

30 June 2022

#### **TECHNICAL MEMORANDUM**

То:	Ryan Grisso (North Marin Water District) Tony Williams (North Marin Water District)
From:	Dave Umezaki (EKI Environment & Water, Inc.) Qiwen Zhang (EKI Environment & Water, Inc.)
Subject:	<b>2022 Annual Water Supply and Demand Assessment</b> North Marin Water District (EKI C00096.02)

At North Marin Water District's (District's) request, EKI Environment & Water, Inc. (EKI) prepared the District's 2022 Annual Water Supply and Demand Assessment (AWSDA) for the District's Novato Service Area. This technical memorandum (TM) summarizes the procedures, key data, and assumptions used to support the AWSDA and is a supplement to the AWSDA tables submitted via California Department of Water Resources' (DWR's) Water Use Efficiency Portal (WUEPortal). Analysis supporting the assumptions and estimates incorporated into the AWSDA are documented in the form of a slide deck, included here as Attachment A, and the DWR submittal tables are provided as Attachment B.

Based on the comparison of unconstrained demand<sup>1</sup> to projected supply through June 2023, assuming conditions remain dry, the AWSDA suggest that even with unconstrained demand, supply is expected to be sufficient to meet demands. However, it is noted that demand is expected to be constrained. Consistent with the State Water Resource Control Board's (SWRCB) Emergency Resolution No. 2022-0018 (ER), the District enacted Shortage Level 2 of Water Shortage Contingency Plan (WSCP) on 21 April 2021, and thus is asking customers to reduce their water use up to 20%.

#### BACKGROUND

Consistent with California Water Code (CWC) §10632.1 urban water suppliers must prepare and submit an AWSDA to DWR by July 1<sup>st</sup> of each year beginning in 2022. As illustrated in **Figure TM-1** below, the primary purpose of this assessment is to determine, under assumed drought conditions, if: (1) the supplier is likely to face water shortages, and (2) how the supplier plans to address any water shortage conditions. The procedures to conduct the District's AWSDA were included in the District's 2020 WSCP.<sup>2</sup>

<sup>&</sup>lt;sup>1</sup> Per CWC §10632.1, unconstrained demand is water demand absent any water use restrictions (i.e., the expected demand without enacting the WSCP).

<sup>&</sup>lt;sup>2</sup> The District's WSCP is included as part of the 2020 Urban Water Management Plan (UWMP) available on DWR's WUEPortal: <u>https://wuedata.water.ca.gov/uwmp\_plans.asp?cmd=2020</u>

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#### Figure TM-1. Annual Water Supply and Demand Assessment Overview

#### AWSDA PROCEDURES

The District's 2020 WSCP identifies the procedures the District's will follow annually to conduct its AWSDA. The procedures outline the key Evaluation Criteria for assessing whether the District's is likely to face a water shortage condition over the next one-year period (July 2022 – June 2023). An assessment of the key Evaluation Criteria is presented in **Table TM-1** below.

Table TM-1	Summary	of Evaluation	<b>Criteria and Findings</b>
------------	---------	---------------	------------------------------

Evaluation Criteria	Comments & Discussion
Sonoma County Water Agency (SCWA) Available Supply	<ul> <li>SCWA available supply provided by SCWA on 16 May 2022 and 30 June 2022, included as Attachment C.</li> </ul>
Surface Water from Stafford Lake	<ul> <li>The District indicates that the available surface water supply from Stafford Lake is 1,000 acre-feet per year (AFY).</li> <li>Possible back-feeding of Stafford Lake from Surplus Russian River water in Winter 2022/23, but supply is not constrained by the back-feeding.</li> </ul>
Recycled Water Considerations	No constraints on recycled water identified.
State Regulatory Conditions	<ul> <li>In April 2021, Governor Newsom declared a statewide drought emergency calling for statewide reduction in water use.</li> <li>The SWRCB ER requires that suppliers implement all demand reduction actions for a Shortage Level 2, and prohibits the use of potable water for irrigation of non-functional turf at commercial, industrial, and institutional sites (CII).</li> </ul>

#### **KEY DATA AND ASSUMPTIONS**

The following section discusses the key data and assumptions included in each of the AWSDA submittal tables. This information is provided as a supplement to the notes included within the tables themselves.

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#### Table 1: Annual Assessment Information

Table 1 includes objective information about the scope of the assessment, units used, and contact information, and does not include any embedded assumptions.

#### Table 2: Water Demands

Table 2 presents the projected potable and non-potable unconstrained demand for July 2022 through June 2023, and reports the last four years of demand data for comparison purposes.

DWR Table 4-3 of the District's 2020 UWMP includes both potable and non-potable unconstrained demand for 2020 and 2025. The District reviewed the unconstrained demand from the UWMP and determined that the UWMP estimate is appropriate based on known conditions (Attachment A). Potable and non-potable unconstrained demand for 2023 was linearly interpolated from these reported values. Factors that could potentially have a significant effect on unconstrained demand that were considered by the District included:

- Projected unconstrained potable and non-potable demand is consistent with the demand trend over the last four years (see analysis presented in Attachment A);
- There have been no significant new developments (i.e., new accounts) that were not already considered in the 2020 UWMP unconstrained potable and non-potable demand projections;
- There has been no significant loss of accounts within the service area; and
- The District has not identified any other factors expected to affect potable and non-potable unconstrained demand.

As discussed in DWR's Annual Water Supply and Demand Assessment Guidance, comparing supply and demand data on a monthly time-step is recommended, as supply and demand typically follow opposite schedules (i.e., demand is greatest in the summer while supply is greatest in the winter) and thus a shortage could occur in summer months when on an annual basis no shortage would be identified.<sup>3</sup> As presented in Attachment A, a comparison of seasonality over the last four years shows consistency, including previous non-drought and drought years for both potable and non-potable supply. Furthermore, annual unconstrained potable and non-potable demand as described above was parsed into monthly demand based on 2021 monthly percent of total demand. 2021 was selected because it reflects drought conditions

#### Table 3: Water Supplies

Table 3 presents the projected dry year supply for July 2022 through June 2023. Supply estimates are based on:

<sup>&</sup>lt;sup>3</sup> DWR, 2022, Annual Water Supply and Demand Assessment Guidance. Available at <u>https://wuedata.water.ca.gov/public/public\_resources/3517484366/AWSDA-Final-Guidance-4-2022.pdf</u>

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- Projected supply from Sonoma County Water Agency (SCWA) provided by SCWA on 16 May 2022 and 30 June 2022. The District makes up approximately 15% of SCWA's retailer unconstrained demand. Based on this percentage of total unconstrained demand, the District's estimated share of SCWA projected supply is 8,689 acre-feet (AF). Supply information provided by SCWA is included as Attachment C to this TM and is discussed further in Attachment A.
- An estimated 1,000 AF of local surface water supply from Stafford Lake would be available to the District as indicated in **Table TM-1** but the District does not need all the local surface water to meet the District's demand and the District generally preferentially uses the available SCWA supply. Therefore, 664 AF (or 66% of total supply) of local surface water is projected to be utilized.
- The District does not anticipate a reduction in recycled water supply, as recycled water is a "drought proof" supply. Therefore, the available non-potable water supply is assumed to be equal to the unconstrained non-potable demand presented in Table 2.

#### Table 4: Water Shortage Assessment and Table 5: Planned Shortage Response

Table 4 presents a comparison of 2023 unconstrained demand and dry year supply, while Table 5 presents the shortage response actions the District is implementing in response to the water shortage and/or pursuant to the SWRCB's ER.

Based on the unconstrained demand projections from Table 2 and the dry year supply projections from Table 3, no supply shortfall is expected for any month through June 2023. However, pursuant to the SWRCB ER, the District enacted Shortage Level 2 (up to a 20% demand reduction) of its WSCP on 21 April 2021 and is implementing all associated demand reduction actions.

The potential benefit of enacting Shortage Level 2 actions<sup>4</sup> were modeled using the Drought Response Tool (DRT) as presented in the District's 2020 WSCP. The demand reduction volumes presented in Table 4 are based on the monthly saving percentages in the DRT modeling for Shortage Level 2 and applied to the estimated monthly unconstrained demand for 2023. The total annual estimated savings percentage presented in Table 5 may not be exactly the same as shown in the WSCP (DWR Table 8-2 and DWR Table 8-3), due to the difference in baseline demands.

With implementation of the Shortage Level 1 and 2 demand reduction actions, as presented in Table 5, the District expects a sufficient supply to meet the unconstrained demand. Though the District does not anticipate a supply shortage, consistent with the SWRCB's ER, the District will continue implementing the Shortage Level 2 response actions, monitor its supply conditions and customer response to demand reduction efforts, and will adjust its WSCP Shortage Level as appropriate for the conditions and applicable regulations.

While some reduction in non-potable demand would be anticipated with implementation of the WSCP, because recycled water use is not the target of the WSCP, recycled water demand reduction has not been quantified.

<sup>&</sup>lt;sup>4</sup> Shortage Level 1 and 2 Actions are presented in the District's WSCP DWR Tables 8-2 Demand Reduction Actions and Table 8-3 Supply Augmentation and Other Actions.

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#### SUMMARY OF FINDINGS

Based on the procedures and key data and assumptions described above, the AWSDA suggests that even with unconstrained potable and non-potable demand, supply is expected to be sufficient to meet demands even if the following year remains dry. Though no shortfall is anticipated, pursuant to the SWRCB ER, the District is required to implement all demand reduction actions for a Shortage Level of 10 to 20 percent (i.e., Shortage Level 2) by 10 June 2022. The District enacted Shortage Level 2 of its WSCP on 21 April 2021 and is continuing implement the corresponding demand reduction actions.

The District will continue to monitor its supply conditions and its customers response to the demand reduction actions and will adjust its WSCP Shortage Level as appropriate for the conditions and pursuant to applicable regulations.

#### **Attachments**

- Attachment A AWSDA Key Findings Presentation
- Attachment B DWR Submittal Tables
- Attachment C Information Provided by Sonoma County Water Agency



### Attachment A

AWSDA Key Findings Presentation

# KEY FINDINGS AND REVIEW OF 2022 ANNUAL WATER SUPPLY AND DEMAND ASSESSMENT

### NORTH MARIN WATER DISTRICT

26 May 2022 Updated on 22 June 2022



NORTH MARIN WATER DISTRICT

DAVE UMEZAKI

**QIWEN ZHANG** 



### PRESENTATION GOALS AND OBJECTIVES

- I. Review potable and non-potable supply and demand methodologies and assumptions for estimations from June 2022
- 2. Review potable and non-potable supply and demand methodologies and assumptions for projections from July 2022 through June 2023
- 3. Approval for submission of **preliminary** AWSDA to DWR by June 1
  - Preliminary AWSDA includes filled out Excel Workbook containing the 5 submittal tables (submitted to DWR via email)
  - Final AWSDA includes filled out tables and methodology Technical Memorandum (TM) (submitted to DWR via WUEdata portal)
- 4. Findings presented are basis for the TM to be submitted to DWR by July 1 deadline



# REQUIREMENTS FOR DEMAND ESTIMATES AND PROJECTIONS

- I. Report last four years of monthly potable and non-potable demand data (optional for comparison purposes)
- 2. Estimate June 2022 potable and non-potable demand (optional for comparison purposes)
- Project unconstrained potable and nonpotable demand\* for July 2022 through June 2023
- 4. Based on previous input from NMWD, none of the optional data will be included as part of the final submittal to DWR.

\*<u>Unconstrained demand</u> is water demand absent any water use restrictions [i.e., the expected demand without enacting your WSCP; CWC §10632.1]



# **STEP 1A – REPORT AVAILABLE POTABLE DEMAND DATA FOR THE LAST FOUR YEARS**



### Annual Potable Demand

### Monthly Potable Demand



### \*June 2022 data not yet available



Supply vs. Demand

### **STEP 2A – ESTIMATE POTABLE DEMAND (JUNE 2022)**

### **Annual Potable Demand**

Introduction

& Objectives

**Monthly Potable Demand** 



### June 2022 potable demand assumed to be equal to June 2021 potable demand



Demand Supply Supply vs. Supply vs. Demand WSCP Stage

# STEP 1B – REPORT AVAILABLE NON-POTABLE

**Annual Non-Potable Demand** 



### **STEP 2B – ESTIMATE NON-POTABLE DEMAND (JUNE** 2022)

**Annual Non-Potable Demand** 

Introduction

& Objectives





Supply vs.

Demand

June 2022 non-potable demand assumed to be equal to June 2021 non-potable demand 

Supply

Demand



WSCP Stage Reporting Jun-2022

**Jec-2021** 

Jun-2021

# STEP 3 – PROJECT UNCONSTRAINED DEMAND (JULY 2022 - JUNE 2023)

- 2023 Unconstrained Demand per UWMP DWR Table 7-5: <u>9,975 AF</u>
- No adjustments to unconstrained demand projected in UMWP
  - No significant new developments not considered in UWMP
  - No significant loss of accounts
  - No other identified factors affecting unconstrained demand projections

Table 7-8 Five-Year Drought Risk Assessment Tables to Address Water Code 10635(b) (DWR Table 7-5)

2023	Total
Total Water Use	9,975
Total Supplies	15,913
Surplus/Shortfall w/o WSCP Action	5 <i>,</i> 938
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	-
WSCP - use reduction savings benefit	-
Revised Surplus/(shortfall)	_
Resulting % Use Reduction from WSCP action	0%

Conclusions

& Reporting

\*DWR Table from 2020 UWMP

WSCP Stage

Supply vs.

Demand



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# STEP 3 – PROJECT UNCONSTRAINED DEMAND (JULY 2022 - JUNE 2023)

- 2023 Unconstrained Demand per UWMP DWR Table 7-5 includes both potable and non-potable supply
  - 2023 Unconstrained Demand linearly interpolated from DWR Table 4-3
    - Potable Demand = 9,353 AF
    - Non-potable Demand = 622 AF

2023	Total
Total Water Use	9,975
Total Supplies	15,913
Surplus/Shortfall w/o WSCP Action	5,938
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	-
WSCP - use reduction savings benefit	-
Revised Surplus/(shortfall)	-
Resulting % Use Reduction from WSCP action	0%

Table 4-8 Total Water Use (Potable and Non-Potable) (DWR Table 4-3)

	2020	2025	2030	2035	2040	2045
Potable Water, Raw, Other Non-potable From DWR Tables 4-1 and 4-2	8,194	10,084	10,249	10,463	10,472	10,502
Recycled Water Demand From DWR Table 6-4	658	595	508	622	636	650
TOTAL WATER USE	8,852	10,679	10,757	11,085	11,108	11,152
NOTES: (a) Volumes are in units of AF.						



# STEP 3A – PROJECT UNCONSTRAINED POTABLE DEMAND THROUGH JUNE 2023

Supply

Supply vs.

Demand

- A comparison of seasonality across the last four years shows consistency, including previous nondrought and drought years
- Parsed annual unconstrained potable demand into monthly demand based on 2021 demand as it reflects current drought conditions

Demand

Introduction

& Objectives





# STEP 3B – PROJECT UNCONSTRAINED NON-POTABLE DEMAND THROUGH JUNE 2023 Monthly Non-Potable Demand

- Non-potable demand similarly shows consistency across the past four years
- Annual projected unconstrained non-potable demand parsed out monthly based on 2021 nonpotable demand

Demand

Supply

Introduction

& Objectives





### HISTORICAL AND PROJECTED POTABLE DEMAND FOR SUBMITTAL



### **Projected Potable Demand**

**Projected Potable Monthly Demand** 



Potable Demand Potable Demand (Estimated) Unconstrained Potable Demand (Projected)



Supply vs. Demand



Conclusions

& Reporting



# **HISTORICAL AND PROJECTED NON POTABLE DEMAND FOR SUBMITTAL**

Non-Potable





Non-Potable Demand

Non-Potable Demand (Estimated)

Unconstrained Non-Potable Demand (Projected)



Supply

Supply vs. WSCP Stage Demand

Conclusions & Reporting

# **REQUIREMENTS FOR SUPPLY ESTIMATES AND PROJECTIONS**

- I. Estimate June 2022 potable and non-potable supply (optional for comparison purposes)
- Project potable and non-potable supply for July 2022 through June 2023, assuming drought conditions persist



# **STEP 1A - ESTIMATE POTABLE SUPPLY (JUNE 2022)**



Introduction

& Objectives

### Annual Supply by Source



Conclusions

& Reporting

June 2022 supply assumed to be equal to June 2021 demand

Demand

Supply

Supply vs.

Demand

WSCP Stage

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# STEP 1B – ESTIMATE NON POTABLE SUPPLY (JUNE 2022)



■ Non-Potable Demand ■ Non-Potable Demand (Estimated)

Introduction

& Objectives



■ Non-Potable Demand ■ Non-Potable Demand (Estimated)

WSCP Stage

Conclusions

& Reporting

### June 2022 supply assumed to be equal to June 2021 demand

Demand

Supply

Supply vs.

Demand



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# **STEP 2 – PROJECT SUPPLY THROUGH JUNE 2023 UNDER CONTINUED DROUGHT CONDITIONS**

### **Supply Constraints**

Introduction

& Objectives

Conclusions

& Reporting

- SCWA projects 8,689 AF available to the District through 2023
- The projected surface water supply from Stafford Lake is 1,000 AF, but only 664 AF is needed to meet the District's demand.
  - SCWA water assumed to be used preferentially over the Stafford Lake, but this assumption can be changed if desired.

Supply vs.

Demand

WSCP Stage

Possible from Surplus Russian River water in Winter 2022/23

Supply

Supply does not appear to be constrained by the back-feeding.

Demand



### PROJECTED POTABLE SUPPLY FOR SUBMITTAL

SCWA Supply July 2022 – June 2023 projection provided by SCWA

Introduction

& Objectives

Stafford Lake assumed to make up balance of unconstrained demand

Demand

Supply vs.

Demand

Supply





# PROJECTED NON-POTABLE SUPPLY FOR SUBMITTAL

- Recycled water provided by the Novato Sanitary District and Las Gallinas Valley Sanitary District based on current functionality of non-potable system.
  - Total non-potable supply: 622 AF
  - Maximum monthly supply: 105 AF

Introduction

& Objectives

Supply

Demand



# EVALUATION OF POTABLE UNCONSTRAINED DEMAND WITH DRY YEAR POTABLE SUPPLY

- Assuming dry conditions and potable unconstrained demand, no supply shortfall is anticipated
- Pursuant to the State Water Resources Control Board (SWRCB) Emergency Regulations, the District should still enact Shortage Level 2 actions

### 2023 Dry Year Supply vs. Unconstrained Demand



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# EVALUATION OF NON-POTABLE UNCONSTRAINED DEMAND WITH DRY YEAR NON-POTABLE SUPPLY

- Assuming dry conditions and nonpotable unconstrained demand, no supply shortfall is anticipated
- Pursuant to the State Water Resources Control Board (SWRCB) Emergency Regulations, the District should still enact Shortage Level 2 actions



Conclusions

& Reporting



### WATER SHORTAGE RESPONSE ACTIONS

- The SWRCB emergency regulations require all suppliers to enact WSCP shortage level of up to 20% (Level 2) by 10 June 2022.
  - The District enacted a Stage 2 Shortage on 21 April 2021
  - The District is already in compliance with this requirement.

# Demand Reduction Actions currently in place (Stage 2):

- Suspension of New Connections to the Novato
   Service Area
- · Waste of Water Prohibited
- Prohibition of Non-Essential Use of Water
  - Stage 1 Voluntary Stage (10% reduction).
  - Stage 2: Mandatory Stage (20% reduction)

Additional details are included in the District's Emergency Water Conservation Ordinance No. 41



## CONCLUSIONS

- The AWSDA suggests that even with unconstrained demand, supply is expected to be sufficient to meet demands if the following year remains dry
- Even though no shortfall is anticipated, pursuant to the SWRCB Emergency Regulations, the District will remain in Stage 2 of the WSCP



## **NEXT STEPS AND REPORTING**

- EKI will make adjustments to this presentation and the tables based on feedback from this meeting
- Tables will be submitted as preliminary AWSDA to DWR by I June 2022, by email
  - Would the District like to send the submittal email?
- Tables and TM will be submitted as final AWSDA to DWR by 1 July 2022 through the WUEPortal
- Meeting presentation slides (after revisions) will be included as an attachment to the TM
- Draft TM will be provided to District for review prior to submittal





### **QUESTIONS?**





### **Attachment B**

**DWR Submittal Tables** 

### Table 1. Annual Assessment Information

Annual Assessment Information (Required)	
Year Covered By This Shortage Report	
Start: July 1,	2022
End: June 30,	2023
Supplier's Annual Assessment Planning Cycle	
Start Month:	July
End Month:	June
Data Reporting Interval Used:	Monthly
Volume Unit for Reported Supply and Demand	
(Must use the same unit throughout)	AF
Water Supplier's Contact Information	
Water Supplier's Name:	North Marin Water District
Contact Name:	Ryan Grisso
Contact Title:	Water Conservation Coordinator
Street Address:	P.O. Box 146
ZIP Code:	94948
Phone Number:	(415) 761-8933
Email Address:	rgrisso@nmwd.org
Report Preparer's Contact Information	
(if different from above)	
Preparer's Organization Name:	EKI Environment & Water, Inc.
Preparer's Contact Name:	Dave Umezaki
Phone Number:	(650) 292-9079
Email Address:	dumezaki@ekiconsult.com
Suppliar's Water Shortage Contingency Plan	
Supplier's water Shortage Contingency Flan	
WSCP Title	Water Shortage Contingency Plan 2020 Update
WSCP Adoption Date	6/15/2021
Other Annual Assessment Related Activities	
(Optional)	
Activity	Timeline/ Outcomes / Links / Notes
Annual Assessment/ Shortage Report Title:	Optional
Annual Assessment / Shortage Report	
Approval Date:	MM/DD/YYYY
Other Annual Assessment Related Activities:	Optional
(Add rows as needed)	

														= From prior tables			
														= Auto ca	lculated		
Table 2: Water Demands <sup>1</sup>																	
Use Туре			S	Start Year:		2022		Volum	etric Unit	Used <sup>2</sup> :		AF					
Drop-down list May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool (Add additional rows as needed)	Additional Description (as needed)	Level of Treatment for Non-Potable Supplies <b>Drop-down list</b>															
(Add additional rows as needed)			Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Water Demand Type		
Demands Served by Potable Supplies	•																
All Demands	(a)		1233.2	1047.0	814.2	1111.0	727.5	660.4	565.1	398.7	447.9	813.7	757.6	777.0	9353		
															0		
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															0		
	Total by N	/Ionth (Potable)	1233	1047	814	1111	727	660	565	399	448	814	758	777	9353		
Demands Served by Non-Potable Supplies																	
All Demands			94.4	104.6	71.4	55.3	26.4	0.5	0.8	1.3	27.7	43.9	95.0	100.7	622		
															0		
															0		
															0		
															0		
	Total by Month	n (Non-Potable)	94	105	71	55	26	1	1	1	28	44	95	101	622		
Notes: (a) Raw water demand, which is supplied by 5 Total annual unconstrained potable and non- Total unconstrained demand from the 2020 U - No significant new developments (i.e. new - No significant loss of accounts - No other significant factors expected to aff	Stafford Lake, are include -potable demand for 202 UWMP was not adjusted accounts) that were not ect unconstrained demar	ed in the Potable 3 are interpolate as there were: considered in the	demand p d linearly b e 2020 UW	rojection. between 20 MP projecti	20 and 202 ions.	5 demands	from DWR	R Table 4-3	of the 2020	) UWMP.							

<sup>1</sup> Projections are based on best available data at time of submitting the report and actual demand volumes could be different due to many factors.

<sup>2</sup>Units of measure (AF, CCF, MG) must remain consistent.

<sup>3</sup>When opting to provide other than monthly volumes (bi-monthly, quarterly, or annual), please see directions on entering data for Projected Water Demand in the Table Instructions.

Optional (for comparison purposes)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Last year's total demand													0
Two years ago total demand													0
Three years ago total demand													0
Four years ago total demand													0

															= From prior ta	bles
															= Auto calcul	ated
Table 3: Water Supplies <sup>1</sup>																
Water Supply	ş	Start Year	:	2022			Volum	etric Unit	Used <sup>2</sup> :		AF					
Drop-down List May use each category multiple times.These are the only water supply categories that will be recognized by the WUEdata online submittal tool (Add additional rows as needed)	Additional Detail on Water Supply	Projected Water Supplies - Volume <sup>3</sup>														Total Right or Safe Yield* (optional)
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Water Supply Type	LIST	
Potable Supplies																
Purchased/Imported Water	SCWA	1145.6	972.7	756.4	1032.1	675.8	613.5	525.0	370.4	416.1	755.9	703.8	721.8	8689		
Surface water (not desal.)	Stafford Lake	87.6	74.4	57.8	78.9	51.7	46.9	40.1	28.3	31.8	57.8	53.8	55.2	664		
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Total by	Month (Potable)	1233	1047	814	1111	727	660	565	399	448	814	758	777	9353		0
Non-Potable Supplies																
Recycled Water	· · · · ·	94.4	104.6	71.4	55.3	26.4	0.5	0.8	1.3	27.7	43.9	95.0	100.7	622		
	· · · · ·	· · · · ·												0		1
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Total by Mon	th (Non-Potable)	94	105	71	55	26	0.50	0.76	1.26	28	44	95	101	622		0
Notes: The District will utilize Sonoma Co AF.	unty Water Agenc	y (SCWA) v	vater to me	et the cust	tomer's der	mand and s	supplement	the remain	ning demar	nd with Staf	ford Lake s	surface wat	er, and the	e projected Staf	ford Lake supply	y is 1,000

Projected supply from SCWA provided by SCWA on 16 May 2022 and 30 June 2022. The District makes up roughly 14.6% of SCWA's retailer unconstrained demand. Based on this percent of total unconstrained demand, the /District's estimated share of SCWA projected supply is 8,689 AF.

The District does not anticipate a reduction in recycled water supply, as recycled water is a "drought proof" supply. Therefore the available recycled water supply is assumed to be equal to the unconstrained demand presented in Table 2.

<sup>1</sup>Projections are based on best available data at time of submitting the report and actual supply volumes could be different due to many factors.

<sup>2</sup>Units of measure (AF, CCF, MG) must remain consistent.

<sup>3</sup>When opting to provide other than monthly volumes (bi-monthly, quarterly, or annual), please see directions on entering data for Projected Water Supplies in the Table Instructions.

Optional (for comparison purposes)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
eAR Reported Total Water Supplies													0

							= Auto calo	culated					
											= From pri	or tables	
											= For manu	ual input	
Table 4(P): Potable Water Shortage Assessmer	essmer <sup>1</sup>			itart Year:	2022		Volumetri	c Unit Use	d²:		AF		
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun <sup>3</sup>	Total
Anticipated Unconstrained Demand	1233.2	1047.0	814.2	1111.0	727.5	660.4	565.1	398.7	447.9	813.7	757.6	777.0	9353.35
Anticipated Total Water Supply	1233.2	1047.0	814.2	1111.0	727.5	660.4	565.1	398.7	447.9	813.7	757.6	777.0	9353.35
Surplus/Shortage w/o WSCP Action	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Surplus/Shortage w/o WSCP Action	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
State Standard Shortage Leve	0	0	0	0	0	0	0	0	0	0	0	0	0
Planned WSCP Actions													
Benefit from WSCP: Supply Augmentation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Benefit from WSCP: Demand Reduction	239.8	173.7	166.2	186.0	124.7	85.2	70.0	28.4	40.7	20.6	96.2	105.0	1336.6
Revised Surplus/Shortage with WSCP	239.8	173.7	166.2	186.0	124.7	85.2	70.0	28.4	40.7	20.6	96.2	105.0	1336.6
% Revised Surplus/Shortage with WSCP	19%	17%	20%	17%	17%	13%	12%	7%	9%	3%	13%	14%	14%

 $^1$ Assessments are based on best available data at time of submitting the report and actual volumes could be different due to many factors.

<sup>2</sup>Units of measure (AF, CCF, MG) must remain consistent.

<sup>3</sup>When optional monthly volumes aren't provided, verify Tables 2 and 3 use the same columns for data entry and are reflected properly in Table 4 and make sure to use those same columns to enter the benefits from Planned WSCP Actions. Please see directions on the shortage balancing exercise in the Table Instructions. If a shortage is projected, the supplier is highly recommended to perform a monthly analysis to more accurately identify the time of shortage.

											= Auto calo	ulated	
											= From pri	or tables	
											= For man	ual input	
Table 4(NP): Non-Potable Water Shortage Asse	Table 4(NP): Non-Potable Water Shortage Assessmer <sup>1</sup> Start Year:       2022       Volumetric Unit Used <sup>2</sup> :       AF												
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun <sup>3</sup>	Total
Anticipated Unconstrained Demand: Non-Potable	94.4	104.6	71.4	55.3	26.4	0.5	0.8	1.3	27.7	43.9	95.0	100.7	621.88
Anticipated Total Water Supply: Non-Potable	94.4	104.6	71.4	55.3	26.4	0.5	0.8	1.3	27.7	43.9	95.0	100.7	621.9
Surplus/Shortage w/o WSCP Action: Non-Potable	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Surplus/Shortage w/o WSCP Action: Non-Potable	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Planned WSCP Actions													
Benefit from WSCP: Supply Augmentation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Benefit from WSCP: Demand Reduction	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Revised Surplus/Shortage with WSCP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Revised Surplus/Shortage with WSCP	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Assessments are based on best available data at time of submitting the report and actual volumes could be different due to many factors.

<sup>2</sup>Units of measure (AF, CCF, MG) must remain consistent.

<sup>3</sup>When optional monthly volumes aren't provided, verify Tables 2 and 3 use the same columns for data entry and are reflected properly in Table 4 and make sure to use those same columns to enter the benefits from Planned WSCP Actions. Please see directions on the shortage balancing exercise in the Table Instructions. If a shortage is projected, the supplier is highly recommended to perform a monthly analysis to more accurately identify the time of shortage.

Table 5: Planned Water Shortage Response Actions			July 1,	2022	to June 30,	2023
Anticipated Shortage Level Drop-down List of	ACTIONS: Demand Reduction, Supply Augmentation, and Other Actions. (Drop-down List)	Is action already being	How much is action the shortag	going to reduce ge gap?	When is short action antici implem	age response pated to be nented?
State Standard Levels (1 - 6) and Level 0 (No Shortage)	These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.	implemented? (Y/N)	Enter Amount	(Drop-down List) Select % or Volume Unit	Start Month	End Month
Add additional rows	as needed					
1	Other Actions (describe in Notes at bottom of Table)	Yes	5	%	July	June
2	Other Actions (describe in Notes at bottom of Table)	Yes	9	%	July	June

NOTES

(1) Shortage Level 1 Actions, as shown in the Water Shortage Contingency Plan DWR Tables 8-2 Demand Reduction Actions and Table 8-3 Supply Augmentation and Other Actions, may include:

1) Encouraging non-commercial washing of privately-owned motor vehicles, trailers and boats except from a bucket and except that a hose equipped with a shut off nozzle may be used for a quick rinse; requesting restaurants, hotels, cafes, cafeterias, bars or other public places where food or drink are served/purchased to serve water only upon request; promoting "navy showers" (e.g. turn on water to wet person or persons, turn off water, lather up, scrub, then turn on water for a quick rinse, then turn off shower with free push button showerhead control valves available to customers upon request); requesting notel and motel operators to provide guests with the option of choosing not to have towels and linens laundered daily; voluntary rationing; enforcing water waste prohibitions as defined in District Regulation 15, Section B; requesting customers to make conscious efforts to conserve water; encouraging private sector to use alternate sources; and encouraging night irrigation.

(2) Shortage Level 2 Actions, as shown in the Water Shortage Contingency Plan DWR Tables 8-2 Demand Reduction Actions and Table 8-3 Supply Augmentation and Other Actions, may include:

1) Refilling a completely drained swimming pool and/or initial filling of any swimming pool for which application for a building permit was made after July 1, 2021;

2) Non-commercial washing of privately-owned motor vehicles, trailers and boats except from a bucket and except that a hose equipped with a shut off nozzle may be used for a quick rinse;

3) Any use of potable water from a fire hydrant except for fighting fire, human consumption, essential construction needs or use in connection with animals;

4) Watering of any lawn, garden landscaped area, tree, shrub or other plant except from:

a) A handheld hose equipped with an automatic shut-off nozzle;

b)A container;

c) A drip irrigation system; or

d)An overhead sprinkler irrigation system used more than three (3) days per week.

i.Odd numbered street addresses are authorized to irrigate using an overhead sprinkler irrigation system on Monday, Wednesday and Friday and even numbered street addresses are authorized to irrigate using an overhead sprinkler irrigation system on Monday, Wednesday and Friday and even numbered street addresses are authorized to irrigate using an overhead sprinkler irrigation system on Tuesday, Thursday and Saturday provided that the customer maintains an overall 20% reduction in water use compared to the corresponding billing period in 2020 and properly operates the irrigation system in a non-wasteful manner

between the hours of 7:00 p.m. and 9:00 a.m. the next day.

ii.Exemptions may be granted for irrigation of commercial or government owned recreational landscape areas provided a 20% reduction in water use compared to the corresponding billing period in 2020 is maintained.

iii.Customers using less than 300 gallons per day are permitted to water their landscapes without the required 20% reduction).

5) Use of potable water, soil compaction or backfill consolidation for dust control at construction sites or other locations; and

6) Watering any portion of a golf course with potable or raw water except the tees and greens unless the customer can maintain a 25% reduction in water use as compared to 2020; and

7) Failing to repair leaks within 48 hours.

(3) The actions listed above were modeled using the Drought Response Tool (DRT) and presented in the District's 2020 WSCP. The demand reduction volumes presented in Table 4 are based on the monthly saving percentages in the DRT modeling for Shortage Level 2 and applied to the estimated monthly unconstrained demand for FY 2023. Thus, the total annual estimated savings percentage presented here may not be the same as shown in the WSCP (DWR Table 8-2), due to the difference in baseline demands.

(4) Some actions may not occur year-round.



### Attachment C

### Information Provided by Sonoma County Water Agency

- Table C. Estimated Potable Water Demand [*Received 16 May 2022*]
- Sonoma Water Water Shortage Assessment Report [Received 30 June 2022]

From: Paul Piazza <<u>Paul.Piazza@scwa.ca.gov</u>>
Sent: Monday, May 16, 2022 1:21 PM
To: Tony Williams <<u>twilliams@nmwd.com</u>>
Cc: Matthew Fullner <<u>mfullner@vomwd.org</u>>; Burke, Jennifer <<u>iburke@srcity.org</u>>; Ryan Grisso
<<u>rgrisso@nmwd.com</u>>
Subject: RE: Water Supply and Demand Assessment Data

Subject: RE: Water Supply and Demand Assessm

#### Hi Tony,

The approach used for the supply analysis for the 5-yr DRA is not the same as what is being used for the AWSDA. For the 5-yr DRA the supply analysis used the unconstrained demands the contractors (and other customers) provided from 2025 and applied them to each of the five years, 2021-2025 as a highly conservative estimate of demands to meet. For the AWSDA the unconstrained demands used are specifically from 2022 and 2023, but as I mentioned as the starting point. See the below table showing net unconstrained demands for these two years as provided by the contractors and including revisions to local supply for Windsor and Rohnert Park. I can confirm that the projected 59,436 AF does reflect the full unconstrained demand estimates by each Contractor (and other customers) for the reporting period (July 1, 2022 to June 30, 2023). The annual demands were projected to monthly (in aggregate, not for each contractor separately) using a delivery simulation based on our monthly transmission system deliveries dataset from 2011-2021.

### C. Estimated Potable Demand (A minus B, except for MMWD\*)

Water Retailer	Net Potable Demand (Gross - Passive Savings) (AFY)					
	2021	2022	2023	2024	2025	
City of Cotati	812	840	870	900	931	
Marin Municipal Water District*	8,500	8,500	8,500	8,500	8,500	
North Marin Water District	7,898	8,136	8,379	8,629	8,866	
City of Petaluma	8,235	8,350	8,467	8,586	8,706	
City of Rohnert Park	2,756	2,927	3,104	3,287	3,477	
City of Santa Rosa	17,775	18,359	18,961	19,581	20,220	
City of Sonoma	2,068	2,092	2,117	2,142	2,168	
Town of Windsor	3,682	3,890	4,109	4,340	4,585	
Valley of the Moon Water District	2,548	2,614	2,752	2,852	2,897	
Total Net Potable Demand	54,274	55,708	57,259	58,817	60,350	

\* Values provided by MMWD

Hope this helps.

-Paul



### Sonoma Water Water Shortage Assessment Report

Prepared for Sonoma Water Santa Rosa, California June 2022

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### List of Abbreviations

ac-ft	acre-feet
AWSDA	Annual Water Supply and Demand Assessment
cfs	cubic feet per second
FIRO	forecast-informed reservoir operations
ні	hydrologic index
Marin Water	Marin Municipal Water District
PG&E	Pacific Gas & Electric
RR ResSim	Russian River System Model
Sonoma Water	Sonoma County Water Agency
SWRCB	State Water Resources Control Board
TUCP	Temporary Urgency Change Petition
UWMP	Urban Water Management Plan
WSCP	Water Shortage Contingency Plan



### Section 1 Introduction

### 1.1 Agency Overview

Sonoma County Water Agency (Sonoma Water) provides wholesale water, principally from the Russian River, to eight water contractors, other water transmission system customers, and Marin Municipal Water District (Marin Water), collectively referred to as Sonoma Water's customers. The water contractors and other water transmission system customers that Sonoma Water serves include:

- Water Contractors: Cities of Santa Rosa, Petaluma, Rohnert Park, Cotati, and Sonoma; Town of Windsor; North Marin Water District; and Valley of the Moon Water District
- Other Water Transmission System Customers: Forestville Water District, California-American Water Company (Larkfield-Wikiup area), Kenwood Village Water Company, Lawndale Mutual Water Company, Penngrove Water Company, County of Sonoma, State of California, and Santa Rosa Junior College

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 approximately 630,000 people, and the population is projected to grow to more than 770,000 by 2045.

Sonoma Water also supplies small quantities of water (when available) from its transmission system to surplus water customers, and allows Russian River customers (Town of Windsor, City of Healdsburg, Camp Meeker Recreation and Park District, and Occidental Community Services District) to divert water from the Russian River under Sonoma Water's water rights using their own facilities. In this regard the Town of Windsor is unique, in that it is the only contractor that diverts Russian River water under Sonoma Water's water rights using their own facilities, while also purchasing water directly through a connection to Sonoma Water's transmission system.

### 1.2 Service Area

Sonoma Water's service area covers a large part of Sonoma County and the eastern portion of Marin County. The service areas of Sonoma Water's customers are shown on Figure 1-1, as are 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.

In common with much of the California coastal area, Sonoma Water's service area experiences a wet and dry season during the year. Approximately 93 percent of the annual precipitation normally falls during the wet season (i.e., 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. Given the region's dependence on these intermittent storms, reservoir management is an important part of Sonoma Water's supply operations. Sonoma Water has been implementing forecast-informed reservoir operations (FIRO) at Lake Mendocino under a



major deviation to the flood control manual to better inform decisions to retain or release water from storage based on improved weather and water forecasting. Work is also moving forward to evaluate the viability of implementing FIRO at Lake Sonoma. More information about FIRO is available online at <a href="https://www.sonomawater.org/firo">https://www.sonomawater.org/firo</a>.





Figure 1-1. Sonoma Water service areas and water transmission facilities



### 1.3 Supplies

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.

### 1.3.1 Surface Water

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.

Two federal projects impound water in the Russian River watershed: the Coyote Valley Dam on the East Fork Russian River east of Ukiah in Mendocino County (forming Lake Mendocino), and the Warm Springs Dam on Dry Creek (a tributary of the Russian River) northwest of Healdsburg in Sonoma County (forming Lake Sonoma). Lake Mendocino has a design supply capacity of 111,000 acre-feet (ac-ft) per year, captures runoff from the surrounding 105-square-mile drainage area, and receives diverted water from Pacific Gas & Electric's (PG&E) Potter Valley Project on the Eel River. Lake Sonoma has a design supply capacity of 245,000 ac-ft and captures runoff from 130 square miles of surrounding drainage area.

### 1.3.2 Groundwater

Although 14 groundwater basins and sub-basins have been identified in Sonoma County, Sonoma Water has groundwater supply wells only in the Santa Rosa Plain sub-basin of the Santa Rosa Valley basin. These groundwater supply wells are located along Sonoma Water's aqueduct in the Santa Rosa Plain at Occidental Road, Sebastopol Road, and Todd Road. The three wells were initially constructed in 1977 as emergency supply wells in response to the 1976-1977 drought, and two of the wells were replaced in the late 1990s. Although the wells were operated continuously in the early 2000s, the use of the wells has shifted to as-needed use during periods of drought or when Russian River supplies are otherwise constrained.

### **1.4 Transmission System**

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 more than 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.



### Section 2 Annual Water Supply and Demand Assessment

California Water Code §10632.1 requires urban water suppliers to conduct an annual water supply and demand assessment (AWSDA) every year starting July 1, 2022. The AWSDA is intended for urban water suppliers to evaluate their water supply reliability for the current year and one subsequent dry year.

### 2.1 Purpose

The AWSDA forecasts near-term water supply conditions to ensure shortage response actions are triggered in a timely manner. This annual assessment provides 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. Sonoma Water's annual assessment information is provided in Table 2-1.

Annual Assessment Information	Supplier Data
Annual assessment year start	07/01/2022
Annual assessment year end	06/30/2023
Supplier's annual assessment planning cycle start month	01/01/2022
Supplier's annual assessment planning cycle end month	12/31/2023
Data reporting interval used	Monthly
Volume unit for reported supply and demand	acre-feet (ac-ft)
Water supplier's name	Sonoma County Water Agency
Contact name	Paul Piazza
Contact title	Principal Programs Specialist
Street address	404 Aviation Boulevard
ZIP code	95403
Phone number	(707) 547-1968
Email address	paul.piazza@scwa.ca.gov
Report preparer's organization name	Brown and Caldwell
Preparer's contact name	Katie Ruby
Phone number	(925) 210-2256
Email address	kruby@brwncald.com
Supplier's Water Shortage Contingency Plan (WSCP) title	Water Shortage Contingency Plan
WSCP adoption date	05/11/2021

#### Table 2-1. Annual Assessment Information

Brown AND Caldwell

### 2.2 Methodology

Sonoma Water uses the following steps as described in the water shortage contingency plan (WSCP) to develop the AWSDA:

- 1. Quantify current calendar year water supply. Sonoma Water uses actual supply conditions as of May of the current year and assumes the remainder of the current year (through June 30) to be dry.
- 2. **Quantify subsequent calendar year supply.** The subsequent year water supplies (July 1 through June 30) are estimated by assuming dry conditions. Sonoma Water bases the estimate of dry season water supplies on a statistical analysis of the historical hydrologic record and the selection of an appropriate exceedance frequency.
- 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 are considered. Examples of plausible constraints include minimum instream flows and groundwater production capacity.
- 4. **Quantify unconstrained water demand.** Sonoma Water uses the unconstrained water demand projections from the most recent urban water management plan (UWMP) unless more recent demand projections are provided by the water contractors before May of the current year.
- 5. **Compare projected water supplies to demands.** The water supplies identified in the AWSDA 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 year and subsequent dry year (July 1 through June 30). The forecast will be coordinated with Sonoma Water's customers, and if anticipated water shortages are identified, the appropriate shortage stage will be selected as outlined in the WSCP.
- 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 its customers to conserve and increase the use of local supplies. The State Water Resources Control Board (SWRCB) could also mandate Sonoma Water to reduce diversions. For example, mandatory reductions could be required (as specified in Sonoma Water's water rights) if Lake Sonoma levels dropped below 100,000 ac-ft prior to July 15 of a calendar year.

#### 2.2.1 Decision-making Process

As detailed in Sonoma Water's WSCP, the decision-making process for the AWSDA begins in December, when Sonoma Water staff start monitoring water supply conditions prior to the January Decision 1610 trigger date for setting minimum instream flow requirements according to the water year classification.<sup>1</sup> Decision 1610 requires reassessment of the water year classification each month until June 1, when it is set for the remainder of the year. During this time, Sonoma Water evaluates water supply conditions at least mid-month prior to each of the Decision 1610 trigger dates to determine whether anticipated conditions at the trigger date warrant any actions by Sonoma

<sup>&</sup>lt;sup>1</sup> Sonoma Water's water rights permits 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.



Water, such as initiating a water conservation messaging program or filing a Temporary Urgency Change Petition (TUCP) with the SWRCB to change the hydrologic index (HI) used to establish the water supply condition and minimum instream flows. This decision-making process is summarized in Figure 2-1.

**Process**: Mid-month, evaluate water supply conditions relative to D1610 triggers to set HI at first of the following month to determine which scenario applies:

No concerns – Re-evaluate middle of next month. Potential Concerns -Close monitoring. Consider water conservation messaging program. Anticipated Shortages -Submit TUCP to SWRCB & initiate water conservation messaging program.

Evaluation of Water Supply Conditions:

- Potter Valley Project Operations: Lake Pillsbury storage levels, observed & projected project transfers
- Russian River Operations: Current release & minimum in-stream flows, water demands
- Hydrology & Watershed Conditions: Cumulative inflows, storage levels, soil moisture, snowpack
- Meteorology: Cumulative rainfall, near-term and long-term forecast

#### Figure 2-1. Assessment of Russian River supply conditions

Although Sonoma Water continually monitors water supply conditions and acts accordingly, actual conditions as of May serve as the starting point for the AWSDA. Sonoma Water develops supply projections for the remainder of the current year (through June 30) and the subsequent year (July 1 through June 30 of the following year) assuming dry conditions.

For the demand portion of the assessment, Sonoma Water uses the unconstrained demand projections from the most recent UWMP unless more recent demand projections are provided by the contractors before May of the current year. If the assessment forecasts a shortage in the upcoming year, Sonoma Water will activate the appropriate level of the adopted water shortage contingency plan and coordinate with the customers to implement response actions.

After the AWSDA is submitted, Sonoma Water will continue to monitor supplies and reassess shortage conditions, adjusting response actions as needed in coordination with its customers.

### 2.3 Key Data Inputs

The AWSDA compares projected unconstrained demand for all of Sonoma Water's wholesale customers to the expected available water supply based on current available supply and anticipating one dry year ahead. The analysis is performed on a monthly time step and looks ahead to the next 12 months (July 1, 2022, through June 30, 2023), assuming dry conditions. The key data inputs and associated assumptions are described below.

#### 2.3.1 Unconstrained Demand

Unconstrained demand represents the total demand for Sonoma Water's supply, absent any restrictions or demand reduction actions. During development of the 2020 UWMP, each of Sonoma Water's contractors and Marin Water provided annual projected unconstrained demands for Sonoma Water supply for calendar years 2021 through 2025 (as well as projections in five-year increments through 2045), considering population growth, available local supplies, and other factors. For



Sonoma Water's other customers, which are not required to prepare UWMPs due to their small size, Sonoma Water developed unconstrained demand estimates based on historical demands, population growth projections, and assumed available local supplies. The total unconstrained demand also includes transmission system losses (assumed as 3 percent) and expected diversions by the Russian River customers (City of Healdsburg, Town of Windsor, Camp Meeker, and Occidental) under Sonoma Water's water rights. For the Russian River customers (not including Windsor), it was assumed that their actual diversions in 2020 are representative of unconstrained demands for the current year and subsequent dry year.

These annual demand projections serve as the basis for unconstrained demand in the current year and subsequent dry year, which for the purpose of this analysis is defined as July 1, 2022, through June 30, 2023. Since the unconstrained demands provided for the UWMP were presented on an annual basis, Sonoma Water converted the total annual demand for calendar years 2022 and 2023 to estimated monthly demands for the AWSDA. The annual demands were converted to monthly values using actual transmission system delivery data from the last 5 years to develop a seasonal demand curve.

Total projected monthly unconstrained demands for July 2022 through June 2023 are presented in Table 2-2.

Month <sup>a</sup>	Projected Water Demand Volume <sup>b, c</sup> (ac-ft)
July	6,688
August	6,015
September	5,685
October	5,236
November	4,159
December	3,459
January	3,947
February	3,744
March	4,131
April	4,203
Мау	5,698
June	6,473
Total	59,436

#### **Table 2-2. Projected Water Demands**

a. Projected water demands start in 2022 and continue into 2023.

b. Projected potable water demands include demands for all points of diversion under Sonoma Water's water rights, with assumed 3% system losses to calculate water transmission production to meet demands.

c. Projections are based on best available data at time of submitting the report and actual demand volumes could be different due to many factors.



### 2.3.2 Available Water Supply

Most of Sonoma Water's water supply comes from the Russian River, with groundwater from the Santa Rosa Plain as a secondary source. Projections of future available water supply are based on Sonoma Water's operations modeling of the Russian River system, using the Russian River System Model (RR ResSim). RR ResSim incorporates various data inputs, operational criteria, and constraints, including hydrologic conditions, levels of demand, storage levels and operational criteria for Lake Mendocino and Lake Sonoma (e.g., flood control releases), diversions from the Eel River into the Russian River (computed separately using the Potter Valley Project ResSim Model), minimum instream flow requirements, and requirements of the Russian River Biological Opinion. More detail on RR ResSim and the associated inputs are described in Section 5.1.6 of Sonoma Water's 2020 UWMP (https://www.sonomawater.org/UWMP).

Sonoma Water simulates a range of scenarios using RR ResSim to understand multiple possible outcomes and takes an adaptive approach by continually monitoring water supply conditions and adjusting model inputs accordingly. For the purpose of the AWSDA, the following hydrologic assumptions were used to characterize the current year and subsequent dry year (note: given that hydrologic data from water years<sup>2</sup> 1911 through 2017 serve as the basis of the hydrology in the model, the simulations were performed on a water-year basis and then presented on a monthly basis for July 2022 through June 2023).

- For the remainder of water year 2022 (June through September): Starting with actual observed conditions at the time of the assessment (late May 2022), Sonoma Water projected conditions through the remainder of the water year using 1976 hydrology, which represents the tenth percentile June through September period based on unimpaired flow. Since the current year as defined in the AWSDA ends June 30, 2022, the last 3 months in water year 2022 represent the first 3 months of the subsequent dry year in the AWSDA (July through September 2022).
- For water year 2023 (October 2022 through September 2023): Conditions for water year 2023 were also modeled using the 1976 hydrology (tenth percentile water year based on total Russian River unimpaired flow). For the purpose of the AWSDA, results are presented on a monthly basis through June 2023.

Figure 2-2 shows how the modeled water years overlap with and inform the future dry year presented in the AWSDA.



Figure 2-2. Timeline for Russian River modeling and AWSDA

 $<sup>^{2}</sup>$  A water year is defined as the 12-month period between October 1 and September 30 of the following calendar year.



Another key assumption that informs Russian River supply availability is minimum instream flow requirements. Since December 10, 2021, Sonoma Water has been operating under a temporary urgency change order issued by the SWRCB, which established a *Critical* water supply condition in the Russian River and set minimum instream flows of 25 cubic feet per second (cfs) and 35 cfs in the upper and lower river, respectively. The AWSDA assumes that these minimum instream flows will continue until December 2022. Although the order expired on June 8, 2022, Sonoma Water filed another TUCP on May 26 to extend these minimum instream flows for another 180 days. The TUCP was subsequently approved by the SWRCB. From December 2022 through the remainder of the analysis, Sonoma Water assumes minimum instream flows will be governed by *Dry Spring 2* conditions under SWRCB Decision 1610.

Although Sonoma Water generally does not use groundwater as a normal year source of supply, given dry conditions, the AWSDA assumes use of the Todd Road Well (1.5 million gallons per day) starting June 1, 2022, and the Sebastopol Road well (2 million gallons per day) starting January 1, 2023, to preserve surface water supplies.

The results of the water supply modeling show that there is sufficient water supply to meet the projected unconstrained demand through June 2023, assuming dry conditions; therefore, the projected supply quantities shown in Table 2-3 sum to the total demand. Although model results show that the storage level in Lake Sonoma may drop below 100,000 ac-ft in November and December, it is expected to recover to above 100,000 ac-ft before triggering mandatory reductions (as may be required if storage levels drop below 100,000 ac-ft prior to July 15 of a calendar year).

Month <sup>a</sup>	Surface Water Supply: Russian River Diversion Volume <sup>b</sup> (ac-ft)	Groundwater Supply: Santa Rosa Plain Production Wells Volume <sup>b, c</sup> (ac-ft)	Total Volume <sup>b</sup> (ac-ft)
July	6,545	143	6,688
August	5,872	143	6,015
September	5,547	138	5,685
October	5,093	143	5,236
November	4,021	138	4,159
December	3,316	143	3,459
January	3,613	334	3,947
February	3,443	301	3,744
March	3,797	334	4,131
April	3,880	323	4,203
Мау	5,364	334	5,698
June	6,150	323	6,473
Total	56,640	2,796	59,436

**Table 2-3. Projected Water Supplies** 

a. Projected water supplies start in 2022 and continue into 2023.

b. Projections are based on best available data at time of submitting the report and actual supply volumes could be different due to many factors.

c. Groundwater supply includes Todd Road Well (starting June 1, 2022) and Sebastopol Road Well (starting January 1, 2023). It is assumed that Todd Road Well will operate at 1.5 million gallons per day and Sebastopol Road Well will operate at 2 million gallons per day.



#### 2.3.3 Existing Infrastructure Capabilities and Plausible Constraints

The projected available water supply presented in Section 2.3.2 reflects Sonoma Water's current and expected infrastructure capabilities, including groundwater well production capacity. Sonoma Water practices conjunctive management of surface water and groundwater and typically reserves use of groundwater as a backup supply (e.g., during dry periods or when Russian River supplies are otherwise constrained). Given current dry conditions, Sonoma Water plans to pump from Todd Road well beginning this summer and is working to have the Sebastopol Road well online by January 1, 2023, in order to preserve Russian River supplies for potential subsequent dry years. In future normal and wet years, Sonoma Water will limit use of groundwater to promote sustainability of the groundwater basin and avoid potential undesirable results under the Sustainable Groundwater Management Act.

There are several regulatory and operational constraints that affect Sonoma Water's Russian River supply, as described in Section 5.1 of the 2020 UWMP. These constraints—such as minimum instream flows and PG&E's Potter Valley Project operations—are incorporated into the RR ResSim model and are based on a certain set of assumptions. The results of the AWSDA represent the most likely outcome based on expected conditions, though it is possible that decisions by regulatory agencies or other circumstances outside of Sonoma Water's control could further constrain Sonoma Water's ability to divert Russian River supply. Sonoma Water continues to monitor conditions in coordination with its customers and will update modeling assumptions if there are any substantial changes.

### 2.4 Supply and Demand Analysis

Table 2-4 provides a comparison of projected water supply and unconstrained demand for one subsequent dry year (July 1, 2022, through June 30, 2023). The supply and demand assessment shows that there is sufficient water supply to meet the projected unconstrained demand; therefore, the projected supply is shown as equal to the demand.



Montha	Anticipated Unconstrained Demand	Anticipated Total Water Supply	Shortage without
July	6,688	6,688	0
August	6,015	6,015	0
September	5,685	5,685	0
October	5,236	5,236	0
November	4,159	4,159	0
December	3,459	3,459	0
January	3,947	3,947	0
February	3,744	3,744	0
March	4,131	4,131	0
April	4,203	4,203	0
Мау	5,698	5,698	0
June	6,473	6,473	0
Total	59,436	59,436	0

#### Table 2-4. Water Shortage Assessment

a. Projected water supplies and demands start in 2022 and continue into 2023.

b. Projections are based on best available data at time of submitting the report and actual volumes could be different due to many factors.



### Section 3 Shortage Response Actions

Based on the results of the supply and demand analysis, no shortage level is triggered; however to preserve supplies for potential future dry years and to respond to recent State actions calling for conservation, Sonoma Water is voluntarily implementing shortage response actions consistent with Level 2 of the WSCP adopted May 11, 2021.

### 3.1 Planned Response Actions

Although the results of the supply and demand analysis show no projected supply shortage through June 2023, as part of the TUCP recently filed by Sonoma Water, Sonoma Water and its contractors have committed to reducing total Russian River diversions by 20 percent from July 1 through October 31, relative to the same period in 2020. This action aligns with Governor Newsom's Executive Order N-7-22 issued March 28, 2022, and the SWRCB's subsequent adoption of an emergency regulation for urban water conservation on May 24, 2022. Among other requirements, the emergency regulation calls for urban water suppliers to implement the demand reduction actions identified in the supplier's adopted water shortage contingency plan for a shortage level of 10 to 20 percent (Level 2).<sup>3</sup>

As noted in Table 2 of Sonoma Water's WSCP (adopted May 11, 2021), shortage Level 2 corresponds to a voluntary reduction in Russian River diversions by Sonoma Water of 10 to 20 percent. Sonoma Water is working with its customers to achieve this reduction by:

- Increasing production from Sonoma Water's groundwater wells to offset Russian River supply
- Encouraging wholesale customers to use local supplies, where possible
- Holding monthly drought town halls
- Expanding public outreach through the Sonoma-Marin Saving Water Partnership, including:
  - Messaging (in English and Spanish) around actions customers can take to save water
  - Offering an online eco-friendly garden tour
  - Coordinating and promoting partner agencies' events

Planned water shortage response actions are summarized in Table 3-1.

<sup>&</sup>lt;sup>3</sup> The full adopted text of the emergency regulation can be accessed at: <u>https://www.waterboards.ca.gov/board\_decisions/adopted\_orders/resolutions/2022/rs2022\_0018.pdf</u>



Anticipated Shortage Levelª	Water Shortage Response Actions	How Much is Action Going to Reduce the Shortage Gap?	Anticipated Implementation of Shortage Response Action: Start Month	Anticipated Implementation of Shortage Response Action: End Month
0 (No Shortage)	Other Actions <sup>b</sup>	20% <sup>b</sup>	July 2022	October 2022

#### **Table 3-1. Planned Shortage Response Actions**

a. Shortage assessment for July 1, 2022 through June 30, 2023, assuming dry conditions.

b. In order to help preserve surface water supply, Sonoma Water filed a TUCP with the State Board that includes a voluntary 20 percent reduction in Russian River diversions from July through October 2022. This action is consistent with the Governor's Executive Order N-7-22 and the recently adopted emergency regulation to implement the shortage response actions for a shortage level up to 20 percent (Level 2). Sonoma Water is coordinating with its retail water contractors to achieve this demand reduction.

### 3.2 Ongoing Reassessment

The TUCP filed by Sonoma Water on May 26 includes a commitment to reduce Russian River diversions authorized under Sonoma Water's water rights by 20 percent from July 1 through October 31 compared to the same period in 2020. The TUCP extends the current minimum instream flow requirements through December 5, 2022. The TUCP was approved by the SWRCB. Extending the 20 percent diversion reduction beyond October 31—when nearly all water demand is associated with indoor use—would have caused many customers to fall below the amount of supply needed to meet basic health and safety needs.

Sonoma Water will continue to assess supply and demand conditions through the remainder of 2022 to assess whether there is a need to file another TUCP and/or continue demand reduction measures into 2023. These decisions will largely depend on whether dry conditions persist through the fall and winter, when the Russian River watershed typically experiences the most precipitation.



### Section 4 Conclusion

Although the results of the AWSDA do not indicate a shortage in the upcoming year (even if dry conditions persist), water storage levels in Lake Mendocino and Lake Sonoma are currently at historic lows. Therefore, Sonoma Water and its wholesale customers are taking proactive steps to reduce demand on the Russian River system and preserve surface water supplies for future use.

Planned response actions include ramping up groundwater production (at Sonoma Water's Todd Road Well and Sebastopol Road Well), encouraging customers to use local supplies, and expanding public outreach and conservation efforts.

Sonoma Water will continue to monitor supplies and demands to reassess shortage conditions and adjust response actions, if needed.



### Section 5 References

DWR. Annual Water Supply and Demand Assessment Guidance, April 2022. Sonoma Water, 2020 Urban Water Management Plan, June 2021. Sonoma Water, Water Shortage Contingency Plan, June 2021.



### Appendix A: AWSDA 2022 Reporting Tables



#### Table 1. Annual Assessment Information

Annual Assessment Information (Required)								
Year Covered By This Shortage Report								
Start: July 1,	2022							
End: June 30,	2023							
Supplier's Annual Assessment Planning Cycle								
Start Month:	1/1/2022							
End Month:	12/31/2023							
Data Reporting Interval Used:	MONTHLY							
Volume Unit for Reported Supply and Demand:	AF.							
(Must use the same unit throughout)	AF							
Water Supplier's Contact Information								
Water Supplier's Name:	Sonoma County Water Agency							
Contact Name:	Paul Piazza							
Contact Title:	Principal Programs Specialist							
Street Address:	404 Aviation Blvd							
ZI P Code:	95403							
Phone Number:	(707) 547-1968							
Email Address:	paul.piazza@scwa.ca.gov							
Report Preparer's Contact Information								
(if different from above)								
Preparer's Organization Name:	Brown and Caldwell							
Preparer's Contact Name:	Katie Ruby							
Phone Number:	(925) 210-2256							
Email Address:	kruby@brwncald.com							
Supplier's Water Shortage Contingency Plan								
WSCP Title	Water Shortage Contingency Plan							
WSCP Adoption Date	5/11/2021							
Other Annual Assessment Related Activities (Optional)								
Activity	Timeline/Outcomes/Links/Notes							
Annual Assessment/ Shortage Report Title:	Water Shortage Assessment Report							
Annual Assessment / Shortage Report Approval Date:								
Other Annual Assessment Related Activities:								
(Add rows as needed)								





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														= From p	rior tables
														= Auto d	alculated
Table 2: Water Demands <sup>1</sup>															
Use Type			5	Start Yea	r:	2022		Volum	etric Unit	Used <sup>2</sup> :		AF			
Drop-down list     Level of       May select each use multiple times     Additional Description       nese are the only Use Types that will     Additional Description       e recognized by the WUEdata online     (as needed)       submittal tool     Supplies       Drop-down     Drop-down															
(Add additional rows as needed)		list	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Water Demand Type
Demands Served by Potable Supplies															
All Demands	Includes demands for all points of diversion under Sonoma Water's water rights, with assumed 3% system losses to calculate Water Transmission Production to meet demands.		6688	6015	5685	5236	4159	3459	3947	3744	4131	4203	5698	6473	59436
															0
			<u> </u>												0
															0
															0
															0
															0
															0
															0
	Total by Me	onth (Potable)	6688	6015	5685	5236	4159	3459	3947	3744	4131	4203	5698	6473	59436
Demands Served by Non-Potable Supp	lies	1	1	1	1		1				1				
															0
															0
			<u> </u>												0
															0
	Total by Month	(Non-Potable)	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:		(non rotable)						0	0			0	Ū	0	Ū
Notes.															
1 Designations and have done based on the state in the based	والمستعمل المستعمل والمستعمل والمستعمل والمعالية والمعالية والمستعم والمعار		-1:66 +												
Projections are based on best available	data at time of submitting the report and actual demand volt	imes could be	amerent	due to ma	iny factors	ō.									
<sup>2</sup> Units of measure (AF, CCF, MG) must r	emain consistent.														
<sup>3</sup> When opting to provide other than mo	onthly volumes (bi-monthly, quarterly, or annual), please see o	lirections on e	ntering da	ita for Pro	jected Wa	ater Dema	and in the	Table Inst	ructions.						
			1.1		6	0.1		Der	1	<b>5</b> .1					Tetal
	Optional (for compari	son purposes)	Jui	Aug	Sep	Uct	NOV	Dec	Jan	Feb	iviar	Apr	iviay	Jun	Total
	Last year's	total demand													
	Two years ago	total demand													
	Three years ago	total demand													



Four years ago total demand

Appendix A
= From prior tables
= Auto calculated

															= Auto calcu	lated										
Table 3: Water Supplies <sup>1</sup>																										
Water Supply		Start Yea	r:	2022			Volum	etric Uni	t Used <sup>2</sup> :		AF															
Drop-down List May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online	Additional Detail on Water Supply	Projected Water Supplies - Volume <sup>3</sup>										Projected Water Supplies - Volume <sup>3</sup>						Projected Water Supplies - Volume <sup>3</sup>								
submittal tool (Add additional rows as needed)		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Water Supply Type	List	(optional)										
Potable Supplies	•																									
Surface water (not desal.)	Russian River Diversion	6545	5872	5547	5093	4021	3316	3613	3443	3797	3880	5364	6150	56640												
Groundwater (not desal.)	Santa Rosa Plain Production Wells	143	143	138	143	138	143	334	301	334	323	334	323	2796												
														0												
														0												
		<u> </u>				<u> </u>								0												
														0												
		<u> </u>		<u> </u>	<u> </u>	<u> </u>								0												
		<u> </u>	<u> </u>											0												
		<u> </u>												0												
	Total by Month (Potable)	6688	6015	5685	5236	4159	3459	3947	3744	4131	4203	5698	6473	59436		0										
Non-Potable Supplies																										
														0												
														0												
														0												
														0												
	Total by Month (Non-Potable)	0	0	0	0	0	0	0	0	0	0	0	0	0		0										
Notes: List hydrological and regulate	bry conditions, infrastructure capabilities	s, and plau	usible cons	straints w	hich may i	mpact the	e water su	ipplies.			Ū		Ŭ	Ŭ												
<sup>1</sup> Projections are based on best availa <sup>2</sup> Units of measure (AF, CCF, MG) mu <sup>3</sup> When opting to provide other than	able data at time of submitting the repoi st remain consistent. monthly volumes (bi-monthly, quarterl	rt and acti y, or annu	ual supply ual), please	volumes e see direc	could be c	lifferent d entering d	lue to mai lata for Pr	ny factors. ojected W	/ater Supp	lies in the	e Table Ins	structions														
	Optional (for comparison purposes)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total	1											





											= Auto ca	culated	
											= From pr	ior tables	
											= For man	ual input	
Table 4(P): Potable Water Shortage Assessmen	ıt <sup>1</sup>		St	tart Year:	2022		Volumetr	ic Unit Use	ed²:		AF		
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun <sup>3</sup>	Total
Anticipated Unconstrained Demand	6687.8	6014.6	5685.4	5235.8	4158.9	3459.0	3946.6	3743.9	4130.7	4203.1	5697.7	6472.6	59436.21
Anticipated Total Water Supply	6687.8	6014.6	5685.4	5235.8	4158.9	3459.0	3946.6	3743.9	4130.7	4203.1	5697.7	6472.6	59436.21
Surplus/Shortage w/o WSCP Action	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Surplus/Shortage w/o WSCP Action	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
State Standard Shortage Level	0	0	0	0	0	0	0	0	0	0	0	0	0
Planned WSCP Actions													
Benefit from WSCP: Supply Augmentation													0.0
Benefit from WSCP: Demand Reduction													0.0
Revised Surplus/Shortage with WSCP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Revised Surplus/Shortage with WSCP	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	والمحاجب والمغاجب		المنب المنتقم مرا		الم الم		f	-					

<sup>2</sup>Units of measure (AF, CCF, MG) must remain consistent.

<sup>3</sup>When optional monthly volumes aren't provided, verify Tables 2 and 3 use the same columns for data entry and are reflected properly in Table 4 and make sure to use those same columns to enter the benefits from Planned WSCP Actions. Please see directions on the shortage balancing exercise in the Table Instructions. If a shortage is projected, the supplier is highly recommended to perform a monthly analysis to more accurately identify the time of shortage.

											= Auto ca	culated	
											= From pr	ior tables	
= For man											iual input		
Table 4(NP): Non-Potable Water Shortage Asse	essment <sup>1</sup>			S	tart Year:	2022		Volumetr	ic Unit Us	ed²:			
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun <sup>3</sup>	Total
Anticipated Unconstrained Demand: Non-Potable	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
Anticipated Total Water Supply: Non-Potable	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Surplus/Shortage w/o WSCP Action: Non-Potable	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Surplus/Shortage w/o WSCP Action: Non-Potable													
Planned WSCP Actions													
Benefit from WSCP: Supply Augmentation													0.0
Benefit from WSCP: Demand Reduction													0.0
Revised Surplus/Shortage with WSCP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Revised Surplus/Shortage with WSCP													

<sup>1</sup>Assessments are based on best available data at time of submitting the report and actual volumes could be different due to many factors.

<sup>2</sup>Units of measure (AF, CCF, MG) must remain consistent.

<sup>3</sup>When optional monthly volumes aren't provided, verify Tables 2 and 3 use the same columns for data entry and are reflected properly in Table 4 and make sure to use those same columns to enter the benefits from Planned WSCP Actions. Please see directions on the shortage balancing exercise in the Table Instructions. If a shortage is projected, the supplier is highly recommended to perform a monthly analysis to more accurately identify the time of shortage.

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Table 5: Planned	Water Shortage Response Actions		July 1,	2022	to June 30,	2023	
Anticipated Shortage Level Drop-down List of	Inticipated         Actions: Demand Reduction, Supply Augmentation,           Level         and Other Actions.           p-down List of         (Drop-down List)		How much is ac reduce the sho	tion going to ortage gap?	When is shortage response action anticipated to be implemented?		
State Standard Levels (1 - 6) and Level 0 (No Shortage)	These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.	implemented? ( <b>Y/N)</b>	Enter Amount	(Drop-down List) Select % or Volume Unit	Start Month	End Month	
Add additional rows	as needed			-			
0 (No Shortage)	Other Actions (describe in Notes at bottom of Table)	No	20	%	July	October	
					-		
			-		-		
NOTES: In order to h	elp preserve surface water supply, Sonoma Water filed	a TUCP with the	State Board that in	ncludes a volunt	ary 20 percent r	eduction in	

NOTES: In order to help preserve surface water supply, Sonoma Water filed a TUCP with the State Board that includes a voluntary 20 percent reduction in Russian River diversions from July through October 2022. This action is consistent with the Governor's Executive Order N-7-22 and the recently adopted emergency regulation to implement the shortage response actions for a shortage level up to 20 percent (Level 2). Sonoma Water is coordinating with its retail water contractors to achieve this demand reduction.

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