry.

The annual assessment will be based on evaluating the key data inputs to determine the water supply reliability. The methodology to develop the annual assessment will follow the general approach described below.

1. **Quantify current calendar year water supply.** The available water supply from all water supply sources will be estimated for the current calendar year based on the data inputs, evaluation criteria, and hydrological and regulatory conditions. The current calendar year consists of the latter portion of the current wet season and the earlier portion of the subsequent wet season. Sonoma Water staff will evaluate water supply conditions beginning at least mid-month prior from January to June to determine whether anticipated conditions warrant any actions by Sonoma Water. The wet season that starts in the Fall of the current year will be assumed to be dry as described in the next step. The projections of the water supply will be expressed as a range and based on the results of operations modeling of the Russian River system consisting of the statistical evaluation of multiple scenarios. The model is described later in this subsection. Figure 1 presents the key considerations for the assessment of Russian River supply conditions.
2. **Quantify subsequent calendar year supply.** The subsequent calendar year water supplies will be estimated by assuming that the next wet season that starts at the end of the current calendar year will be dry. Sonoma Water will select the climate type for the wet season that starts at the end of the subsequent calendar year. Sonoma Water will base the estimate of dry season water supplies on a statistical analysis of the historical precipitation record and the selection of an appropriate exceedance frequency. The details of the methodology will be defined in the development of the assessment.
3. **Identify infrastructure constraints.** The existing infrastructure capabilities and plausible constraints as they impact Sonoma Water's ability to deliver supplies to meet expected customer water use needs in the coming year will be considered.
4. **Quantify unconstrained water demand.** The unconstrained water demands for all the customers will be provided by the customers or developed by Sonoma Water staff.
5. **Compare projected water supplies to demands.** The water supplies identified in the annual assessment will represent the water demand that can be met while maintaining adequate storage in Lake Mendocino and Lake Sonoma.
6. **Identify and quantify anticipated water supply shortages, if any.** The forecast of water supplies in comparison to water demands will identify and quantify any anticipated water shortages for the current calendar year. The forecast will be coordinated with Sonoma Water's customers, surplus customers, and Russian River customers. Depending on the extent of the forecast shortage, the appropriate shortage stage will be selected. If the early winter season has been wet and the forecast is for a wet season, there would be no concerns. If the season was dry in the early wet season, there would be a potential concern and river flows and reservoir levels would be monitored more closely. Depending on the extent of precipitation in the latter portion of the wet season, the forecast could be changed to no concern or to an anticipated shortage.
7. **Implications of forecasted water shortage.** Depending on the extent of the forecasted water shortage for the current calendar year and particularly the summer months, Sonoma Water may implement voluntary reductions of its diversions and request it customers to conserve and utilize local supplies. The State Water Resources Control could also mandate reduction of diversions by Sonoma Water. For example, mandatory reductions would be required (as specified in Sonoma Water's water rights) if Lake Sonoma levels reached 100,000 ac-ft by July 15 of a given year. Such reductions would be implemented in accordance with the applicable provisions of the Restructured Agreement and consistent with the defined shortage stages. If a shortage is identified, the water shortage allocation methodology specified by the Restructured Agreement would be used to allocate the reduced supply to each customer. Each of Sonoma Water's customers would develop their own annual assessments that will include estimates of their projected quantity of local water supplies.

The forecast of the amount of available water supplies will be developed by Sonoma Water using the Russian River System Model (RR ResSim). 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.

3.2.5 Infrastructure Considerations

The annual assessment will include an evaluation of how infrastructure capabilities and constraints may affect Sonoma Water's ability to deliver supplies to meet expected customer water use needs in the current year.

3.2.6 Other Factors

The annual assessment will describe any other locally applicable factors that could influence the amount of available water supplies.

Summary: D1610 contains trigger points at the first of the month (January – June) to establish the Hydrologic Index (HI) based on cumulative inflows into Lake Pillsbury (Eel River). Sonoma Water staff evaluate water supply conditions (as shown in Figure 1 below) beginning at least mid-month prior to each of the D1610 trigger dates to determine whether anticipated conditions at the trigger date warrant any actions by Sonoma Water. This assessment process may be revised to consider a changed HI based on the Fish Flow Project as described in Section 5.1.6.1 of the 2020 Plan. While D1610 is currently used, a proposal to change Sonoma Water's water rights may require an updated methodology.

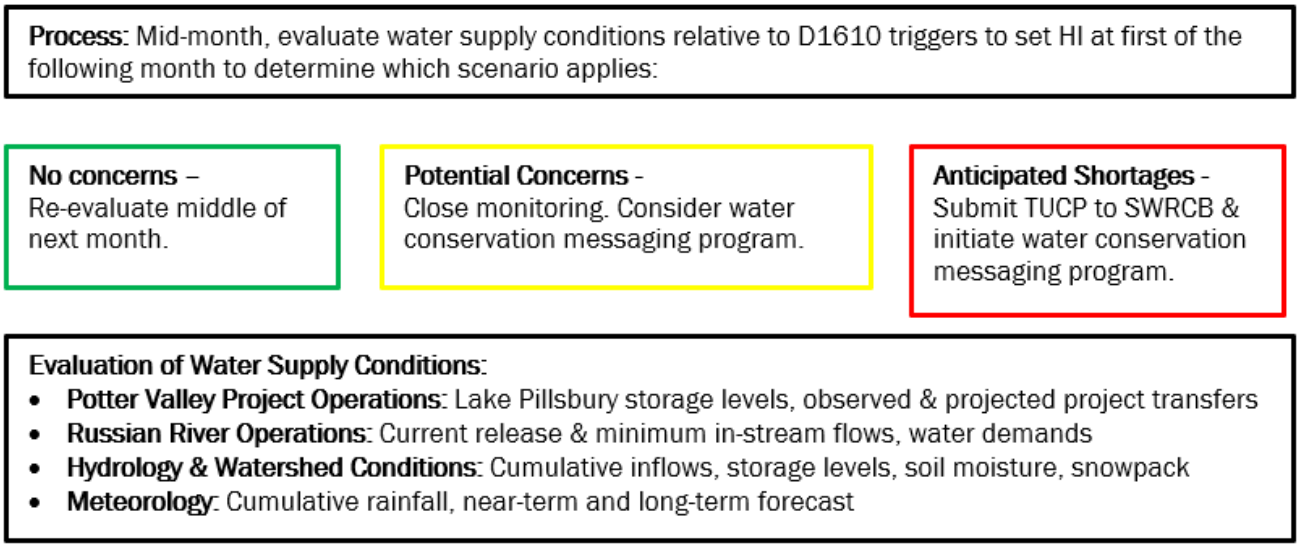

Figure 1. Assessment of Russian River Supply Conditions.

Section 4: Water Shortage Levels

The shortage levels are presented in Table 2. The shortage is defined as the unmet unconstrained demand divided by the unconstrained demand, which can be expressed as follows for when the forecast supply is less than the unconstrained demand:

Shortage, percent = ((unconstrained demand – forecast supply)/ unconstrained demand) X 100

Table 2. Water Shortage Contingency Plan Shortage Levels (DWR Table 8-1)		
Shortage Level	Percent Shortage Range	Shortage Response Actions
1	Up to 10%	Reduction in Russian River diversions by Sonoma Water of up to 10%. Sonoma Water's wholesale customers each have voluntary reduction of wholesale water deliveries as determined by shortage allocation.
2	10 - 20%	Reduction in Russian River diversions by Sonoma Water of 10% to 20%. Sonoma Water's wholesale customers each have voluntary reduction of wholesale water deliveries as determined by shortage allocation.
3	20 - 30%	Reduction in Russian River diversions by Sonoma Water of 20% to 30%. Sonoma Water's wholesale customers each have mandatory reduction of wholesale water deliveries as determined by shortage allocation.
4	30 – 40%	Reduction in Russian River diversions by Sonoma Water of 30% to 40%. Sonoma Water's wholesale customers each have mandatory reduction of wholesale water deliveries as determined by shortage allocation.
5	40 – 50%	Reduction in Russian River diversions by Sonoma Water of 40% to 50%. Sonoma Water's wholesale customers each have mandatory reduction of wholesale water deliveries as determined by shortage allocation.
6	>50%	Reduction in Russian River diversions by Sonoma Water greater than 50%. Sonoma Water's wholesale customers each have mandatory reduction of wholesale water deliveries as determined by shortage allocation.

The extent of the shortage of Sonoma Water's supplies does not translate to the same proportion of shortage for many of Sonoma Water's customers because the supply provided by Sonoma Water only represents a portion of their respective water supply portfolio. Many of these customers have their own local surface water, groundwater, and/or recycled water supplies. Each of these customers will develop its own annual water supply and demand assessment and, if a shortage is forecast, would determine its own shortage level that considers their own local supplies.

The allocation of Sonoma Water's supplies to its customers in the event of a shortage is based on the procedures set forth in the Restructured Agreement for Water Supply. Section 3.5(a) of the Restructured Agreement describes the way Sonoma Water is to allocate water to its customers in the event of a water supply shortage, and Section 3.5(b) of the Restructured Agreement describes the manner in which Sonoma Water is to allocate water to its customers in the event of a temporary impairment of the capacity of some or all of Sonoma Water's transmission system. Section 3.5(d) of the Restructured Agreement requires Sonoma Water to "have an adopted water shortage allocation methodology sufficient to inform each Customer of the water that would be available to it pursuant to Section 3.5(a) in the event of reasonably anticipated shortages, which methodology shall be consistent with this Section 3.5 and shall be included in the Urban Water Management Plan prepared pursuant to Section 2.7."

On April 18, 2006, Sonoma Water's Board of Directors adopted Resolution No. 06-0342, which approved a water allocation methodology developed by Sonoma Water and the water contractors. Resolution No. 06-0342 recognized that the methodology could be modified in the future as additional data regarding customer demands, local supply, and recycled water became available or changed. In order to address changes that have occurred, Sonoma Water is updating the water allocation methodology and anticipates finalizing the update in 2021.

Section 5: Shortage Response Actions

Sonoma Water will regularly perform the annual supply and demand assessment to forecast in advance water shortages. If a water shortage is anticipated, Sonoma Water would implement one or more potential shortage response actions. This section describes demand reduction, supply augmentation, operational changes, the emergency response plan, the seismic risk assessment and mitigation plan, and shortage response action effectiveness.

5.1 Demand Reduction

As noted earlier, as a wholesale supplier, Sonoma Water has no ability to directly restrict the use of water by end users, or to impose financial penalties on end users for excessive use. Under the Restructured Agreement, Sonoma Water has several 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 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 percent 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. In the event of a severe water supply shortage, 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, 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% of the then-current operations and maintenance charge for each ac-ft 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.

Table 3 presents a summary of demand reduction actions and the estimated effectiveness of each action. The combination of the demand reduction actions in Table 3 and the supply augmentation actions in Table 4 are intended to mitigate the shortage. The estimated effectiveness of each action is a planning estimate that will be revised in the future based on the actual performance of these actions during shortage periods.

Table 3. Demand Reduction Actions (DWR Table 8-2)				
Shortage Level	Demand Reduction Actions [a]	How much is this going to reduce the shortage gap? (percent)[b]	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
1	Notification of potential water shortage.	5		N/A
1	Encourage voluntary demand reduction measures by wholesale customers.	5		N/A
2	Encourage enhanced voluntary demand reduction measures by wholesale customers.	5		N/A
3	Imposition of Section 3.5 allocations. [c]	10		Liquidated damage surcharge for taking in excess of allocation.
4	Petition SWRCB for temporary relief from minimum instream flow requirements. [c]	5		N/A
4	Implement measures identified in Section 3.5e of the Restructured Agreement.	5		Physical limitation on deliveries to customers and legal remedies against customers taking in excess of allocation. See Section 3.5e of the Restructured Agreement
5	Implement measures identified in Section 3.5e of the Restructured Agreement.	10		Physical limitation on deliveries to customers and legal remedies against customers taking in excess of allocation. See Section 3.5e of the Restructured Agreement
6	Implement measures identified in Section 3.5e of the Restructured Agreement.	>10		Physical limitation on deliveries to customers and legal remedies against customers taking in excess of allocation. See Section 3.5e of the Restructured Agreement

a. Actions implemented at each stage include continued implementation of actions initiated at prior lower stages.

b. Percent reductions are approximate and represent Sonoma Water's best estimate.

c. Action could also be implemented voluntarily at a lower shortage stage.

5.2 Supply Augmentation

Sonoma Water has two sources of water supply consisting of diversions from the Russian River and local groundwater. In the event of a shortage, Sonoma Water would maximize the use of its groundwater supplies and encourage its wholesale customers to maximize the use of their local water supplies. Table 4 presents a summary of supply augmentation actions and the estimated effectiveness of each action.

Table 4. Supply Augmentation and Other Actions (DWR Table 8-3)			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier	How much is this going to reduce the shortage gap? (percent)	Additional Explanation or Reference
2	Encourage wholesale customers to maximize use of local supplies.	3	Reduces customers' water shortage. May free up some wholesale water for customers with minimal local supplies.
2	Maximize use of Sonoma Water's groundwater wells.	2	Limited by groundwater well capacity.

Another possible supply augmentation action that would be considered and has been implemented in the past is a Sonoma Valley County Sanitation District program providing a residential recycled water fill station near the wastewater treatment plant to provide free recycled water for local residents that can be used to water lawns, gardens, and landscaped areas.

5.3 Operational Changes

Sonoma Water will consider changes to the operations of the water system if they would help to mitigate water shortages.

5.4 Additional Mandatory Restrictions

In addition to the methods of reducing consumption described above including the enforcement of water allocations during a shortage in accordance with Section 3.5 of the Restructured Agreement, the water contractors have ordinances placing limitations on the uses of water by end customers in the event of a water shortage. These ordinances were developed in consultation with Sonoma Water and are described in detail in the water contractors' individual Urban Water Management Plans.

5.5 Emergency Response Planning

An occurrence where there is an insufficient amount of available water to meet the region's needs because of a disaster can be considered a catastrophic water shortage. Sudden interruption of water supply with no to minimal advance warning can be caused by events that include earthquakes, toxic spills, and power outages, while events like a drought can develop over a long period of time.

To prepare for these events, and in accordance with the California Emergency Services Act, Sonoma Water has developed an Emergency Operation Plan (EOP). The EOP guides response to unpredicted catastrophic events that can impact water system infrastructure and delivery. The EOP serves as Sonoma Water's foundational emergency response and recovery document for all levels of emergencies, from minor accidents to major disasters.

The EOP describes the situations and incidents that trigger the activation of the EOP and the Sonoma Water Emergency Operations Center (EOC). It also provides direction and strategies for responding to a major emergency or disaster. The EOP includes:

- Authorities, policies, and procedures associated with emergency response activities.
- EOC activities, including activation and deactivation guidelines.
- Multi-agency and multi-jurisdictional coordination, particularly between Sonoma Water, its water contractors, and the Sonoma Operational Area in accordance with Standardized Emergency Management System and National Incident Management System guidelines.

- Incident Command System management and organization and emergency staffing required to assist in mitigating any significant emergency or disaster.
- Mutual Aid Agreements and covenants that outline the terms and conditions under which mutual aid assistance will be provided.
- Hazard specific action plans and Incident Command System position checklists.

The WSCP is considered an appendix to Sonoma Water's EOP as well as an appendix to the 2020 Plan. In addition, Sonoma Water provides input to the Sonoma County Operational Area Emergency Operations Plan and support annexes, which, in turn, support the Sonoma Water EOP.

In addition to Sonoma Water's actions, the water contractors and Marin Water would initiate their own actions to address a catastrophic water supply interruption in accordance with their own WSCPs. Many of Sonoma Water's customers have local water supplies that would be relied upon during the period of water supply interruption.

5.6 Seismic Risk Assessment and Mitigation Plan

Sonoma Water has several initiatives to reduce and mitigate seismic risk. These include the local hazard mitigation plan (LHMP), the Regional Water Supply Resiliency Study, and the Risk and Resilience Assessment.

In January 2008, Sonoma Water's Board of Directors adopted a LHMP to reduce the system's exposure to natural hazards, including seismic events, and improve reliability. The plan was developed in accordance with the federal Disaster Mitigation Act of 2000 (Public Law 106-390) and approved by the Federal Emergency Management Agency (FEMA). Per FEMA requirements, the plan must be updated every five years in order to remain eligible for certain federal disaster assistance funding. Sonoma Water's LHMP was most recently updated in 2018 and is available at this location: https://www.sonomawater.org/secureourwater.

The 2018 LHMP identifies the water system facilities' vulnerability to surface fault rupture, ground shaking, liquefaction, and earthquake-induced landslides, as well as several other hazards. Key facilities evaluated in the plan include the Russian River system, dams and diversion facilities, aqueducts, storage tanks, pump stations, treatment facilities, groundwater wells, and power facilities. The LHMP also identifies specific mitigation actions to increase reliability of water supply to the public during and after a natural disaster.

Sonoma Water has made substantial investment in recent years pursuing multiple seismic resilient projects aimed at reducing damage to the water system facilities and the associated adverse impacts of a major earthquake. Projects completed since 2013 or currently under construction include:

- Santa Rosa Aqueduct Crossing at Rodgers Creek Fault - reducing the risk of pipeline failure located within the rupture zone of the Rodgers Creek Fault.
- River Diversion System Ground Stabilization Improvements - protecting against seismically-induced liquefaction in the vicinity of the production pumping facilities along the Russian River.
- Transmission System Isolation Valves - increasing points of isolation for greater flexibility in rapidly isolating damaged portions of the system, reducing damage from uncontrolled releases of water, and facilitating more timely restoration of service following an earthquake.
- Russian River-Cotati Intertie Crossing at the Russian River – reducing the risk of pipeline rupture due to liquefaction-induced lateral spread.
- Seismic Retrofit of Sonoma Booster Pump Station #1 – protecting against structural failure of the pumphouse at an essential pumping facility.

Several additional projects, primarily focused on seismically-vulnerable stream crossings identified in Sonoma Water's LHMP, continue to be pursued and are in various stages of design development.

Implementation of these projects remain highly reliant on Sonoma Water's continuing success in securing grant funding.

Sonoma Water is also conducting, in collaboration with its water contractors, a Regional Water Supply Resiliency Study. The study will assist in identifying potential opportunities to optimize the management of regional resources to mitigate system vulnerabilities, including associated seismic and drought risks, through the shared resources and coordinated operations of these regional water supply partners across Sonoma Water's service area. Supporting that effort is a separate study, also underway, that is evaluating potential service interruption durations that could occur following a major earthquake. The study will assist in establishing reasonable goals and strategies for restoration of service if significant damage were to occur to the water supply facilities and provide recommendations for further enhancement of Sonoma Water's current LHMP to mitigate those risks.

Sonoma Water conducted a Risk and Resilience Assessment in 2020 as required by the America's Water Infrastructure Act of 2018. Natural hazards and malevolent acts, including the seismic threat, were applied to applicable critical assets to assess the baseline risk cost of each asset-threat pair. Possible measures to mitigate the risks were identified.

Section 6: Communication Protocols

Sonoma Water has protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments regarding:

1. any current or predicted shortage as determined by the annual supply and demand assessment,
2. any shortage response actions triggered or anticipated to be triggered, and
3. any other relevant communications (e.g., emergency communications in case of catastrophic events).

The description of the decision-making process for the annual water supply and demand assessment procedure includes communications regarding shortages with several entities. These entities are the TAC ad-hoc, the TAC, the WAC, and the Sonoma Water Board of Directors. These entities are the primary way that Sonoma Water communicates with local and regional governments. Each of Sonoma Water's wholesale water customers have their own communication protocols that are documented in their individual WSCPs. Communications regarding shortage response actions would be these same entities. Emergency communication protocols are included in the EOP.

Sonoma Water has an active program to communicate with the public and interested parties. The program includes the web site, social media, press releases, and mailers. This public information program would be used to communicate shortages and response actions to the public.

Section 7: Legal Authorities

Sonoma Water has authority under Water Code section 350 to declare a water shortage emergency condition, and has authority under its contracts with its customers to declare a water shortage and to apportion available water supplies among its customers. As a water wholesaler, Sonoma Water does not have direct relationships with individuals and businesses that are end users of water and does not have the ability to impose water use restrictions on such end users. Sonoma Water coordinates with its customers, the County of Sonoma, and incorporated cities regarding water shortage/mandatory conservations ordinances and possible local emergency proclamations.

Water Code Section 350 et seq.:

Sonoma Water can, and will, declare a water shortage emergency condition under the provisions of Water Code section 350 et seq. in the event that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of Sonoma Water to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.

Restructured Agreement for Water Supply:

The rights and obligations of Sonoma Water and its wholesale customers are primarily set forth in the Restructured Agreement between Sonoma Water and its water contractors. Section 3.5(a) of the Restructured Agreement specifies the manner in which Sonoma Water allocates water to its customers in the event of a water supply shortage, and section 3.5(b) of the Restructured Agreement describes the manner in which Sonoma Water allocates water to its customers in the event of a temporary impairment of the capacity of some or all of Sonoma Water's transmission system. These provisions apply to "other Agency customers" through incorporation of the provisions in the Sonoma Water's Water Service Rules. Sonoma Water's agreements with Marin Water and the entities that may divert water directly from the Russian River under Sonoma Water's water rights contain similar, although not identical, provisions.

Section 3.5(d) of the Restructured Agreement requires Sonoma Water to "have an adopted water shortage allocation methodology sufficient to inform each Customer of the water that would be available to it pursuant to Section 3.5(a) in the event of reasonably anticipated shortages…." Sonoma Water has adopted such a methodology. The Restructured Agreement requires Sonoma Water's customers to limit the amounts of water that they take from the transmission system to the allocations specified by Sonoma Water under Section 3.5. The water contractors may also unanimously agree upon an alternative allocation of available supply. Sonoma Water and its contractors are currently updating the model.

Sonoma Water has several methods available to it under the Restructured Agreement to ensure that its customers do not use more than the amounts of water allocated to them by Sonoma Water. Under Section 3.5(a) of the Restructured Agreement, Sonoma Water is required to terminate deliveries to surplus customers in the event of a shortage. Under Section 3.5(e) of the Restructured Agreement, a contractor taking more than its allocated amount of water from the transmission system 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 allows the Water Advisory Committee to request that Sonoma Water physically limit the quantity of Sonoma Water-supplied water taken by a contractor or "other Agency customer" to the amounts authorized by Section 3.5, or to pursue all other available legal and equitable remedies applicable to such violations.

It is up to each Sonoma Water retail water customer to reduce end user demands as necessary to reduce its deliveries from the transmission system to the amount allocated to it by Sonoma Water. To accomplish this, Sonoma Water's contractors have adopted ordinances placing limitations on the uses of water by end customers in the event of a water shortage.

These ordinances were developed in consultation with Sonoma Water and are described in detail in each contractor's individual Urban Water Management Plans. These ordinances impose mandatory water conservation measures on end users under certain specific conditions.

Coordination Regarding Local Emergency Proclamation:

Sonoma Water will coordinate with the cities and counties within which it provides water supply services for the possible proclamation of a local emergency under the California Emergency Services Act. A list of these entities and contacts is presented in Table 5.

Table 5. Cities and Counties for which Sonoma Water Provides Water Supply Services	
	Contact
Water Contractors	
City of Cotati	Craig Scott, Director Public Works, Engineering
North Marin Water District	Drew McIntyre, General Manager
City of Petaluma	Kent Carothers, Deputy Director Public Works & Utilities
City of Rohnert Park	Mary Grace Pawson, City Engineer, Director of Development Services
City of Santa Rosa	Jennifer Burke, Director of Santa Rosa Water
City of Sonoma	Colleen Ferguson, Public Works Director, City Engineer
Valley of the Moon Water District	Matt Fullner, Interim General Manager
Town of Windsor	Sandi Potter, Deputy Director, Water and Environmental Management
Other Transmission System Customers and MMWD	
Forestville Water District	Tony Lopes, General Manager
Marin Municipal Water District	Ben Horenstein, General Manager
California American Water Company (Larkfield)	Margaret DiGenova, Operations Supervisor, Manager
Penngrove Water Company	Julie Cavaz, Manager
Lawndale Mutual Water Company	Bill Mellana, President
Kenwood Water Company	Jim Geib, Vice President
Russian River Customers (Direct Diverters)	
Camp Meeker Recreation and Park District	Gary Helfrich, Director
Occidental Community Services District	Chris Martin, Director
City of Healdsburg	Terry Crowley, Public Works Director
Counties	
County of Marin	Matthew Hymel, County Administrator
County of Sonoma	Sheryl Bratton, County Administrator
County of Mendocino	Carmel Angelo, Chief Executive Officer
Regional Agencies	
Mendocino County Russian River Flood Control and Water Conservation Improvement District (MCRRFCWCID)	Elizabeth Salomone, General Manager
State Agencies	
North Coast Regional Water Quality Control Board	Matt St. John, Executive Officer
San Francisco Bay Regional Water Quality Control Board	Jim McGrath, Board Chair
State Water Resources Control Board	Eileen Sobeck, Executive Director
California Department of Fish and Wildlife (CDFW)	Matt Wells, Chief

Table 5. Cities and Counties for which Sonoma Water Provides Water Supply Services	
	Contact
Federal Agencies	
USACE	Colonel James Handura,
Federal Energy Regulatory Commission (FERC)	Frank Blackett, Regional Engineer
NMFS	Chris Yates, Assistant Regional Administrator
Other	
City of Cloverdale	David Kelley, City Manager
City of Ukiah	Sage Sangiacomo, City Manager
City of Sebastopol	Larry McLaughlin, City Manager
Potter Valley Irrigation District	Steven Elliott, Superintendent
Redwood Valley County Water District	Jarod Walker, General Manager
Sweetwater Springs Water District	Edward Fortner, General Manager
Pacific Gas & Electric (PG&E)	Randy DeCaminada, Executive Manager, North Coast
General public	Sonoma Water E-News, Press Release, Social Media

The coordination protocols in the event of a local emergency are documented in the EOP.

Section 8: Financial Consequences

Although a water shortage would result in reduced water deliveries by Sonoma Water, a water shortage would not have any material impacts on Sonoma Water's financial condition.

Under the Restructured Agreement, Sonoma Water imposes charges on the contractors and other customers on an acre-foot basis. The charges are set in an amount necessary to produce revenues to meet Sonoma Water's revenue bond obligations and expected operations and maintenance, and to produce a prudent reserve in an amount determined by the Water Advisory Committee. Charges are set annually each spring to be effective for the following fiscal year (July 1 to June 30). In computing the charges, the Restructured Agreement requires Sonoma Water to assume that the amount of water to be delivered from each aqueduct of the transmission system will be the same as the amount of water delivered from said aqueduct during the twelve months preceding such establishment, or the average annual amount of water delivered during the preceding 36 months, whichever is less. In addition, however, the Restructured Agreement provides that "[if] because of drought or other water-supply reduction, state or federal order, or other similar condition, Sonoma Water anticipates that any such quantities will not be predictive of future usage, Sonoma Water may use a different amount with the prior approval of the Water Advisory Committee." Thus, Sonoma Water has the ability to increase water rates, with Water Advisory Committee approval, in order to address a pending water supply shortage.

In addition, in order to protect the interest of the holders of revenue bonds issued to finance transmission system facilities, the Restructured Agreement provides that "it is the intention of the parties that the charges set forth herein will be sufficient to pay the Revenue Bonds and to meet the Revenue Bond Obligations not met from other sources of funds," and that the contractors "agree to pay promptly such charges notwithstanding any deficiency in the quantity or quality of water to which they or any of them would be entitled pursuant to this Agreement." The term "Revenue Bond Obligations" includes Sonoma Water's

operations and maintenance costs. The Restructured Agreement thus requires the contractors to ensure that Sonoma Water has sufficient funds to operate and maintain the transmission system, and to pay off the holders of revenue bonds, notwithstanding a water supply shortage leading to a reduction in deliveries.

A water shortage would reduce some of Sonoma Water's transmission system's variable expenses. A large component of Sonoma Water's transmission system operational expenses is the cost of electrical power to pump water from the Russian River and deliver it through the various aqueducts to its customers. The reduction in water deliveries may reduce the total cost of electrical power depending on power rates.

Table 6. Proposed Measures to Overcome Revenue Impacts

Names of Measures	Summary of Effects
Rate adjustments	Offset loss in revenue
Use of financial reserves	Offset loss in revenue

When Sonoma Water allocates water supplies to its Customers pursuant to Section 3.5 of the Restructured Agreement, other contractual provisions, and the allocation methodology, Sonoma Water would monitor compliance with the allocation by increasing the frequency of its readings of meters showing the amount of water being taken by its contractors and customers.

Section 9: Plan Refinement Procedures

Sonoma Water considers its WSCP as a dynamic tool that is subject to refinements as needed to ensure that the shortage response actions are effective and produce the desired results. Sonoma Water has a procedure to identify procedural refinements or new actions, evaluate their effectiveness, incorporate them into the WSCP, and implement them quickly at the appropriate water shortage level. This procedure is described below.

1. Sonoma Water's customers identify possible improvements through the TAC.
2. Sonoma Water staff identifies possible improvements by submitting email to the Chief Engineer.
3. The suggested procedural refinements or new actions are reviewed by Sonoma Water engineering staff.
4. The results of the evaluation are submitted to the Chief Engineer.
5. The Chief Engineer makes the decision on whether to revise the WSCP.
6. Any changes to the WSCP are communicated to Sonoma Water's customers at the TAC meeting.

Section 10: Water Shortage Contingency Plan Adoption, Submittal, and Availability

The WSCP was adopted, submitted, and made available as part of the same process for the 2020 Plan per the applicable requirements of the Water Code. The adoption process consisted of public notification, a public hearing, and adoption as an action item by Sonoma Water's Board of Directors. The reader is referred to Section 2 of Sonoma Water's 2020 Plan for further details on the adoption and submittal process, Appendix A for documentation of the process, and Appendix D for the adoption resolution of the WSCP.

Cities and counties within the service area were notified concurrent with the 2020 Urban Water Management Plan more than 60 days prior to the public hearing that the WSCP was being prepared. Public

hearing notifications were published in the Santa Rosa Press Democrat, in the April 2021 issue of Sonoma Water monthly public electronic newsletter (SCWA E-News), on Sonoma Water's website, and on its social media sites. Copies of the draft 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 web site.

The public hearing was held on May 11, 2021 as agenda item 58. A video of the public hearing and WSCP adoption can be viewed at the County of Sonoma's web page for Board of Supervisors meetings (https://sonoma-county.legistar.com/Calendar.aspx). The WSCP was adopted by Sonoma Water's Board of Directors on the same date and after the public hearing was closed. A copy of the adoption resolution is provided in Appendix D.

The WSCP was submitted to DWR, the California State Library, and Sonoma, Mendocino, and Marin Counties and pertinent cities within 30 days after adoption. The WSCP was made available for public review on Sonoma Water's web site within 30 days after filing a copy of the Plan with DWR.

Section 11: References

NMFS. 2016. Letter to U.S. Army Corps of Engineers, Re: Coyote Valley Dam Ramping Rates. Santa Rosa, CA: National Oceanic and Atmospheric Administration, National Marine Fisheries Service. April.

USACE. 1984. Warm Springs Dam and Lake Sonoma, Dry Creek, California, Water Control Manual. U.S. Army Corps of Engineers, Sacramento District.

USACE. 2003. United States Army Corps of Engineers, Coyote Valley Dam and Lake Mendocino, Russian River, California, Water Control Manual: Appendix I to master water control manual Russian River basin, California. Sacramento (CA): U.S. Army Corps of Engineers, Sacramento District.

Appendix D: Water Shortage Contingency Resolution No. 21-0207

THE WITHIN INSTRUMENT IS A
CORRECT COPY OF THE ORIGINAL
ON FILE IN THIS OFFICE

ATTEST: May 11, 2021
SHERYL BRATTON, Clerk/Secretary
BY:

Date: May 11, 2021

Item Number: 58
Resolution Number: 21-0207

☐ 4/5 Vote Required

Resolution Of The Board Of Directors Of The Sonoma County Water Agency Adopting The Water Shortage Contingency Plan

Whereas, the Urban Water Management Planning Act, which is codified at California Water Code Section 10610 et seq., requires that every urban water supplier which provides 3,000 acre feet or more of water annually, or which directly or indirectly supplies water for municipal purposes to more than 3,000 customers, shall prepare an Urban Water Management Plan, the primary objective of which is to plan for the conservation and efficient use of water; and

Whereas, the Sonoma County Water Agency (Sonoma Water) has prepared a wholesale Urban Water Management Plan (UWMP 2020) covering Sonoma Water to meet the requirements of the Urban Water Management Planning Act (Act); and

Whereas, the Act requires that every urban water supplier shall prepare and adopt a Water Shortage Contingency Plan (Water Code Section 10632) as part of its urban water management plan; and

Whereas, Sonoma Water has in accordance with the Act prepared a Water Shortage Contingency Plan (WSCP) covering Sonoma Water and including the elements pertaining to wholesale suppliers; and

Whereas, Sonoma Water wishes to adopt the WSCP separately from the UWMP 2020 so that the WSCP may be amended or updated independent of any changes to the UWMP 2020; and

Whereas, the WSCP must be adopted after public review and a public hearing by Sonoma Water's Board of Directors and must be filed with the California Department of Water Resources by July 1, 2021; and

Whereas, Sonoma Water coordinated preparation of the UWMP 2020 and WSCP with other appropriate agencies in the area; provided notices to cities and counties within its

service area; and encouraged the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plans as more fully described in the UWMP 2020, in compliance with the requirements of the Act; and

Whereas, on April 27, 2021, Sonoma Water circulated for public review a draft of the WSCP, in compliance with the requirements of the Act; and

Whereas, a copy of the draft WSCP was made available for public inspection continuously since April 27, 2021, at Sonoma Water's Administration building, the office of the Clerk of Sonoma Water's Board of Directors, and Sonoma Water's website; and

Whereas, on May 11, 2021, this Board of Directors held a duly noticed public hearing on the WSCP, notice of the time and place of which was published in the Santa Rosa Press Democrat, a newspaper of general circulation, on April 26, 2021 and May 6, 2021; and

Whereas, Sonoma Water reviewed and considered all comments received on the draft WSCP;

Now, Therefore, Be It Resolved that the Board of Directors of the Sonoma County Water Agency hereby finds, determines, and declares as follows:

1. All of the above recitals are true and correct.
2. Sonoma Water's WSCP is based upon substantial evidence, including reasonable assumptions about future conditions detailed in the UWMP 2020, and meets all requirements of the Urban Water Management Planning Act.
3. The Water Shortage Contingency Plan is hereby approved and adopted.

Directors:

Gorin: Aye Rabbitt: Aye Coursey: Aye Gore: Aye Hopkins: Aye

Ayes: 5 Noes: 0 Absent: 0 Abstain: 0

So Ordered.

Appendix E: DWR Urban Water Management Plan Checklist

2020 UWMP Checklist						
Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Chapter 1	10615	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and Overview	Sections 4, 5, and 6
x	x	Chapter 1	10630.5	Each plan shall include a simple description of the supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a supplier may also choose to include a simple description at the beginning of each chapter.	Summary	Section 1.3
x	x	Section 2.2	10620(b)	Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.	Plan Preparation	Section 2.2.3
x	x	Section 2.6	10620(d)(2)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	Section 2.2
x	x	Section 2.6.2	10642	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan and contingency plan.	Plan Preparation	Section 2.2.2 and Appendix A
x		Section 2.6 Section 6.1	10631(h)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) - if any - with water use projections from that source.	System Supplies	n/a

2020 UWMP Checklist						
Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
	x	Section 2.6	10631(h)	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	Section 2.2.1
x	x	Section 3.1	10631(a)	Describe the water supplier service area.	System Description	Section 3.1
x	x	Section 3.3	10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.2
x	x	Section 3.4	10631(a)	Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.	System Description	Section 3.3
x	x	Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the supplier's water management planning.	System Description	Section 3.3.1
x	x	Sections 3.4 and 5.4	10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Section 3.3
x	x	Section 3.5	10631(a)	Describe the land uses within the service area.	System Description	Section 3.4
x	x	Section 4.2	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Section 4.2
x	x	Section 4.2.4	10631(d)(3)(C)	Retail suppliers shall provide data to show the distribution loss standards were met.	System Water Use	n/a
x	x	Section 4.2.6	10631(d)(4)(A)	In projected water use, include estimates of water savings from adopted codes, plans, and other policies or laws.	System Water Use	n/a
x	x	Section 4.2.6	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System Water Use	n/a
x	optional	Section 4.3.2.4	10631(d)(3)(A)	Report the distribution system water loss for each of the 5 years preceding the plan update.	System Water Use	n/a

2020 UWMP Checklist						
Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	optional	Section 4.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	n/a
x	x	Section 4.5	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System Water Use	Section 4.4
x		Chapter 5	10608.20(e)	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	n/a
x		Chapter 5	10608.24(a)	Retail suppliers shall meet their water use target by December 31, 2020.	Baselines and Targets	n/a
	x	Section 5.1	10608.36	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	Section 8.5
x		Section 5.2	10608.24(d)(2)	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	n/a
x		Section 5.5	10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5-year baseline. This does not apply if the suppliers base GPCD is at or below 100.	Baselines and Targets	n/a
x		Section 5.5 and Appendix E	10608.4	Retail suppliers shall report on their compliance in meeting their water use targets. The data shall be reported using a standardized form in the SBX7-7 2020 Compliance Form.	Baselines and Targets	n/a

2020 UWMP Checklist						
Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought.	System Supplies	Section 6.3
x	x	Section 6.1	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, *including changes in supply due to climate change.*	System Supplies	Section 5.9 and Section 6
x	x	Section 6.1	10631(b)(2)	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System Supplies	Section 5
x	x	Section 6.1.1	10631(b)(3)	Describe measures taken to acquire and develop planned sources of water.	System Supplies	Section 5.7
x	x	Section 6.2.8	10631(b)	Identify and quantify the existing and planned sources of water available for 2020, 2025, 2030, 2035, 2040 and optionally 2045.	System Supplies	Section 5.8
x	x	Section 6.2	10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 5.2
x	x	Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	Section 5.2
x	x	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System Supplies	Section 5.2
x	x	Section 6.2.2	10631(b)(4)(B)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	Section 5.2.2

2020 UWMP Checklist						
Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 6.2.2.1	10631(b)(4)(B)	For unadjudicated basins, indicate whether or not the department has identified the basin as a high or medium priority. Describe efforts by the supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	System Supplies	Section 5.2.1
x	x	Section 6.2.2.4	10631(b)(4)(C)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	System Supplies	Section 5.2.2.2
x	x	Section 6.2.2	10631(b)(4)(D)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	Section 5.8
x	x	Section 6.2.7	10631(c)	Describe the opportunities for exchanges or transfers of water on a short-term or long- term basis.	System Supplies	Section 5.6
x	x	Section 6.2.5	10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System Supplies (Recycled Water)	Section 5.4.3
x	x	Section 6.2.5	10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 5.4.3
x	x	Section 6.2.5	10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	Section 5.4.3
x	x	Section 6.2.5	10633(e)	Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	Section 5.4.1 and Section 5.8
x	x	Section 6.2.5	10633(f)	Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System Supplies (Recycled Water)	Section 5.4.1 (quantities n/a)
x	x	Section 6.2.5	10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	n/a

2020 UWMP Checklist						
Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 5.5
x	x	Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area with quantified amount of collection and treatment and the disposal methods.	System Supplies (Recycled Water)	Section 5.4.2 (quantities n/a)
x	x	Section 6.2.8, Section 6.3.7	10631(f)	Describe the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and for a period of drought lasting 5 consecutive water years.	System Supplies	Section 5.7
x	x	Section 6.4 and Appendix O	10631.2(a)	The UWMP must include energy information, as stated in the code, that a supplier can readily obtain.	System Suppliers, Energy Intensity	Section 5.10
x	x	Section 7.2	10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	Section 6.1
x	x	Section 7.2.4	10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	Section 6.4
x	x	Section 7.3	10635(a)	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	Section 6.3
x	x	Section 7.3	10635(b)	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water Supply Reliability Assessment	Section 6.5
x	x	Section 7.3	10635(b)(1)	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts 5 consecutive years.	Water Supply Reliability Assessment	Section 6.5.1
x	x	Section 7.3	10635(b)(2)	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water Supply Reliability Assessment	Section 6.5.2

2020 UWMP Checklist						
Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.	Water Supply Reliability Assessment	Section 6.5.3
x	x	Section 7.3	10635(b)(4)	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water Supply Reliability Assessment	Section 6.5
x	x	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	Appendix C
x	x	Chapter 8	10632(a)(1)	Provide the analysis of water supply reliability (from Chapter 7 of Guidebook) in the WSCP	Water Shortage Contingency Planning	Appendix C
x	x	Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the water shortage contingency plan to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water Shortage Contingency Planning	Appendix C
x	x	Section 8.2	10632(a)(2)(A)	Provide the written decision- making process and other methods that the supplier will use each year to determine its water reliability.	Water Shortage Contingency Planning	Appendix C
x	x	Section 8.2	10632(a)(2)(B)	Provide data and methodology to evaluate the supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water Shortage Contingency Planning	Appendix C
x	x	Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10, 20, 30, 40, 50 percent shortage and greater than 50 percent shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water Shortage Contingency Planning	Appendix C

2020 UWMP Checklist						
Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 8.3	10632(a)(3)(B)	Suppliers with an existing water shortage contingency plan that uses different water shortage levels must cross reference their categories with the six standard categories.	Water Shortage Contingency Planning	n/a
x	x	Section 8.4	10632(a)(4)(A)	Suppliers with water shortage contingency plans that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water Shortage Contingency Planning	Appendix C
x	x	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency Planning	Appendix C
x	x	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	Appendix C
x	x	Section 8.4	10632(a)(4)(D)	Specify additional mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions are appropriate to local conditions.	Water Shortage Contingency Planning	Appendix C
x	x	Section 8.4	10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water Shortage Contingency Plan	Appendix C
x	x	Section 8.4.6	10632.5	The plan shall include a seismic risk assessment and mitigation plan.	Water Shortage Contingency Plan	Appendix C
x	x	Section 8.5	10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water Shortage Contingency Planning	Appendix C
x	x	Section 8.5 and 8.6	10632(a)(5)(B) 10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water Shortage Contingency Planning	Appendix C
x		Section 8.6	10632(a)(6)	Retail supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water Shortage Contingency Planning	n/a

2020 UWMP Checklist						
Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the supplier to enforce shortage response actions.	Water Shortage Contingency Planning	Appendix C
x	x	Section 8.7	10632(a)(7)(B)	Provide a statement that the supplier will declare a water shortage emergency Water Code Chapter 3.	Water Shortage Contingency Planning	Appendix C
x	x	Section 8.7	10632(a)(7)(C)	Provide a statement that the supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local emergency.	Water Shortage Contingency Planning	Appendix C
x	x	Section 8.8	10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	Appendix C
x	x	Section 8.8	10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	Appendix C
x		Section 8.8	10632(a)(8)(C)	Retail suppliers must describe the cost of compliance with Water Code Chapter 3.3: Excessive Residential Water Use During Drought	Water Shortage Contingency Planning	n/a
x		Section 8.9	10632(a)(9)	Retail suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water Shortage Contingency Planning	n/a
x		Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water Shortage Contingency Planning	n/a
x	x	Sections 8.12 and 10.4	10635(c)	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 30 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Appendix C

2020 UWMP Checklist						
Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 8.14	10632(c)	Make available the Water Shortage Contingency Plan to customers and any city or county where it provides water within 30 after adopted the plan.	Water Shortage Contingency Planning	Appendix C
	x	Sections 9.1 and 9.3	10631(e)(2)	Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and supplier assistance program.	Demand Management Measures	Section 8
x		Sections 9.2 and 9.3	10631(e)(1)	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	Section 8
x		Chapter 10	10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan Adoption, Submittal, and Implementation	n/a
x	x	Section 10.2.1	10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Reported in Table 10-1.	Plan Adoption, Submittal, and Implementation	Section 2.2.3
x	x	Section 10.4	10621(f)	Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.	Plan Adoption, Submittal, and Implementation	Section 2.2.3
x	x	Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the urban water supplier made the plan and contingency plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan and contingency plan.	Plan Adoption, Submittal, and Implementation	Section 2.2.3 and Appendix B
x	x	Section 10.2.2	10642	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	Appendix B
x	x	Section 10.3.2	10642	Provide supporting documentation that the plan and contingency plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Appendix D
x	x	Section 10.4	10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	Section 2.2.3

2020 UWMP Checklist						
Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 10.4	10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	Section 2.2.3
x	x	Sections 10.4.1 and 10.4.2	10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Section 2.2.3
x	x	Section 10.5	10645(a)	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 2.2.3
x	x	Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its water shortage contingency plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Appendix C
x	x	Section 10.6	10621(c)	If supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Plan Adoption, Submittal, and Implementation	n/a
x	x	Section 10.7.2	10644(b)	If revised, submit a copy of the water shortage contingency plan to DWR within 30 days of adoption.	Plan Adoption, Submittal, and Implementation	n/a

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