

# Suisun-Solano Water Authority 2020 Water Shortage Contingency Plan



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## LIST OF ABBREVIATIONS AND ACRONYMS

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AF	acre-feet
AFY	acre-feet per year
AMI	Advanced Metering Infrastructure
CCR	Consumer Confidence Report
CII	Commercial, Industrial and Institutional
City	City of Suisun City
DRA	Drought Risk Assessment
DSS Model	Least Cost Planning Decision Support System Model
DWR	California Department of Water Resources
EAP	Emergency Action Plan
EOP	Emergency Operations Plan
ERP	Emergency Response Plan
M&I	Municipal & Industrial
MF	multifamily
MG	million gallons
MGD	million gallons per day
MJHMP	Multi-Jurisdictional Hazard Mitigation Plan
NBA	North Bay Aqueduct
NIMS	National Incident Management System
SCWA	Solano County Water Agency
SEMS	Standard Emergency Management System
SF	Single Family
SID	Solano Irrigation District
SSWA	Suisun-Solano Water Authority
SWP	State Water Project
TM	Technical Memorandum
USBR	United States Bureau of Reclamation
UWMP	Urban Water Management Plan
WARN	Water/Wastewater Agency Response Network
WSCP	Water Shortage Contingency Plan
WUE	Water Use Efficiency

# 1 INTRODUCTION AND WSCP OVERVIEW

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The Suisun-Solano Water Authority (SSWA) Water Shortage Contingency Plan (WSCP) is a planning document designed to prepare for and respond to water shortages. This WSCP complies with California Water Code Section 10632, which requires that every urban water supplier prepare and adopt a WSCP as part of its Urban Water Management Plan (UWMP). This level of detailed planning and preparation is intended to help maintain reliable water supplies and reduce the impacts of supply interruptions.

The WSCP is SSWA's operating manual that is used to prevent catastrophic service disruptions through proactive, rather than reactive, water management. A water shortage occurs when water supply availability is insufficient to meet the normal, expected customer water use at a given point in time. This may occur for several reasons, such as drought, climate change or catastrophic events (e.g., earthquake). This WSCP is not intended to replace water distribution system operating rules or procedures, but rather to complement SSWA's Local Hazard Mitigation and Emergency Response Plans.

This WSCP provides a structured guide for SSWA to address water shortages, incorporating prescriptive information and standardized action levels along with implementation strategies in the event of a supply interruption. Therefore, when shortage conditions arise, SSWA's governing body, its staff and the public can easily identify and efficiently implement pre-determined steps to manage the shortage. A well-structured WSCP allows for efficient management of any shortage with predictability and accountability through real-time water supply availability assessment and well-defined actions aligned with different water shortage levels which, if necessary, may be modified to respond to actual conditions.

The WSCP also describes SSWA's procedures for conducting an Annual Water Supply and Demand Assessment (Annual Assessment). An Annual Assessment, as required by Water Code Section 10632.1, is to be submitted to the California Department of Water Resources (DWR) on or before July 1st of each year.

SSWA's WSCP is included as an appendix to its 2020 UWMP which will be submitted to DWR upon adoption. However, this WSCP is created separately from SSWA's 2020 UWMP and can be amended as needed without amending the UWMP. It should be noted that the Water Code does not prohibit an urban water supplier from taking actions not specified in its WSCP, if needed, without having to formally amend its WSCP or UWMP.

## 1.1 Water Shortage Contingency Plan Requirements and Organization

The WSCP provides the steps and water shortage response actions to be taken in times of water shortage conditions. The WSCP has prescriptive elements, such as the following:

- An analysis of water supply reliability
- The water shortage response actions for each of the six standard water shortage levels that correspond to water shortage percentages ranging from 10% to greater than 50%
- An estimate of the potential to close any supply gap for each water shortage response action
- Protocols and procedures to communicate identified actions for any current or predicted water shortage conditions
- Procedures for an Annual Water Supply and Demand Assessment
- Monitoring and reporting requirements to determine customer compliance
- Reevaluation and improvement procedures for evaluating the WSCP

This WSCP is organized into three main sections with Section 3 closely aligned with the California Water Code Section 16032 requirements.

**Section 1 Introduction and WSCP Overview** provides an overview of the WSCP fundamentals.

**Section 2 Background** provides background information on Suisun-Solano Water Authority's service area.

### **Section 3 Water Shortage Contingency Preparedness and Response Planning**

**Section 3.1 Water Supply Reliability Analysis** provides a summary of the water supply analysis and water reliability findings from the 2020 UWMP.

**Section 3.2 Annual Water Supply and Demand Assessment Procedures** provides a description of procedures to conduct and approve the Annual Assessment.

**Section 3.3 Six Standard Water Shortage Levels** explains the six standard water shortage levels corresponding to progressive ranges of up to 10%, 20%, 30%, 40%, 50%, and more than 50% shortages.

**Section 3.4 Shortage Response Actions** describes the WSCP's shortage response actions that align with the defined shortage levels.

**Section 3.5 Communication Protocols** addresses communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments regarding any current or predicted shortages and any resulting shortage response actions.

**Section 3.6 Compliance and Enforcement** describes customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions.

**Section 3.7 Legal Authorities** is a description of the legal authorities that enable Suisun-Solano Water Authority to implement and enforce its shortage response actions.

**Section 3.8 Financial Consequences of the WSCP** provides a description of the financial consequences of and responses to drought conditions.

**Section 3.9 Monitoring and Reporting** describes monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.

**Section 3.10 WSCP Refinement Procedures** addresses reevaluation and improvement procedures for monitoring and evaluating the functionality of the WSCP.

**Section 3.11 Special Water Feature Distinction** is a required definition for inclusion in a WSCP per the California Water Code.

**Section 3.12 Plan Adoption, Submittal, Availability, and Implementation** provides a record of the process Suisun-Solano Water Authority followed to adopt and implement its WSCP.

**Section 3.13 Seismic Risk Assessment and Mitigation Plan** addresses the vulnerability of the systems to earthquakes and the FEMA Approved Solano County Multi-Jurisdiction Hazard Mitigation Plan.

## **1.2 Integration with Other Planning Efforts**

As a retail water supplier in Solano County, SSWA considered other key entities in the development of this WSCP and developed this WSCP with input from several existing planning documents and efforts. Following are some of the key planning and reporting documents that were used to develop this WSCP:

- Suisun-Solano Water Authority's 2020 Urban Water Management Plan
- Solano County Multi-Jurisdictional Hazard Mitigation Plan (Solano County, 2022)
- Solano County Emergency Operations Plan, Vol 1 and Vol 2 (Solano County, 2017)
- 2021 Reliability Technical Memorandum (TM), Suisun City (Suisun City, 2020)
- 1999 Drought Measures Agreement
- 2015 Solano Irrigation District (SID) Water Shortage Risk Assessment
- Agreement for Emergency Potable Water Service Between the City of Fairfield and the Suisun-Solano Water Authority (2020)



## 2 BACKGROUND INFORMATION

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### 2.1 General Description

The City of Suisun City (City) and Solano Irrigation District (SID) formed a Joint Exercise of Powers Agreement in 1976 intended to provide a long-term water supply for the City. In 1990, the City and SID strengthened their partnership by becoming a full Joint Powers Authority, the Suisun-Solano Water Authority. This change sparked a reconstruction and modernization of the old Suisun Water System which served the older neighborhoods in Old Town Suisun, the Marina, and Laurel Creek.



#### City of Suisun City

The City of Suisun City is a small Californian community of approximately 30,000 residents. It is an active, inclusive, sustainable, and flourishing community committed to maintaining harmony between its urban and rural areas. The City is dedicated to fostering opportunities for current and future generations by supporting the City's history, arts, natural environment and thriving waterfront district.

The City is situated midway between San Francisco and Sacramento in Central Solano County. The Old Town section of the City is located on the Suisun Channel, which empties into Suisun and Grizzly Bays, the connecting point for the Sacramento River and the San Francisco Bay.

The City was established in the 1850s during the California Gold Rush as a trading route between the foothills of the Sierra Nevada and the San Francisco Bay Area. The City continued to prosper with the introduction of the transcontinental railroad in 1869, linking the City to the East Coast. The City remained the bustling hub of agricultural in Solano County until Interstate 80 opened in the 1960s, effectively switching commercial traffic away from the railroad and the waterfront area and into nearby Fairfield.

Since 1989, the City has implemented an aggressive redevelopment program centered on the Old Town Waterfront and Historic Main Street Shopping District. After decades of isolation, the waterfront is once again accessible to the general public via a new Public Marina, Public Promenade, and Harbor Plaza. The channel has been deepened to allow boating excursions from San Francisco Bay and the Sacramento Delta.

The City is recreating itself as a prosperous waterfront community from a more relaxed time. Buildings along Main Street have been remodeled to reflect the hometown charm of one-of-a-kind shops and restaurants. The City is destined to become a thriving destination for business gatherings, family daytrips, and people looking for a singular and relaxing waterfront atmosphere.

The future of SSWA shows some growth, but the City has geographical constraints, including a marsh and a common boundary with the City of Fairfield. The 2011 Capital Improvement Plan outlined several planned changes to water infrastructure facilities. As of the writing of this 2020 UWMP, some of those Capital Improvement Projects have been completed including rebuilding three clarifiers, constructing a new two-million-gallon (MG) tank, installing a new pipeline up to existing tanks, and replacing more than 8,500 meters with Advanced Metering Infrastructure (AMI). Current Capital Improvement Plans include replacing large meters, rehabilitating existing tanks, and installing a new chemical feed system at Cement Hill Water Treatment Plant. Upon the completion of the treatment plant chemical feed system rehabilitation project, SSWA will perform a new condition assessment to re-evaluate projects and priorities for its Capital Improvement Plan.

Since the 2015 UWMP, SSWA has mostly grown in the areas of single family and landscape accounts. For example, single family homes have changed from approximately 7,770 accounts in 2005 to 8,030 accounts in 2010, 8,210 accounts in 2015, and 8,286 accounts in 2020, for an increase of 516 accounts in 20 years. The current service area is shown in Figure 2-1 and Figure 2-2.

### **Solano Irrigation District**

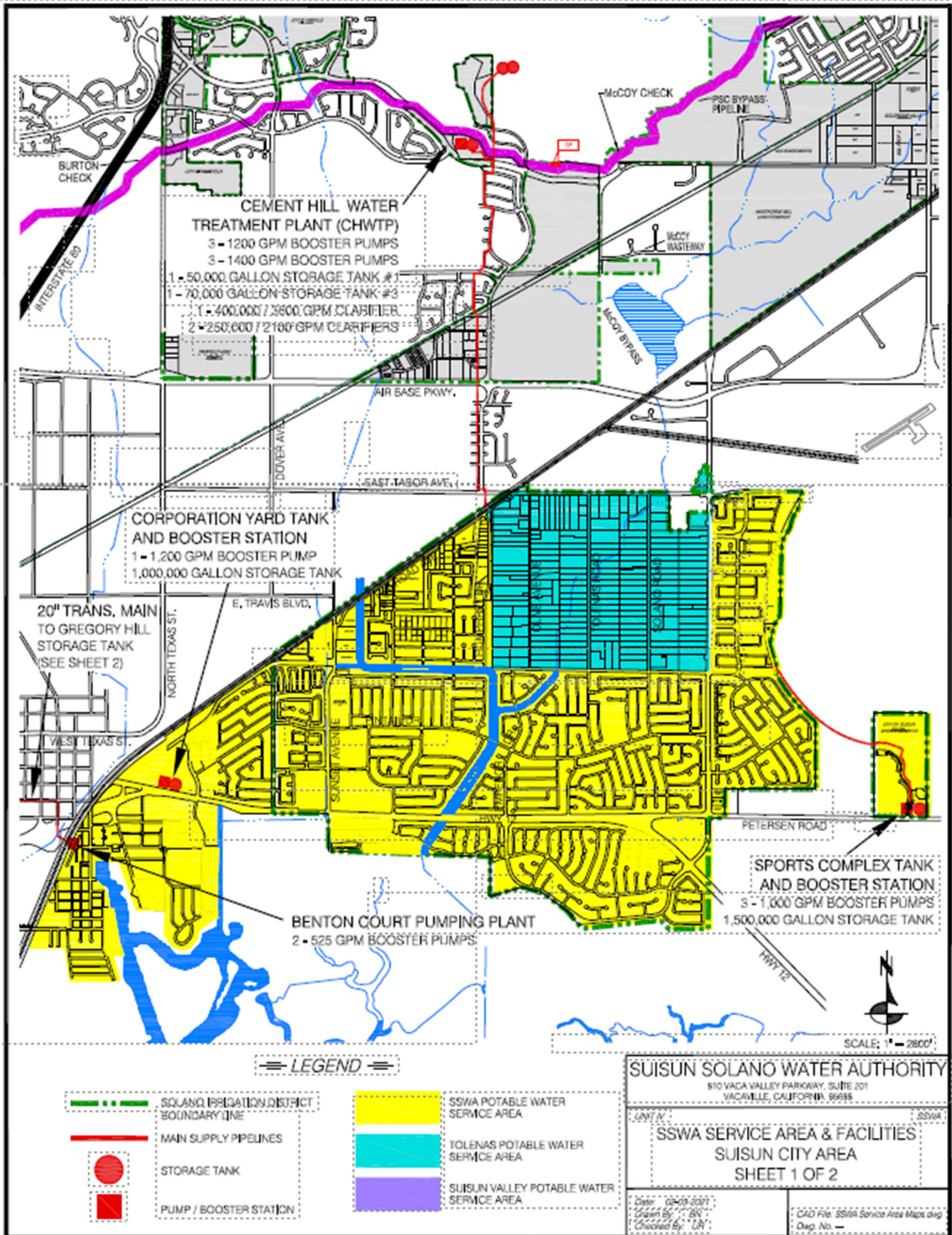
The Solano Irrigation District (SID) is an independent special district organized in 1948 under provisions of the California Irrigation District Law for the purpose of contracting surface water supplies from the U.S. Bureau of Reclamation's Solano Project. SID is governed by a five-member Board of Directors, each of which are elected by registered voters within the boundaries of SID. SID has entitlements and agreements for 141,000 acre-feet (AF) of agricultural and domestic water for service to many areas in Solano County each year. SID uses the majority of this water for agricultural irrigation service to approximately 42,000 acres. SID also provides non-potable water service for urban landscape irrigation in the Solano County cities of Fairfield and Vacaville and potable-treated surface water in several public water systems, the largest of which is SSWA. SID, under contract with the Solano County Water Agency (SCWA), operates and maintains the Solano Project, which delivers Lake Berryessa water to four cities, the Maine Prairie Water District, and SID customers. SID owns and operates an 11.5-megawatt hydroelectric power plant at the base of Monticello Dam. SID employs 85 staff members and operates on a \$11 million annual budget of its own. SID partners with the City of Suisun City in water delivery, utilizing another \$6 million to accomplish this partnership's objective.

### **Suisun-Solano Water Authority Service Area**

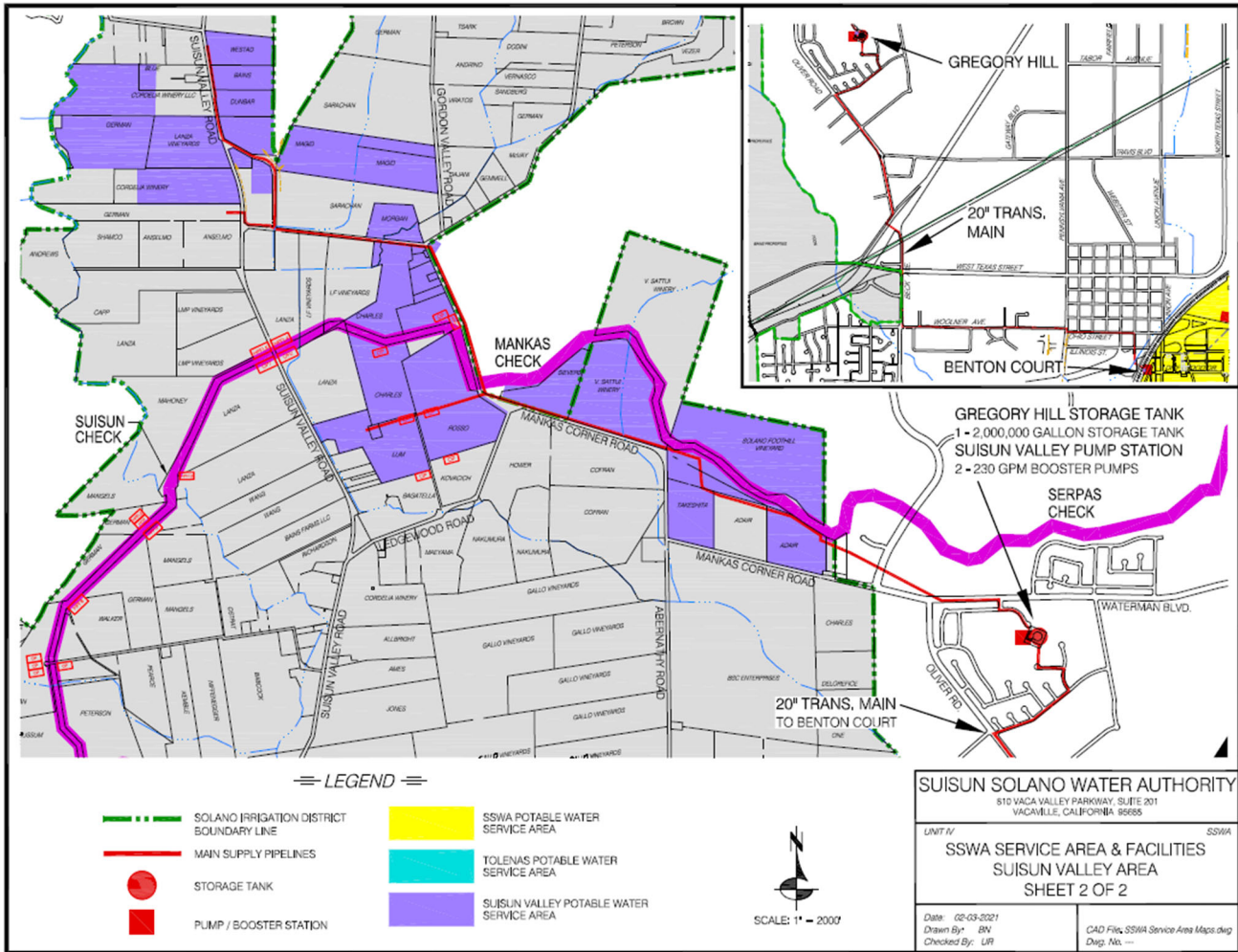
Figure 2-1 and Figure 2-2 show the boundaries of SID and an overview of SSWA's service area.



Figure 2-1. Potable Water Service Area



**Figure 2-2. Public Water System**



## 2.2 Relationship to Wholesalers

Solano County Water Agency is a wholesaler that supplies surface water to SSWA and SID, among others. SCWA is also instrumental in generating water source reliability factors. Water demand projections developed as part of the 2020 UWMP, in cooperation with the City, have been shared with SCWA. A copy of the 2020 UWMP will be provided to SCWA upon final adoption by the SSWA Board.

The water supply reliability for SSWA is directly related to the reliability of deliveries of water from the Solano Project (administered by the U.S. Federal Bureau of Reclamation, or USBR) and State Water Project (SWP, administered by DWR). Reliability is quantified by the percentage of the contracted amount an agency would receive from the supplying agency. 100% reliability means delivery of a full annual allocation, and 50% reliability means delivery of half of an annual allocation.

### State Water Project

The SWP supply is not always available at a consistent level. Plans to replace or supplement the SWP source when there are shortages are the responsibility of SCWA member agencies that contract for SWP supplies. They would typically shift to other supplies such as Solano Project and groundwater (if they have rights to these supplies) or enter into purchase or exchange agreements with other Solano County agencies. SCWA would also keep member agencies informed about any SWP collective programs for dry year water purchases, such as a drought water bank. SCWA would coordinate any joint local efforts to secure short-term water supplies under



drought conditions. Increased demand management measures are the responsibility of the member agencies to implement.

### **Solano Project**

The allocation process for water supplies from the Solano Project is very different than for the SWP. For the Solano Project, the contract between SCWA and USBR calls for the full contract amount to be delivered to SCWA unless it is physically impossible to deliver the water from Solano Project storage (i.e., reservoir is dry). Therefore, the full contract water supply of 207,350 acre-feet per year (AFY) is allocated until there is no water available in the reservoir (dead storage is 10,300 AF).

## **2.3 Relationship with Other Plans**

The WSCP is designed to be consistent with SSWA's 2020 UWMP as well as other water shortage planning efforts as described below.

### **Solano Project Supplies Under Shortage Conditions**

Regarding Solano Project supplies, per Section 9 of the City's and SID's Participating Agency Contracts with SCWA, "In any year in which there may occur a shortage from any cause so that the total quantity of water made available to the Agency is less than the total of all quantities contracted for by this Participating Agency and other Participating Agencies, the Agency shall apportion the water supply available to the Agency among all Participating Agency [sic] entitled to receive water from the Project, in proportion to their contractual entitlements to Project Water,...." This authority has never been exercised by SCWA.

SCWA and the Participating Agencies, including SSWA and SID, entered into the Solano Project Members' Agreement as to Drought Measures and Water Allocation in 1999. Per the Drought Measures Agreement (Appendix A), deliveries of Solano Project water are reduced based upon storage levels in Lake Berryessa. Once the storage level drops below 800,000 AF, as measured on April 1 of each year, 95% of contract amounts are delivered with 5% being stored in the reservoir as restricted carryover. If the reservoir is between 450,000 AF and 550,000 AF by April 1, 90% is delivered and 10% is stored as restricted carryover. Participating agencies have the ability to carry over more than this amount if they desire. Restricted carryover is divided into two categories-agricultural irrigation and municipal & industrial (M&I). Once the reservoir level is below 450,000 AF on April 1, the participating agencies can use their full allocation and any M&I restricted carryover. Only the M&I restricted carryover may be used; the agricultural irrigation restricted carryover remains in storage but can be sold to Solano Project Members for M&I purposes.

Additionally, when the storage in Lake Berryessa is less than 400,000 AF on April 1 (this is within the last stage of curtailments described above), SID will prepare to implement a voluntary agricultural water marketing program for growers to sell their next-year's allocation to cities that are party to the Drought Measures Agreement to meet M&I water needs (see section 5.8 of the Drought Measures Agreement – Appendix A of this WSCP.)

### **State Water Project Supplies**

Regarding State Water Project supplies, per Section 6 of the City's Member Unit Contract, "If at any time there occurs a shortage from any cause in the quantity of project water made available to Agency so that the total quantity made available to Agency is less than the total of all quantities of project water contracted for by this Member Unit and other member units, Agency shall apportion the project water available among all member units in such a manner as Agency shall determine to be equitable. In making such determination, Agency shall consult with all its member units and shall be guided by, but not limited to, consideration of the following factors with respect to each member unit: other supplies of water available to the member unit; the quantities of water normally used by the member unit for domestic, municipal, industrial, commercial, and other purposes, and the

relative ability of the member unit to reduce the quantity of water it uses; and the impact various reductions of water supply will have on the economy, public health, and welfare.”

Although there are frequent shortages in the SWP supply, SCWA has never used its authority to allocate SWP supplies during any shortages. SCWA has delivered supplies in proportion to contract amounts. SCWA has a two-stage trigger for contingency actions. Stage 1 is if there is a 25% reduction in either SWP and/or Solano Project supplies. During Stage 1 conditions, SCWA will offer to assist member agencies in any internal exchanges or transfers and also assist in securing additional water supplies from outside sources, such as drought water banks or joint efforts with other water agencies, to obtain supplies in dry years. Stage 2 is invoked if there is a 50% reduction in SWP and/or Solano Project supplies. During Stage 2 conditions, SCWA will perform the same functions in Stage 1 as well as state its willingness to consider allocations of shortages in the SWP supply as specified in the member agency agreements.

### **Solano County Multi-Jurisdictional Hazard Mitigation Plan**

The hazard mitigation plan was developed by Solano County to guide County and City officials in protecting the people and property within the county from the effects of natural disasters and hazard events. The hazard mitigation plan demonstrates Solano County’s commitment to reducing risk from natural hazards through mitigation and serves as a tool to direct county resources to achieve optimum results with available administrative, technical, and financial resources. This document identifies and assesses natural hazard risks and vulnerabilities to SSWA infrastructure and the public at large, as a hazard could reduce water availability for SSWA.

## 3 WATER SHORTAGE CONTINGENCY PLANNING

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SSWA's Water Shortage Contingency Plan is a detailed guide of how SSWA intends to act in the case of an actual water shortage condition. The WSCP anticipates a water supply shortage and provides pre-planned guidance for managing and mitigating a shortage. Regardless of the reason for the shortage, the WSCP, based on adequate details of demand reduction and supply augmentation measures that are structured to match varying degrees of shortage, will ensure the relevant stakeholders understand what to expect during a water shortage situation.

### 3.1 Water Supply Reliability Assessment

Per Water Code Section 10632 (a)(1), the WSCP shall provide an analysis of water supply reliability conducted pursuant to Water Code Section 10635 and the key issues that may create a shortage condition when evaluating SSWA's water asset portfolio.

Understanding water supply reliability, factors that could contribute to water supply constraints, availability of alternative supplies, and what effect these have on meeting customer demands provides SSWA with a solid basis on which to develop appropriate and feasible response actions in the event of a water shortage. In the 2020 UWMP, SSWA conducted a Water Reliability Assessment to compare the total water supply available with long-term projected water use over the next 25 years, in five-year increments (for a normal water year, a single dry water year, and a drought lasting five consecutive water years). SSWA also conducted a Drought Risk Assessment (DRA) to evaluate SSWA's supply risks under a drought period that lasts five consecutive water years starting from 2020.

An analysis of both assessments determined that SSWA is anticipated to meet all customers' demands from 2021 through 2045 under a normal year, single dry year, or a drought lasting five consecutive years. This ability to meet demands is due to significant imported water supplies, supplemental dedicated drought supplies from the USBR Federal Solano Project, the DWR SWP, and ongoing conservation program efforts.

As a result, there is no projected shortage condition due to drought that will trigger customer demand reduction actions until Lake Berryessa drops below 50% capacity and the 1999 Drought Measures Agreement is implemented, reducing the amount of available entitlement to Solano Project Member Units. More information is available in SSWA's 2020 UWMP Sections 6 and 7.

Another event could trigger a significant requirement for demand reduction; if the Tolenas Pipeline should fail, SSWA will have to rely on the emergency supply interties with the City of Fairfield, which have a maximum capacity of 3.8 million gallons per day (mgd). Demands can range from 6.5 mgd in the peak summer to winter demands averaging less than 2.5 mgd. Depending upon the timing of this event, it could require significant demand reduction or no demand reduction.

### 3.2 Annual Water Supply and Demand Assessment Procedures

Per Water Code Section 10632.1, SSWA will conduct an annual water supply and demand assessment pursuant to subdivision (a) of Section 10632 and by July 1st of each year, beginning in 2022. SSWA will submit an annual water shortage assessment with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the supplier's water shortage contingency plan.

This section documents the decision-making process required for formal approval of SSWA's Annual Assessment determination of water supply reliability and the key data inputs and the methodologies used to evaluate the water system reliability for the coming year, while considering that the year to follow would be dry.

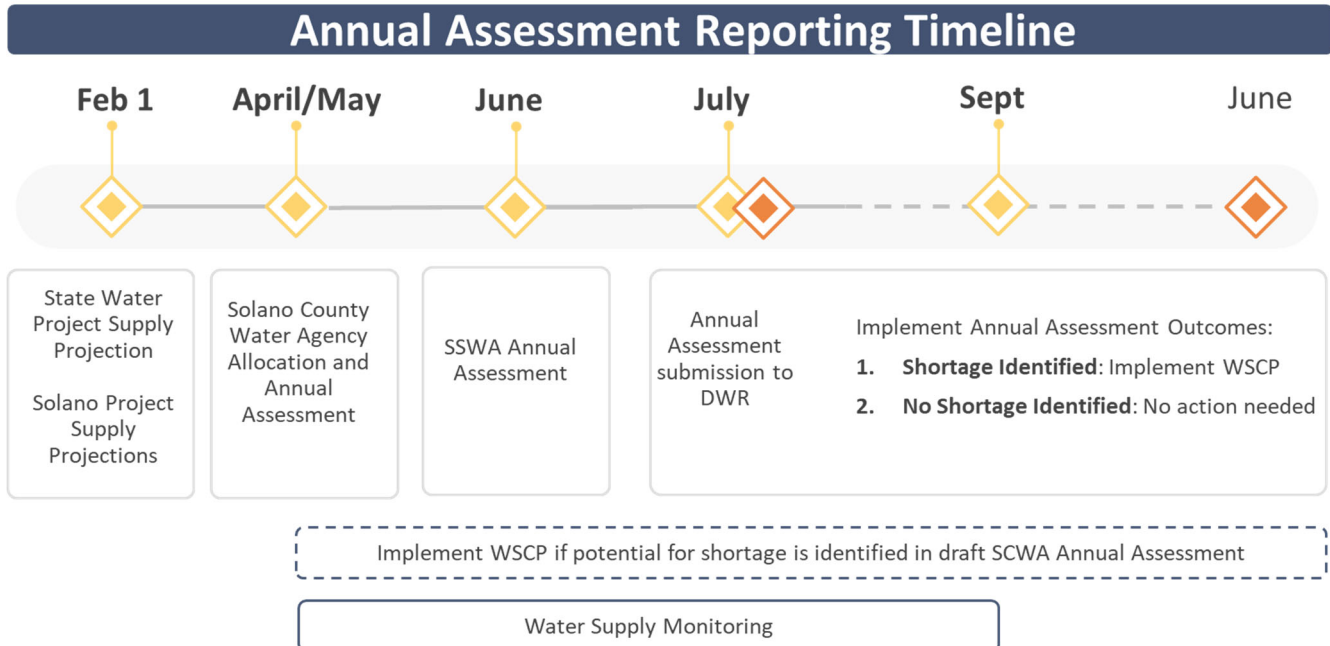


## Decision-Making Process

The Annual Assessment will be predicated on SSWA’s Annual Assessment findings. Following is the decision-making process:

1. Near or around the end of February, observe the storage capacity of Lake Berryessa. Because SSWA currently cannot make use of its SWP within the service area, only the Solano Project Water is considered in the decision-making process.
2. If the storage is at or above 800,000 AF, then all Solano Project entitlements are available. If below 800,000 AF then a drought response will be required per the 1999 Drought Measures Agreement. If Lake Berryessa is below 800,000 AF on December 1, then the Solano Project Member Units begin water shortage contingency planning for the Solano Project. 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, SSWA will initiate implementation of the WSCP.
3. In June, finalize the SSWA Annual Assessment based on outcomes of any additional water conservation measures identified under 1999 Drought Measures Agreement, and further accounting for any additional storm runoff inflow into Lake Berryessa that may change storage volumes. SSWA will identify if any water supply gaps exist considering Solano Project supplies available.
4. If a shortage is identified, the Annual Assessment will be presented to the Board for approval and the WSCP will be implemented. If no shortage is identified, the Annual Assessment may be presented during a regularly scheduled Board meeting.
5. SSWA will submit the Annual Assessment to DWR by July 1st of each year.

**Figure 3-1. Annual Assessment Reporting Timeline**



## Data and Methodologies

The following sections document the key data inputs and methodologies that are used to evaluate the water system reliability for the coming year, while considering that the year to follow would be dry, as defined below:

## **Evaluation Criteria**

In the 2020 UWMP, SSWA assessed the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment compares the total water supply sources available to SSWA with the long-term total projected water use over the next 25 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. This assessment was based on SSWA's service area, water sources, water supply reliability, and water use as described in Water Code Section 10631, including available data from state, regional, or local population, land use development, and climate change projections within the SSWA service area.

SSWA water supply reliability is dependent on the supply reliability and allocations of the SWP and the USBR Solano Project. The main factor affecting Solano Project reliability is the frequency of long droughts which could result in major drawdown of Lake Berryessa; therefore, it is possible for these supplies to be impacted by climate change and drought conditions.

In addition, SSWA is in a region that has significant risk for seismic activity. Earthquake risk is further detailed in Section 3.13, the Seismic Risk Assessment and Mitigation Plan.

## **Water Supply**

The Annual Assessment will provide a quantification and description of SSWA's service area water supply portfolio. SSWA currently has two sources of water, USBR Federal Solano Project and the DWR SWP. The main water supply to SSWA is from Lake Berryessa which is owned and operated by the USBR. Lake Berryessa has a nominal storage capacity of 1,600,000 AF.

SSWA's water supply portfolio includes the following imported water supplies and volumes established by the 1990 SSWA Implementation & Lease Agreement:

- Solano County Water Agency under contract to City of Suisun City for Solano Project water: 521 MG (1,600AF).
- Solano County Water Agency under contract to City of Suisun City for State Water Project water: 424 MG (1,300AF).
- Solano County Water Agency under contract to Solano Irrigation District for Solano Project water: 170 MG (522AF).

## **Unconstrained Customer Demand**

The WSCP and Annual Assessment define unconstrained demand as expected water use prior to any projected shortage response actions that may be taken under the WSCP. Unconstrained demand is differentiated from observed demand as observed demand may be constrained by preceding, ongoing, or future actions, such as emergency supply allocations during a multi-year drought. WSCP shortage response actions to constrain demand are inherently extraordinary; routine activities such as ongoing conservation programs and regular operational adjustments are not considered constraints on demands.

The Least Cost Planning Decision Support System Model (DSS Model) was used to project long-term demand through 2045 based on expected service area growth for both population and employment. Demand forecasts were developed for SSWA to account for conservation from passive (i.e., from codes/standards) and active conservation programs. Based on this analysis, water demands were projected after accounting for the effects of the existing plumbing code and future active conservation savings.

## **Planned Water Use for Current Year Considering Dry Subsequent Year**

Water Code Section 10632(a)(2)(B)(ii) requires the Annual Assessment to determine "current year available supply, considering hydrological and regulatory conditions in the current year and one dry year." The Annual Assessment will include two separate estimates of SSWA's annual water supply and unconstrained demand

using: 1) current year conditions, and 2) assumed dry year conditions. SSWA will determine the hydrologic conditions of normal and dry years according to the following methodology:

**Normal Year** – This condition represents the water supplies a supplier considers available during normal conditions. This could be a single year or average range of years that most closely represents the average water supply available to the supplier. In the 2020 UWMP Guidebook and this WSCP, the terms “average” and “normal” are used interchangeably when addressing the water year type.

SSWA’s normal year and single dry year data are reported in Tables 7-1, 7-2, and 7-3 of the 2020 UWMP.

- **State Water Project:** The estimated deliveries in an average water year are based on the average SWP deliveries over a repeat of the *DWR State Water Project Delivery Capability Report 2019* (2019 DCR) historic hydrologic period of 1922 through 2003. The 2014 North of Delta Settlement allocation of 10% is included in this amount. Per Table 3c of the 2021 Reliability TM (UWMP Appendix K), Suisun City (and therefore SSWA) in an Average Water Year may receive 1,079 AF, or 83% of its contractual Table A Supply of 1,300 AF. In other words, the City’s SWP supply is 83% reliable in a normal water year. This percentage is used throughout the period of the 2020 UWMP of 2020 to 2045.
- **Solano Project:** The estimated Solano Project deliveries in an average water year are based on the average total percent allocation (including canal losses) and deliveries during average years over the historic hydrologic period of 1906 through 2020.

Per Table 6b of the 2021 Reliability TM, Suisun City (and therefore SSWA) in an Average Water Year may receive 1,590 AF, or 99.4% of its Participating Agency contractual amount of 1,600 AF. In other words, the City’s Solano Project supply is 99.4% reliable in a normal water year. This figure is used throughout the period of the 2020 UWMP of 2020 to 2045.

Per Table 6g of the 2021 Reliability TM, SID may deliver to SSWA in an Average Water Year 99.4% of its planned supply amount. In other words, SID’s Solano Project delivery to Suisun-Solano Water Authority is 99.4% reliable in a normal water year. This figure is used throughout the period of the 2020 UWMP of 2020 to 2045.

**Single Dry Year** – The single dry year is characterized as a year in which conditions reflect the lowest water supply available to the supplier.

- **State Water Project:** The estimated deliveries in a single dry water year are based on a repeat of single dry years 2015 and 2021. Per Table 3c of the 2021 Reliability TM, Suisun City (and therefore SSWA) in a Single Dry Water Year may receive 65 AF, or 5% of its contractual Table A Supply of 1,300 AF. In other words, the City’s SWP supply is 5% reliable in a single dry water year. This figure is used throughout the period of the 2020 UWMP of 2020 to 2045.
- **Solano Project:** The estimated deliveries in a single dry water year are based on the average percent of total Solano Project allocation during single dry years over the historic hydrologic period of 1906 through 2020.

Per Table 6b of the 2021 Reliability TM, Suisun City (and therefore SSWA) in a Single Dry Water Year may receive 1,577 AF, or 98.5% of its Participating Agency contractual amount of 1,600 AF. In other words, the City’s Solano Project supply is 98.5% reliable in a single dry water year. This figure is used throughout the period of the 2020 UWMP of 2020 to 2045.

Per Table 6g of the 2021 Reliability TM, SID may deliver to SSWA in a Single Dry Water Year 98.5% of its planned supply amount. In other words, SID’s Solano Project delivery to SSWA is 98.5% reliable in a single dry water year. This figure is used throughout the period of the 2020 UWMP of 2020 to 2045.

**Multiple Dry Years** – The multiple dry year period is the period that represents the lowest average water supply availability to an agency, generally considered to be the lowest average runoff for a consecutive multiple year

period (five years or more) for a watershed since 1903. DWR has interpreted “multiple dry years” to mean five dry years for the 2020 UWMP.

- **State Water Project:** The estimated deliveries in a multiple dry water year period are annual averages over five consecutive dry years that occurred in the last ten years. The 2014 North of Delta Settlement allocation of 10% is included in this percentage.

Per Table 3c of the 2021 Reliability TM, Suisun City (and therefore SSWA) in a Multiple Dry Water Year period may receive in dry year one 585 AF, or 45%, dry year two 390 AF, or 30%, dry year three 65 AF, or 5%, dry year four 195 AF, or 15%, and dry year five 390 AF, or 30%, of its contractual Table A Supply of 1,300 AF. In other words, the City’s SWP supply ranges from 45% to 5% reliable in multiple dry water years, depending on the year. This figure is used throughout the period of the 2020 UWMP of 2020 to 2045.

- **Solano Project:** The estimated deliveries in a multiple dry water year period are annual averages over five consecutive dry years, based on a repeat of the historic five-year dry period with low inflow to Lake Berryessa of 1990-1994.

Per Table 6b of the 2021 Reliability TM, Suisun City (and therefore SSWA) in a Multiple Dry Water Year period may receive 1,484 AF, or 92.8% of its Participating Agency contractual amount of 1,600 AF. In other words, the City’s Solano Project supply is 92.8% reliable in multiple dry water years. This figure is used throughout the period of the 2020 UWMP of 2020 to 2045.

Per Table 6g of the 2021 Reliability TM, SID may deliver to SSWA in a Multiple Dry Water Year period 92.8% of its planned supply amount. In other words, SID’s Solano Project delivery to SSWA is 92.8% reliable in multiple dry water years. This figure is used throughout the period of the 2020 UWMP of 2020 to 2045.

### Infrastructure Considerations

The Annual Assessment will include consideration of any infrastructure issues that may pertain to near-term water supply reliability, including repairs, construction, and environmental mitigation measures that may temporarily constrain capabilities, as well as any new projects that may add to system capacity. The following list identifies infrastructure issues that will be taken into consideration during the annual assessment:

1. *Water Treatment Plant construction: Chemical System Rehabilitation and conversion from gaseous chlorine to liquid chlorine.*
2. *Annual canal cleaning (November), manual clean each reach, water shortage event, requires planning and the potential to use alternate sources (Fairfield Emergency Interties).*
3. *A failure of the Tolenas Pipeline, which is a sole source of supply, and conveys water from the Cement Hill Water Treatment Plant to the SSWA distribution system. Per agreement, the two interties can provide up to 3.8 mgd. In 2021, the maximum day demand for SSWA was 6.5 mgd. This event could require in excess of a 50% demand reduction, or none, depending on the time of year a failure occurs.*

### Other Factors

For the Annual Assessment, any known issues related to water quality would be considered for their potential effects on water supply reliability. Recent fire activity in the Lake Berryessa watershed has the potential to impact the water quality supplies for SSWA.

- **Water Quality:** There was extensive testing by multiple agencies in the Solano Project watershed for volatile organics and inorganics after the LNU Lightning Complex Fire of August- October 2020. There have been no negative impacts to water quality for public water systems from the fire. SSWA will be testing for the fifth round of the Unregulated Contaminant Monitoring Rule (UCMR5) required monitoring in 2024. This includes collecting quarterly samples for 29 per- and polyfluoroalkyl substances (PFAS) and lithium, during a 12-month period from January 2024 through December 2024.

- **Climate Change:** Solano County has a mild, temperate climate throughout the year. A prevailing wind from the west, across the bay, tempers the climate. The annual mean daily temperature is 60.5°F. Predominant wind directions are from the southwest. There is an average of 344 frost-free days per year. Climate change has the potential to directly impact the SSWA’s surface water supply and to indirectly impact groundwater supplies. SID is committed to adapting to climate change in a manner that protects the water resources for the maximum benefit while continuing to maintain a reliable, affordable, high quality water supply for agriculture.
- **Precipitation:** The rainy season extends from October through April. Total average annual rainfall is 25 inches (1995–2020). In comparison, 2020 received 8 inches of rainfall for the year. Precipitation in Solano County may continue to have high variability year to year, leading to very wet years sometimes and very dry years at other times.
- **Sea Level Rise:** The Suisun City Marina is connected to the Bay Area Delta. Although the watershed and reservoirs are not on the Delta, the sea level rise might impact the service area land uses.

### 3.3 Six Standard Water Shortage Levels

Per Water Code Section 10632 (a)(3)(A), Suisun-Solano Water Authority must include the six standard water shortage levels that represent shortages from the normal reliability as determined in the Annual Assessment. The shortage levels have been standardized to provide a consistent regional and statewide approach to conveying the relative severity of water supply shortage conditions. This is an outgrowth of the severe statewide drought of 2012-2016, and the widely recognized public communication and state policy uncertainty associated with the many different local definitions of water shortage levels.

The six standard water shortage levels that are presented in Table 3-1 (DWR Submittal Table 8-1) correspond to progressively increasing estimated shortage conditions (up to 10%, 20%, 30%, 40%, 50%, and greater than 50% shortage compared to the normal reliability condition) and align with the response actions SSWA would implement to meet the severity of the impending shortages. These six levels, with increasing water use reduction targets and water demand reduction actions, are intended to have water use restrictions that are additive. For example, when successive levels of shortage are declared, the restrictions for Level 1 remain in place and Level 2 limitations are added; restrictions for Level 1 and 2 remain in place and Level 3 actions are added; and so on. The table below provides context and a general overview of the progressive water shortage levels. A comprehensive list of actions as provided for each level is presented in Table 3-2 (DWR Submittal Table 8-2) in Section 3.4.

**Table 3-1. Water Shortage Contingency Plan Levels (DWR Submittal Table 8-1)**

Table 8-1 Retail Water Shortage Contingency Plan Levels		
Shortage Levels	Complete Both	
	Percent Shortage Range <sup>1</sup> <i>Numerical value as a percent</i>	Water Shortage Condition <i>(Narrative description)</i>
0	0% (Normal)	A Level 0 Water Supply Shortage – Condition exists when Suisun-Solano Water Authority notifies its water users that no supply reductions are anticipated in this year. Suisun-Solano Water Authority proceeds with planned water efficiency best practices to support consumer demand reduction in line with



**Table 8-1 Retail  
Water Shortage Contingency Plan Levels**

Shortage Levels	Complete Both	
	Percent Shortage Range <sup>1</sup> <i>Numerical value as a percent</i>	Water Shortage Condition <i>(Narrative description)</i>
		state mandated requirements and local Suisun-Solano Water Authority goals for water supply reliability. Permanent water waste prohibitions are in place as stipulated in Suisun-Solano Water Authority’s Water Shortage Response Ordinance.
1	Up to 10%	A Level 1 Water Supply Shortage – Condition exists when Suisun-Solano Water Authority notifies its water users that due to drought or other supply reductions, a consumer demand reduction of up to 10% is necessary to make more efficient use of water and respond to existing water conditions. Suisun-Solano Water Authority shall implement the mandatory Level 1 conservation measures identified in this ordinance. The type of event that may prompt Suisun-Solano Water Authority to declare a Level 1 Water Supply Shortage may include, among other factors, Lake Berryessa Storage Levels drop below 800,000 AF on February 28, or a failure of the Tolenas pipeline during a portion of the year.
2	11% to 20%	A Level 2 Water Supply Shortage – Condition exists when Suisun-Solano Water Authority notifies its water users that due to drought or other supply reductions, a consumer demand reduction of up to 20% is necessary to make more efficient use of water and respond to existing water conditions. Upon declaration of a Level 2 Water Supply Shortage condition, Suisun-Solano Water Authority shall implement the mandatory Level 2 conservation measures identified in this ordinance.
3	21% to 30%	A Level 3 Water Supply Shortage – Condition exists when Suisun-Solano Water Authority declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its residents and businesses that up to 30% consumer demand reduction is required to ensure sufficient supplies for human consumption, sanitation, and fire protection. Suisun-Solano Water Authority must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
4	31% to 40%	A Level 4 Water Supply Shortage – Condition exists when Suisun-Solano Water Authority declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its residents and businesses that up to 40% consumer demand reduction is required to ensure sufficient supplies for human consumption, sanitation, and fire protection. Suisun-Solano Water Authority must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
5	41% to 50%	A Level 5 Water Supply Shortage – Condition exists when Suisun-Solano Water Authority declares a water shortage emergency condition pursuant to California

Table 8-1 Retail Water Shortage Contingency Plan Levels		
Shortage Levels	Complete Both	
	Percent Shortage Range <sup>1</sup> <i>Numerical value as a percent</i>	Water Shortage Condition <i>(Narrative description)</i>
		Water Code section 350 and notifies its residents and businesses that up to 50% or more consumer demand reduction is required to ensure sufficient supplies for human consumption, sanitation, and fire protection. Suisun-Solano Water Authority must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
6	>50%	A Level 6 Water Supply Shortage – Condition exists when Suisun-Solano Water Authority declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its residents and businesses that greater than 50% or more consumer demand reduction is required to ensure sufficient supplies for human consumption, sanitation, and fire protection. Suisun-Solano Water Authority must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.

<sup>1</sup> One level in the Water Shortage Contingency Plan must address a water shortage of 50%.

### 3.4 Shortage Response Actions

SSWA has defined specific shortage response actions that align with the shortage levels in Tables 3-2 and 3-3. This approach aligns with California Water Code Section 10632 (a)(4) that requires the WSCP to specify shortage response actions that align with the defined shortage levels. These shortage response actions were developed with consideration to SSWA’s system infrastructure and operations changes, supply augmentation responses, customer classes and water use-specific demand reduction initiatives, and increasingly stringent water use prohibitions.

#### Demand Reduction

The demand reduction measures that would be implemented to address shortage levels are described in Table 3-2 (DWR Submittal Table 8-2). This table indicates which actions align with specific defined shortage levels and estimates the extent to which each action will reduce the gap between supplies and demands. The estimates of demand reduction are presented as a range of savings to demonstrate an anticipated response from SSWA’s chosen suite of actions. These demand reductions are expected to deliver the outcomes necessary to meet the requirements of a given shortage level that will receive on-going monitoring. When successive levels of shortage are declared, the actions for Level 1 remain in place and Level 2 limitations are added; restrictions for Level 1 and 2 remain in place and Level 3 actions are added; and so on. This table also identifies the enforcement action, if any, associated with each demand reduction measure.

**Table 3-2. Demand Reduction Actions (DWR Submittal Table 8-2)**

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions <i>Drop down list</i> <i>These are the only categories that will be accepted by the WUE data online submittal tool. Select those that apply to you.</i>	How much is this going to reduce the shortage gap? <i>Include volume units used.</i>	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement? <i>Drop Down List</i>
0	Other water feature or swimming pool restriction	Statewide Prohibition is Required	Cleaning, filling, or operating water features, such as decorative fountains, except where the water is part of a recirculating system, requires a permit from the Suisun-Solano Water Authority.	No
0	Other	Statewide Prohibition is Required	Washing or hosing down vehicles is prohibited except by use of a handheld container, hose with an automatic shut off device, or at a commercial car wash.	No
0	Other - Prohibit use of potable water for washing hard surfaces	Statewide Prohibition is Required	Washing hard or paved surfaces is prohibited except to alleviate safety or sanitary hazards using a handheld container, hose with an automatic shut off device, or a low-volume high pressure cleaning machine that recycles used water.	No
0	Landscape - Restrict or prohibit runoff from landscape irrigation	Statewide Prohibition is Required	Watering vegetated areas in a manner that causes excessive water flow or runoff onto an adjoining sidewalk, driveway, street, alley, gutter, or ditch is prohibited.	Yes
0	Landscape - Other landscape restriction or prohibition	Statewide Prohibition is Required	Irrigating ornamental turf on public street medians is prohibited.	No
0	Landscape - Other landscape restriction or prohibition	Statewide Prohibition is Required	No landscape watering shall occur within 48 hours after measurable precipitation.	No
0	Landscape - Other landscape restriction or prohibition	On-going Long Term-Conservation Savings Measure. Not applicable to Water	Prohibited use of broken or defective plumbing, sprinkler watering or irrigation systems	No

**Submittal Table 8-2: Demand Reduction Actions**

Shortage Level	Demand Reduction Actions <i>Drop down list</i> <i>These are the only categories that will be accepted by the WUE data online submittal tool. Select those that apply to you.</i>	How much is this going to reduce the shortage gap? <i>Include volume units used.</i>	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement? <i>Drop Down List</i>
		Shortage Contingency Plan quantifiable savings.		
0	Landscape - Other landscape restriction or prohibition	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	Prohibited use of potable water for outdoor irrigation in newly constructed homes and buildings, except with drip or micro spray irrigation systems.	No
0	CII - Restaurants may only serve water upon request	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	CII - Restaurants may only serve water upon request	No
0	CII - Other CII restriction or prohibition	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	No water in new, added or altered cooling system equipment unless at least fifty percent (50%) of the water is recycled.	No
0	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	All new commercial car wash and laundry facilities must re-circulate the wash water or obtain a permit from the Suisun-Solano Water Authority.	No
0	Other - Require automatic shut of hoses	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	Use a shutoff nozzle on hoses.	Yes

**Submittal Table 8-2: Demand Reduction Actions**

Shortage Level	Demand Reduction Actions <i>Drop down list</i> <i>These are the only categories that will be accepted by the WUE data online submittal tool. Select those that apply to you.</i>	How much is this going to reduce the shortage gap? <i>Include volume units used.</i>	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement? <i>Drop Down List</i>
0	Pools and Spas - Require covers for pools and spas	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	Pools and spas shall be covered when not in use to prevent evaporation.	No
0	Other - Prohibit use of potable water for construction and dust control	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	Require a construction water use plan be submitted to the water supplier that addresses how impacts to existing water users will be mitigated (such as dust control).	No
0	Landscape - Limit landscape irrigation to specific days	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings	Irrigation shall be limited to 4 days per week turf watering when using potable water.	No
1	CII - Lodging establishment must offer opt out of linen service	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	CII - Lodging establishment must offer opt out of linen service	Yes
1	Expand Public Information Campaign	0-1%	Encourage customers to wash only full loads when washing dishes or clothes.	No
1	Expand Public Information Campaign	0-1%	Encourage customers to use pool covers to minimize evaporation.	No
1	Increase Water Waste Patrols	0-1%	Increase Water Waste Patrols	Yes
1	Reduce System Water Loss	0-5%	Real Loss Reduction - Pressure Management and More	Yes



**Submittal Table 8-2: Demand Reduction Actions**

Shortage Level	Demand Reduction Actions <i>Drop down list</i> <i>These are the only categories that will be accepted by the WUE data online submittal tool. Select those that apply to you.</i>	How much is this going to reduce the shortage gap? <i>Include volume units used.</i>	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement? <i>Drop Down List</i>
			Aggressive Leak Detection and Repair	
1	Expand Public Information Campaign	0-1%	Community Outreach and Messaging (Expand Public Information Campaign)	Yes
1	Landscape - Limit landscape irrigation to specific times	0-5%	Watering or irrigation of vegetated areas is prohibited between 9 am and 6 pm except by use of a handheld device, hose equipped with an automatic shutoff device, or for adjusting or repairing an irrigation system for short periods of time.	Yes
2	Improve Customer Billing	0-1%	Improve customer billing reports to include more details on water use	Yes
2	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	0-1%	Fix leaks or faulty sprinklers within 4 day(s).	Yes
2	Landscape - Limit landscape irrigation to specific days	5-10%	Irrigation shall be limited to 3 days per week turf watering when using potable water. Plant containers, trees, shrubs and vegetable gardens may be watered additional days using only drip irrigation or hand watering.	Yes
2	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	0-1%	Fix leaks or faulty sprinklers promptly/within 5 day(s).	Yes
2	Decrease Line Flushing	0-1%	Decrease Line Flushing	Yes
2	Pools and Spas - Require covers for pools and spas	0-1%	Pools and Spas - Require covers for pools and spas	Yes

**Submittal Table 8-2: Demand Reduction Actions**

Shortage Level	Demand Reduction Actions <i>Drop down list</i> <i>These are the only categories that will be accepted by the WUE data online submittal tool. Select those that apply to you.</i>	How much is this going to reduce the shortage gap? <i>Include volume units used.</i>	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement? <i>Drop Down List</i>
2	Pools - Allow filling of swimming pools only when an appropriate cover is in place.	0-1%	Pools - Allow filling of swimming pools only when an appropriate cover is in place.	Yes
2	Water Features - Restrict water use for decorative water features, such as fountains	0-1%	Filling or refilling ornamental lakes and ponds is prohibited. Ornamental lakes and ponds that sustain aquatic life of significant value and were actively managed prior to the storage declaration are exempt.	Yes
3	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	0-1%	Fix leaks or faulty sprinklers within 3 day(s).	Yes
3	Other water feature or swimming pool restriction	0-1%	Decorative water features that use potable water must be drained and kept dry.	Yes
3	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	0-1%	Car washing is only permitted using a commercial carwash that recirculates water or by high pressure/low volume wash systems.	Yes
3	Other - Prohibit use of potable water for construction and dust control	0-1%	Require a construction water use plan be submitted to the water supplier that addresses how impacts to existing water users will be mitigated (such as dust control).	Yes
3	Landscape - Limit landscape irrigation to specific days	10-25%	Irrigation shall be limited to 2 days per week turf watering when using potable water. Plant containers, trees, shrubs and vegetable gardens may be watered additional days using only drip irrigation or hand watering.	Yes

**Submittal Table 8-2: Demand Reduction Actions**

Shortage Level	Demand Reduction Actions <i>Drop down list</i> <i>These are the only categories that will be accepted by the WUE data online submittal tool. Select those that apply to you.</i>	How much is this going to reduce the shortage gap? <i>Include volume units used.</i>	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement? <i>Drop Down List</i>
3	Water Features - Restrict water use for decorative water features, such as fountains	0-1%	Operations of fountains shall not be permitted.	Yes
4	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	0-1%	Fix leaks or faulty sprinklers within 2 day(s).	Yes
4	Landscape - Limit landscape irrigation to specific days	5-20%	Irrigation shall be limited to 1 day per week turf watering when using potable water. Plant containers, trees, shrubs and vegetable gardens may be watered additional days using only drip irrigation or hand watering.	Yes
4	Other water feature or swimming pool restriction	0-1%	Existing pools shall not be emptied and refilled using potable water unless required for public health and safety purposes.	Yes
4	Other water feature or swimming pool restriction	0-1%	No new permits for pools will be issued.	Yes
5	Landscape - Prohibit all landscape irrigation	5-20%	All irrigation is prohibited.	Yes
5	Landscape - Prohibit certain types of landscape irrigation	0-1%	Watering of all golf course areas is prohibited	Yes
5	Landscape - Prohibit certain types of landscape irrigation	0-1%	Watering of parks, school grounds, and recreation fields is prohibited, except for rare plant or animal species	Yes
5	Other - Customers must repair leaks, breaks, and	0-1%	Fix leaks or faulty sprinklers within 1 day(s).	Yes

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions <i>Drop down list</i> <i>These are the only categories that will be accepted by the WUE data online submittal tool. Select those that apply to you.</i>	How much is this going to reduce the shortage gap? <i>Include volume units used.</i>	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement? <i>Drop Down List</i>
	malfunctions in a timely manner			
6	Landscape - Prohibit all landscape irrigation	0-5%	Suisun-Solano Water Authority may shut off all non-essential water services. All irrigation is prohibited.	Yes
6	CII - Other CII restriction or prohibition	0-15%	Water for commercial, manufacturing, or processing purposes shall be reduced in volume by up to 50% or exceeded if necessary for public health and safety purposes.	Yes
6	Other	0-70%	Water use for public health and safety purposes only. Customer rationing may be implemented.	Yes

**Supply Augmentation**

The supply augmentation actions are described in Table 3-3 (DWR Submittal Table 8-3). These augmentations represent short-term management objectives triggered by the WSCP and do not overlap with the long-term new water supply development or supply reliability enhancement projects.

Supply Augmentation is available through the emergency interties with Fairfield. Two interties currently exist and, by agreement, can provide up to 3.8 mgd. This supply augmentation would be available under short term conditions when SSWA cannot meet supply, for example, due to a failure of the Tolenas Transmission Pipeline. The intent is not to provide additional raw water supply as any water supplied through the Fairfield interties requires raw water to be supplied from Solano Project, unless a transfer agreement was established between another member agency. Unfortunately, the likelihood of this opportunity is low, since all the other member units would likely be required to conserve. However, per the 1999 Drought Measures Agreement, when Lake Berryessa drops below 400,000 AF storage, SID may implement a voluntary fallowing program for the subsequent water year for M&I use that would be provided through Solano Project raw water supplies to the treatment plant.

**Table 3-3. Supply Augmentation and Other Actions**

Table 8-3: Supply Augmentation and Other Actions			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier <i>Drop down list</i> <i>These are the only categories that will be accepted by the WUE data online submittal tool</i>	How much is this going to reduce the shortage gap? <i>Include volume units used.</i>	Additional Explanation or Reference <i>(optional)</i>
<i>Add additional rows as needed</i>			
1 through 6	Exchanges	3.8 mgd	Supply Augmentation is available through the emergency interties with Fairfield. Two interties currently exist and by agreement, can provide up to 3.8 mgd. This supply augmentation would be available under short term conditions when SSWA cannot meet supply. For example, due to a failure of the Tolenas Transmission Pipeline.
5 through 6	Other Actions (describe)	25%	If Lake Berryessa drops below 400,000 AF storage, SID may implement a voluntary fallowing program for the subsequent water year for M&I use that would be provided through Solano Project raw water supplies to the treatment plant.

### Operational Changes

During shortage conditions, operations may be affected by supply augmentation or demand reduction responses. SSWA will consider its operational procedures when it completes its Annual Assessment beginning in 2022 or as needed to identify changes that can be implemented to address water shortage on a short-term basis. SSWA can alter maintenance cycles, such as system flushing, reduce leak response time, and defer planned construction activities and capital improvement projects to limit or defer planned system outages.

### Additional Mandatory Restrictions

California Water Code Section 10632(a)(4)(D) calls for “additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions” to be included among the WSCP’s shortage response actions. SSWA has identified additional mandatory restrictions in Resolution No. 09-11 (Appendix B) and may, upon Board approval, determine additional mandatory measures to be implemented as deemed appropriate under the water shortage conditions.



## Emergency Response Plan

A catastrophic water shortage would be addressed according to the appropriate water shortage level and response actions. It is likely that a catastrophic shortage would immediately trigger Shortage Level 6. Response actions have been put in place to mitigate a catastrophic shortage. In addition, there are several plans that address catastrophic failures and align with the WSCP, as described in the following sections.

## Seismic Risk Assessment and Mitigation Plan

Complete details regarding the Seismic Risk Assessment and Mitigation Plan have been included in Section 3.13 and Appendix F.

## Solano County Emergency Operations Plan

The Solano County Emergency Operations Plan (EOP)<sup>1</sup> establishes an emergency management organization and assigns functions and tasks consistent with the California Standard Emergency Management System (SEMS) and the National Incident Management System (NIMS). It provides for the integration and coordination of planning efforts of multiple jurisdictions within Solano County. The intent of the EOP is to provide direction on how to respond to an emergency from the outset through an extended response, and into the recovery process. The provisions, policies, and procedures of the Solano County EOP are applicable to all agencies and individuals, public and private, having responsibilities for emergency preparedness, response, recovery and/or mitigation in Solano County.

## Suisun-Solano Water Authority Emergency Response Plan

A catastrophic water shortage occurs in the event of a disaster, such as earthquake, flood, fire, or other emergency, that results in a sudden insufficient supply of available water to meet SSWA's needs. In addition to the Water Shortage Contingency Plan, SSWA's Emergency Response Plan (ERP) defines how SSWA will respond to emergencies and/or disasters that may affect its operations and ability to deliver safe water supplies.

The ERP, updated in 2014, is compatible with the comprehensive Solano County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) and includes participation in the nationwide Water/Wastewater Agency Response Network (WARN). The MJHMP contains a list of the designated responsible personnel, including their duties during an emergency, and a contact list of external staff who may be essential for coordinating multi-agency and multi-jurisdiction support. A Water Quality Emergency Notification Plan, Public Notification Procedures, and a list of equipment on-hand is provided, with information for sources of supplies and equipment.

The following discusses actions that would take place if there were a catastrophic event affecting either the Solano Project or SWP supplies.

Earthquake: In the event of an earthquake, the Solano Project Emergency Action Plan (EAP) is invoked. The EAP, developed in coordination with SCWA and the USBR, provides a detailed response for various levels of seismic activities both at the Monticello Dam site and within a specified geographical area surrounding the Solano Project. The response is to first perform an inspection then do an assessment of any potential damage. If water deliveries are unavailable from the Solano Project, water users would shift to SWP supplies and/or invoke emergency exchange agreements with other agencies.

Should an earthquake result in a disruption of SWP supplies through the North Bay Aqueduct (NBA), the member agencies would have access to Solano Project supplies.

Power outage: The Solano Project is not dependent upon power to operate. It is a gravity system from the Monticello Dam to the end of the Putah South Canal that can be operated manually.

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<sup>1</sup> Solano County Emergency Operations Plan: [https://www.solanocounty.com/depts/oes/emergency\\_plans.asp](https://www.solanocounty.com/depts/oes/emergency_plans.asp)

The NBA relies upon PG&E to provide power to pump water through the NBA. A power outage of any duration would result in the NBA not being able to utilize its water supply, except for the limited amount of storage in the pipeline. The NBA water users would shift to Solano Project supplies in this scenario.

Contamination: Any detection of contamination would result in a shut-down of the Solano Project deliveries. Member agencies would switch to SWP supply.

Should there be contamination at the intake to the NBA, the NBA would be shut down, and member agencies would use Solano Project water until the contamination is resolved.

Landslide: The Putah South Canal is susceptible to a landslide which could either block or damage the Putah South’s ability to deliver water. In 2014, an underground pipeline bypass was installed in an area most susceptible to landslide. However, in the event of a landslide that blocks the Putah South Canal, Solano Project water users would shift to a SWP supply.

The NBA is an underground pipeline and not susceptible to any landslide risks.

### Shortage Response Action Effectiveness

For each specific Shortage Response Action identified, the WSCP also estimates the extent to which that action will reduce the gap between supplies and demands identified in Table 8-2. To the extent feasible, SSWA has estimated percentage savings for the chosen suite of shortage response actions, which can be anticipated to deliver the expected outcomes necessary to meet the requirements of a given shortage level.

## 3.5 Communication Protocols

SSWA will communicate any significant changes to, or shortages in, available water supply sources, as well as any disruption of service to its water customers; the public; and local, regional, and state government agencies as required and necessary.

Communications and/or updates may be made through SSWA’s website, social media posts, utility billing inserts or supplements, and press releases in local newspapers, radio, or television stations.

## 3.6 Compliance and Enforcement

Per Water Code Section 10632 (a)(6), Suisun-Solano Water Authority has defined customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions. Communication protocols to ensure customer compliance are described in Section 3.5 and customer enforcement, appeal, and exemption procedures are defined in Resolution No. 09-11 (Appendix B). To enforce the conservation requirements, penalties and charges are established in increasing severity depending on how many offenses have occurred. These are defined in Resolution No. 09-11 and summarized in Table 3-2 (DWR Table 8-2) and are reproduced in Table 3-4.

**Table 3-4. Water Shortage Contingency — Penalties and Charges**

Penalties or Charges	Stage When Penalty Takes Effect
Issue a written notice of the fact of a violation of a water use restriction to the Account Holder	First violation within the preceding twelve (12) calendar months
Impose a surcharge against the Account Holder for the property where the violation of a water use restriction occurred or is occurring in the amount of \$50	Second violation within the preceding twelve (12) calendar months

A surcharge against the Account Holder for the property where the violation of a water use restriction occurred or is occurring, in the amount of \$250	Third violation within the preceding twelve (12) calendar months (optional response)
Install a Flow Restrictor in the water service to the property where the violation of a water use restriction occurred or is occurring, at the Account Holder’s cost, for a length of time to be determined by Suisun-Solano Water Authority, with annual review by Suisun-Solano Water Authority staff	Fourth and any subsequent violation within the preceding twelve (12) calendar months

Exemptions to these penalties can be granted by the SSWA Board of Directors for various reasons, including medical requirements, livestock, protection of public health and safety, severe economic hardship, substantial re-plumbing to comply, commercial carwashes, golf courses, and nurseries.

### 3.7 Legal Authorities

Applicable legislation includes but is not limited to the following:

California Water Code, Division 1, Chapter 3, Water Shortage Emergencies, Sections 350-359, inclusive (authorizes declaration and implementation of water shortage emergency conditions).

California Water Code, Division 1, Chapter 3.5, Water Conservation Programs, Section 375-377, inclusive (authorizes water conservation programs). Government Code §53021(c) which states, “Services performed or expenditures made by a local agency within or without its territorial limits are conclusively deemed for the direct protection and benefit of its inhabitants and property if made or performed for...a local emergency as defined by subdivision (c) of [Gov. Code] Section 8558.”

Per Water Code Section 10632 (a)(7) (B), Suisun-Solano Water Authority shall declare a water shortage emergency condition to prevail within the area served by SSWA whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.

Per Water Code Section 10632 (a)(7)(C), Suisun-Solano Water Authority shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency under California Government Code, California Emergency Services Act (Article 2, Section 8558).

### 3.8 Financial Consequences of WSCP

Per Water Code Section 10632(a)(8), suppliers must include a description of the overall anticipated financial consequences to the supplier of implementing the WSCP. This description must include potential reductions in revenue and increased expenses associated with implementation of the shortage response actions. This should be coupled with an identification of the anticipated mitigation actions needed to address these financial impacts.

The Water Shortage Actions designed to address a range of water shortage conditions have the potential to impact SSWA’s revenues and expenditures. To assess these impacts, SSWA calculated the revenue impacts resulting from each shortage stage percent reduction in sales as compared to an estimate of a normal year baseline. Other factors incorporated into the analysis included water losses, pricing structure and avoided costs.

### 3.9 Monitoring and Reporting

Per Water Code Section 10632(a)(9), Suisun-Solano Water Authority is required to provide a description of the monitoring and reporting requirements and procedures that have been implemented to ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting

requirements. This data will be used to measure the effectiveness of any water shortage contingency level that may be implemented.

#### 3.9.1 Normal Conditions

Under normal water supply conditions, potable water production figures are recorded daily. Totals are reported weekly to the Supervisor, Water Treatment and Quality. Totals are reported monthly to the M&I Operation Superintendent and incorporated into the water supply report. Monthly reports are prepared and monitored.

#### 3.9.2 Drought Conditions

During Drought Stage water supply condition, potable water production figures are recorded daily. Weekly totals will be provided to the Supervisor, Water Treatment and Quality. The M&I Operation Superintendent compares the weekly production to the target weekly production to verify the reduction goal is being met. Weekly comparison reports are forwarded to the Water Conservation Coordinator and the Water & Power Operations Manager. Monthly reports are sent to the General Manager of SSWA. If reduction goals are not met, the General Manager will notify the SSWA Board of Directors so that corrective action can be taken.

#### 3.9.3 Emergency Water Shortage Conditions

During an Emergency Conditions shortage or interruption of service, Drought Stage procedures will be followed, with the addition of daily production reports to the Water & Power Operations Manager.

### 3.10 WSCP Refinement Procedures

Per California Water Code Section 10632 (a)(10), Suisun-Solano Water Authority must provide reevaluation and improvement procedures for systematically monitoring and evaluating the functionality of the water shortage contingency plan in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.

SSWA's WSCP is prepared and implemented as an adaptive management plan. SSWA will use the monitoring and reporting process defined in Section 3.9 to refine the WSCP. In addition, if certain procedural refinements or new actions are identified, SSWA will evaluate their effectiveness, incorporate them into the WSCP, and implement them quickly at the appropriate water shortage level.

Data collected from the normal, drought, and emergency water shortage conditions will be evaluated and considered in determining whether to implement, maintain, amend, or terminate a water shortage response action and/or to amend one or more elements of the WSCP. If revisions to the WSCP are warranted before the next UWMP is updated, the WSCP will be updated outside of the UWMP cycle.

### 3.11 Special Water Feature Distinction

Per Water Code Section 10632 (b), Suisun-Solano Water Authority has defined water features as those artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as per subdivision (a) of Section 115921 of the Health and Safety Code, in Resolution No. 09-11 (Appendix B).

### 3.12 Plan Adoption, Submittal, and Availability

Per Water Code Section 10632 (a)(c), SSWA provided notice of the availability of the draft 2020 UWMP and draft 2020 WSCP and notice of the public hearing to consider adoption of the WSCP. The public review drafts of the 2020 UWMP and the 2020 WSCP were posted prominently on the Solano Irrigation District website <http://www.sidwater.org/> and City of Suisun website at <http://www.suisun.com/> in advance of the public hearing on May 8, 2023. Copies of the 2020 UWMP were made available for public review at the Solano Irrigation District office and at City Hall in Suisun City. Public hearing notifications were published in the Daily Republic

newspaper at least 14 days prior to the meeting including April 24 and May 1, 2023. A copy of the published Notice of Public Hearing is included in Appendix D.

SSWA held the public hearing, reviewed, and approved, the draft 2020 UWMP and draft WSCP on May 8, 2023, at the Regular SSWA Board Meeting at the City of Suisun City Hall. See Appendix E for the adoption resolution approving the WSCP.

By June 8, 2023, SSWA's adopted 2020 UWMP and 2020 WSCP will be filed with DWR and California State Library.. Suisun-Solano Water Authority will make the WSCP available for public review on its website no later than 30 days after filing with DWR.

Based on DWR's review of the WSCP, SSWA will make any amendments in its adopted WSCP, as required and directed by DWR.

If Suisun-Solano Water Authority revises its WSCP after the UWMP is approved by DWR, then an electronic copy of the revised WSCP will be submitted to DWR within 30 days of its adoption.



### 3.13 Seismic Risk Assessment and Mitigation Plan

Earthquakes are a significant concern to Solano County which is seismically active since it is situated on the boundary between two tectonic plates. Solano County is on the North American Plate, and several active faults cross Solano County into the surrounding San Francisco Bay Area. Earthquakes can cause serious structural damage to buildings, overlying aqueducts, transportation facilities, utilities, and can lead to loss of life. Seismic shaking is by far the single greatest cause of damage from an earthquake in Solano County, followed by liquefaction. In addition, earthquakes can cause collateral emergencies including dam and levee failures, fires, and landslides.

Per Water Code Section 10632.5, Suppliers are required to assess seismic risk to water supplies as part of their WSCP. The code also states that “An urban water supplier may comply with this section by submitting, pursuant to Section 10644, a copy of the most recent adopted local hazard mitigation plan or multihazard mitigation plan under the federal Disaster Mitigation Act of 2000 (Public Law 106-390) if the local hazard mitigation plan or multihazard mitigation plan addresses seismic risk.”

The plan also must include the mitigation plan for the seismic risk(s). SSWA is located in the jurisdiction of Solano County, which developed the Solano County Multi-Jurisdiction Hazard Mitigation Plan (MJHMP)<sup>2</sup> to provide the County with a blueprint for hazard mitigation planning to better protect the people and property of the County from the effects of future natural hazard events. The Solano County MJHMP is the official statement of the County’s commitment to ensuring a resilient community and serves as a tool to assist decision makers in directing mitigation activities and resources. The MJHMP is organized into seven sections, with Sections 5-7 described below for reference:

- Section 5, Hazard Risk Assessment identifies and prioritizes natural hazards affecting Solano County and assesses the County’s vulnerability from the identified hazards.
- Section 6, Mitigation Strategy identifies mitigation goals, assesses the County’s capabilities to implement mitigation actions, describes the review of previously identified mitigation actions, and identifies and prioritizes new mitigation actions.
- Section 7, Plan Implementation and Maintenance discusses plan adoption and implementation, as well as the process to monitor, evaluate, update, and maintain the MJHMP. This section also includes a discussion on continued public involvement.

In Table 5-3 of Section 5 in the MJHMP, hazards are prioritized, including earthquakes, in the Hazard Prioritization Matrix (Figure 3-2). In Sections 6 and 7 of the MJHMP, mitigation strategies and plan implementation are defined.

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<sup>2</sup> Solano County Multi-Jurisdictional Hazard Mitigation Plan:  
<https://www.solanocounty.com/civicax/filebank/blobdload.aspx?blobid=37785>

**Figure 3-2. Hazard Prioritization Matrix**

Table 5-3: Hazard Prioritization Matrix

Hazard Type	Declared Hazard Events 1950 to Present (FEMA & CalEMA)	Localized Events	Spatial Extent	Probability of Future Occurrence	Mean Ranking
Wildfire <sup>1</sup>	3	87	Significant	Highly Likely	1
Flooding <sup>2,3</sup>	9	20	Significant	Occasional	2
Earthquake/Seismic Shaking <sup>4</sup>	1	12	Significant	Occasional	3
Severe Weather and Storms <sup>5</sup>	11		Extensive	Highly Likely	4
Landslides <sup>6</sup>		52	Limited	Occasional	5
Drought	3		Extensive	Likely	6
Dam Failure <sup>9</sup>			Significant	Occasional	7
Expansive Soils (Shrink-Swell)			Extensive	Highly Likely	8
Sea Level Rise/Climate Change			Significant	Likely	9
Tsunami			Limited	Unlikely	10

1. Localized events number does not include the 3 declared events by FEMA/CalEMA, data source Cal Fire Sonoma-Lake-Napa Unit from 1951 to 2011.
2. Flooding includes repetitive flooding (localized), coastal flooding, delta levee failure, and erosion.
3. Resulting from Severe Weather/Storms, data source Solano County Computer-Aided Dispatch System from 2001 to 2011.
4. Earthquakes/Seismic Shaking includes faulting and liquefaction.
5. Severe Weather and Storms include extreme heat and freeze.
6. Coe, J.A., Crovelli, R.A., 2008, Landslide risk in the San Francisco Bay region, from 1968 to 2007. Data not specific in terms of delineating if landslides occurred in incorporated or unincorporated areas.
9. Folsom Dam failure event on July 17, 1995. Although not in Solano County, has potential to impact the County in the event of failure.

For Solano County, active faults which could have the largest impact on the County if an earthquake event occurred include the Hayward North/Rodgers Creek and Concord/Green Valley North/South Fault. The Hayward North/Rodgers Creek Fault can generate significantly destructive earthquakes in Solano County. This strike-slip fault is approximately 74 miles (119 kilometers) in length and is situated along the western base of the hills on the east side of the San Francisco Bay Area. The Concord/Green Valley North/South Fault has the potential to cause either a major or small earthquake event to the northwest and southeast of Suisun Bay, in Solano County. The U.S. Geological Survey estimates that the probability of an earthquake occurring between 2007 and 2036 in the San Francisco Bay Region with a magnitude of 6.7 or greater is 63% (Solano County MJHMP). A Hayward North/Rodgers Creek Fault earthquake event with a magnitude of 6.7 or greater has a probability of 31% before 2036. The Concord/Green Valley North/South Fault in Solano County has a lower probability of occurring.

In addition to the Seismic Risk Assessment and Mitigation in the MJHMP, the Solano County ERP includes an Earthquake Annex<sup>3</sup> that provides an overview of an earthquake hazard assessment, along with other earthquake related hazards information. It describes the vulnerability of Solano County to earthquakes, mitigation and preparedness efforts, the response actions, public alert and warning strategies, specialized resources that may be needed and recovery actions taken in response to an earthquake.

<sup>3</sup> Solano County, Office of Emergency Services. (2017). *Emergency Operations Plan Earthquake Annex*: <https://www.solanocounty.com/civicax/filebank/blobload.aspx?BlobID=13274>

## 4 REFERENCES

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*All links below were accessed in February 2022 unless otherwise indicated.*

California State Legislature. (1970). Government Code, California Emergency Services Act, Article 2, Sect. 8558. [https://leginfo.ca.gov/faces/codes\\_displaySection.xhtml?lawCode=GOV&sectionNum=8558#:~:text=\(a\)%20%E2%80%9CState%20of%20war,an%20enemy%20attack%20is%20probable](https://leginfo.ca.gov/faces/codes_displaySection.xhtml?lawCode=GOV&sectionNum=8558#:~:text=(a)%20%E2%80%9CState%20of%20war,an%20enemy%20attack%20is%20probable)

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Public Policy Institute of California (PPIC). (2019). *Priorities for California's Water*. <https://www.ppic.org/publication/priorities-for-californias-water/>

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## APPENDIX A – 1999 SOLANO PROJECT MEMBERS’ DROUGHT MEASURES AGREEMENT

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The 1999 Solano Project Members’ Agreement as to Drought Measures and Water Allocation can be viewed as a separate document online at the following link:

<https://www.sidwater.org/DocumentCenter/View/119/Appendix-D---Solano-Project-Members-Agreement-as-?bidId=>

# APPENDIX B – SUISUN-SOLANO WATER AUTHORITY WATER CONSERVATION REQUIREMENT, RESOLUTION NO. 09-11

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## SUISUN-SOLANO WATER AUTHORITY WATER CONSERVATION REQUIREMENTS

The following Water Conservation Requirements were adopted by Resolution No. 09-11 of the Board of Directors of the Suisun-Solano Water Authority on June 16, 2009.

### SECTION 1 AUTHORITY

#### 1.1 Statement of Need

Because of the terrestrial and climatic conditions which prevail in the region where the Suisun-Solano Water Authority (SSWA) is located and because of the limited water supplies both regionally and to SSWA in particular, there are both moral and practical obligations to put our water resources to beneficial use to the maximum extent possible. Maximizing beneficial use includes elimination of waste or unreasonable use of water and conservation of all water resources available to SSWA, while protecting the interests of the people of SSWA and the public welfare.

#### 1.2 Applicable Legislation

Applicable legislation for this Resolution includes but is not limited to the following:

California Water Code, Division 1, Chapter 3, Water Shortage Emergencies, Sections 350-359, inclusive (authorizes declaration and implementation of water shortage emergency conditions).

California Water Code, Division 1, Chapter 3.5, Water Conservation Programs, Section 375-377, inclusive (authorizes water conservation programs).

#### 1.3 Applicability

The provisions of this Resolution shall apply to all water users served by SSWA water system.

#### 1.4 Prohibition of Violation

No water user of SSWA water system shall knowingly make, cause, use, or permit the use of water from SSWA water system for residential, commercial, industrial, agricultural, institutional, or any other purpose in a manner contrary to any provision of this Resolution.

#### 1.5 Limitation of Liability

Nothing in this Resolution shall be deemed or construed to create any liability for SSWA or its member agencies or the officers, employees and agents of either of them that are not otherwise imposed by law.

### SECTION 2 DEFINITIONS

#### 2.1 Wasting Water

Wasting water includes the following non-beneficial uses of water provided by SSWA:

- a. Watering grass, lawns, ground cover, shrubbery, open ground, crops or trees in a manner or to an extent which allows excess water to run off the area being watered or which results in overspray by spray irrigation facilities.
- b. Washing sidewalks, walkways, driveways, parking lots and all other hard surfaced areas by direct hosing, except as may be necessary to protect the public health and safety.



- c. Causing or permitting water to escape through breaks or leaks within the water user's plumbing or distribution system for any substantial period of time within which such a break or leak should reasonably have been discovered and corrected. Up to 24 hours is presumed to be a reasonable period after discovery of a break or leak to correct the problem.

## 2.2 Customer or Account Holder

A Customer or Account Holder is the person, corporation, agency, or other entity who owns a water meter connected to SSWA water system, and is responsible for making payments for service.

## 2.3 Water User or Consumer

A Water User or Consumer is any person, corporation, agency, or other entity who uses water from SSWA water system for any reason whatsoever regardless of whether the person, corporation, etc., is a Customer or Account Holder.

## 2.4 Flow Restrictor

A Flow Restrictor is any device which limits the pressure or flow rate at the water service connection.

## 2.5 Spray Irrigation

Spray irrigation is applying water to landscape by sprinklers or spray nozzles.

## 2.6 Water Shortage

A Water Shortage is any condition in which water supply is less than actual or projected water demand. Water Shortages can be short term such as those caused by failure of water system infrastructure, or long term, such as those caused by insufficient raw water supplies.

# **SECTION 3 GENERAL PROVISIONS**

## 3.1 Definition of Water Conservation Conditions

### 3.1.1 Stage I - Minimum

The minimum conservation condition is in effect whenever Lake Berryessa storage as of November 1<sup>st</sup> of each year, is at or above 800,000 acre-feet. Minimum conditions will prevail when there is not a water shortage. Conservation practices (including those of the SSWA Urban Water Management Plan) will be required and encouraged during normal conditions in accordance with these Requirements.

### 3.1.2 Stage II - Drought

Drought conditions will be in effect when there is a water shortage and when an authorizing agency has declared drought conditions to be in effect or whenever Lake Berryessa storage is at or above 600,000 acre-feet and below 800,000 acre-feet. Any or all of the specific provisions in Section 4 of these Requirements for Drought conditions may be in effect.

### 3.1.3 Stage III - Severe

Severe conditions will be in effect whenever the specific provisions in Section 4 of these Requirements for Drought conditions are not sufficient to completely mitigate the water shortage, as determined by SSWA, or whenever Lake Berryessa storage is at or above 400,000 acre-feet and below 600,000 acre-feet. Any or all of the specific provisions in Section 4 of these Requirements for Severe conditions may be in effect.

### 3.1.4 Stage IV - Critical

Critical conditions will be in effect whenever the specific provisions in Section 4 of these Requirements for Drought conditions are not sufficient to completely mitigate the water shortage, as determined by SSWA, or whenever Lake Berryessa storage is at or above 200,000 acre-feet and below 400,000 acre-

feet. Any or all of the specific provisions in Section 4 of this Resolution for Critical conditions may be in effect.

### 3.2 Goals

Following are general goals of the water conservation stages. The goals are intended to provide general guidelines, but are not intended to provide specific milestones for declaring Drought, Severe and Critical conditions. Specific milestones are not included in these Requirements in order to provide flexibility in declaring said conditions based on the specific nature of the shortage and the projected impacts of specific conservation measures in light of the time of year and the most current water use patterns.

#### 3.2.1 Stage I Minimum Conditions

During Minimum conditions, the goal is to maximize beneficial use of water through specific provisions of these Requirements, public education, voluntary water conservation, and the Urban Water Management Plan. During Minimum conditions, the goal is to achieve a 10% reduction in per capita water consumption compared with normal water consumption (1987 levels of consumption).

#### 3.2.2 Stage II Drought Conditions

During Drought conditions, the goal is to achieve a 25 percent reduction in water consumption compared with normal.

#### 3.2.3 Stage III Severe Conditions

During Severe conditions, the goal is to achieve a 35 percent reduction in water consumption compared with normal.

#### 3.2.4 Stage IV Critical Conditions

During Critical conditions, the goal is to achieve a 50 percent reduction in water consumption compared with normal.

### 3.3 Execution of Requirements

SSWA shall be responsible for execution of the provisions of these Requirements.

### 3.4 Enactment of Staged Water Conservation Conditions

#### 3.4.1 Monitoring

- a. SSWA staff shall monitor water supply and demand and Lake Berryessa storage. Staff will recommend to the SSWA Executive Committee declaration of appropriate water conservation conditions and implementation of appropriate usage restrictions and water pricing changes.
- b. The SSWA Executive Committee will review staff recommendations and recommend implementation to the SSWA Board.

#### 3.4.2 Authorization of Implementation

The SSWA Board of Directors shall have sole responsibility for determining whether a water shortage exists or is projected to exist and for determining the magnitude of such shortage. The Board will review recommendations by the SSWA Executive Committee and will authorize implementation of staged water conservation provisions.

#### 3.4.3 Public Notification and Public Hearing

Following authorization of implementation, a public hearing shall be scheduled. The hearing shall be advertised in at least one newspaper at least seven days in advance of the hearing. The public shall be notified of 1) SSWA's intent to implement staged water conservation measures, and 2) the date, time

and place of the public hearing. At the hearing, Customers shall have the opportunity to be heard to protest the needs to implement the restrictions and staged water rates.

#### 3.4.4 Declaration of Drought, Severe and Critical Conditions

Following the public hearing, the SSWA may place in effect the staged water conservation provisions. Changes in staged water rates shall be enacted as provided in Section 4.2.4, Enactment of Changes in Water Pricing.

#### 3.4.5 Increases in Drought, Severe and Critical Conservation Measures

In order to enact a more restrictive conservation level the procedures in Sections 3.4.1 through 3.4.4 shall be repeated.

#### 3.4.6 Withdrawal of Drought, Severe and Critical Conservation Conditions

Drought, Severe, or Critical conditions will continue in effect until the SSWA Board has determined that the Water Shortage conditions warrant change to a less restrictive conservation level, based upon Lake Berryessa Storage. The Board shall review the Water Shortage conditions as soon as possible upon a change in said conditions, but not less frequently than annually on or about April 1.

### 3.5 Enforcement

The violation of each specific provision as set forth in Sections 4.3, 4.4, 4.5 and 4.6, and each separate violation thereof, shall be deemed a separate offense, and shall be enforced accordingly.

#### 3.5.1 First Violation

For the first violation within the preceding twelve (12) calendar months, SSWA shall issue a written notice of the fact of such violation to the Account Holder.

#### 3.5.2 Second Violation

For the second violation within the preceding twelve (12) calendar months, SSWA shall impose a surcharge against the Account Holder for the property where the violation occurred or is occurring in the amount of \$50.

#### 3.5.3 Third Violation

For the third violation within the preceding twelve (12) calendar months, SSWA shall impose any or all of the following:

- a. A surcharge against the Account Holder for the property where the violation occurred or is occurring, in the amount of \$250.
- b. Installation of a Flow Restrictor in the water service to the property where the violation occurred or is occurring, at the Account Holder's cost, for a length of time to be determined by SSWA, with annual review by SSWA staff.

#### 3.5.4 Fourth and Subsequent Violations

For a fourth and any subsequent violation within the preceding twelve (12) calendar months, SSWA shall install a Flow Restrictor in the water service to the property where the violation occurred or is occurring, at the Account Holder's cost, for a length of time to be determined by SSWA with annual review by SSWA staff.

#### 3.5.5 Time Period for Accrued Violations

Accrued violations will be based on acts of non-compliance occurring within a consecutive twelve (12) month period. Where failure to comply is continuing and intentional, a separate and distinct violation occurs for each successive twenty-four-hour period of such failure to comply.

### 3.5.6 Notice of Violation

For each violation, SSWA shall give notice as follows:

- a. Written notices of violation will be sent through the U.S. mail or delivered in person by a representative of SSWA to the address of the Account Holder as shown on current water billing records, or
- b. By affixing written notice in a conspicuous location on the property where the violation occurred or is occurring.
- c. Written notices of violation shall include the date, time, and location of the violation; a description of the violation; provisions of these Requirements violated; a statement of the surcharge; and right of appeal procedures.

### 3.5.7 Right of Appeal

Any Account Holder provided a notice of violation in accordance with the provisions of these Requirements shall have the right of appeal. A request for hearing must be made in writing and must be received by SSWA within ten (10) calendar days of the date of the notice of violation. All rights to appeal will be forfeited after ten calendar days of the date of notice of violation, and enforcement actions will be implemented. Upon receipt of request for hearing all applicable enforcement actions will be suspended until such hearing has been completed and a final determination made. The hearing will be before the SSWA Board of Directors within ten (10) calendar days after receipt of the written request for hearing.

### 3.5.8 Determination of Enforcement Action

Determination of enforcement actions will be at the discretion of SSWA. In determining the appropriate enforcement action for non-compliance, SSWA or designee shall consider whether the Account Holder knew of the violation at the time it occurred and whether he or she took reasonable action to correct the violation upon notification of said violation. In addition, SSWA or designee shall exercise discretion in accordance with such guidelines as SSWA may adopt by Resolution.

### 3.5.9 Payment of Surcharges

Any surcharge imposed pursuant to subsections 3.5.2 and 3.5.3 of this section shall be added to the account of the Account Holder for the property where the violation occurred or is occurring and shall be due and payable on the same terms and subject to the same conditions as any other charge for regular water service.

### 3.5.10 Reimbursement of SSWA Expenses

If a Flow Restrictor is installed pursuant to Subsection 3.5.3 of this section, prior to restoration of normal water service, the Account Holder whose service is affected shall be required to reimburse SSWA for the cost it has incurred and will incur in installing and removing the Flow Restrictor and in restoring normal water service.

### 3.5.11 Reimbursement from Tenants

Nothing in this Resolution shall limit or be construed to limit the right of an Account Holder to seek reimbursement of a surcharge from a tenant or other Consumer.

### 3.5.12 Prosecution for Violations

This Resolution constitutes a water conservation program within the meaning of Water Code Section 377.

## 3.6 Right of Inspection and Access to Meters

Any duly authorized representative of SSWA shall have the right to inspect existing and new construction for compliance with these Requirements and to access the Customer's water meter for inspection, for shutting off and turning on water service, and for installing or removing Flow Restrictors.

### 3.7 Place of Use

Water received from or through a meter may be used only on and for the property served by that meter.

### 3.8 Resale of Water

Resale of water supplied by SSWA is prohibited.

### 3.9 Use of Reclaimed Wastewater

Use of reclaimed wastewater is exempt from the provisions of these Requirements and is encouraged in place of potable water supplied by the SSWA water system where it is feasible and within State reclamation guidelines.

## **SECTION 4 SPECIFIC PROVISIONS**

### 4.1 Urban Water Management Plan

The most current version of the adopted Urban Water Management Plan for water conservation is referenced as part of these Requirements, and shall be applicable under Stage I Minimum water conservation conditions.

### 4.2 Water Pricing

#### 4.2.1 Definition of Rate Blocks

Water supplied by the SSWA water system is priced with an increasing block rate structure incorporating four blocks. Block 1 is 0 to 13 units per month (approximately 160 gallons per day), Block 2 is for 13 units per month to 32 units (approximately 375 gallons per day). Block 3 is 32 units to 48 units (600 gallons per day). Block 4 is over 48 units.

#### 4.2.2 Water Prices

Under normal conditions, water prices shall be established and modified from time to time with the objectives of 1) balancing costs to SSWA with revenues collected from Customers, and 2) promoting beneficial use of the water.

#### 4.2.3 Enactment of Changes in Water Pricing

- a. Changes in water pricing for staged water conservation conditions shall be made effective only by resolution of the SSWA Board of Directors.
- b. Water pricing shall be decreased when water conservation conditions are declared by the SSWA Board of Directors to be less restrictive. Temporary continuation of increased water prices may be approved by resolution of the Board of Directors if necessity is demonstrated, and the duration of the temporary continuation is specified.

### 4.3 Restrictions on Water Use during Stage I Minimum Water Conservation Conditions

#### 4.3.1 Wasting Water

Wasting water is prohibited.

#### 4.3.2 Plumbing Standards

- a. All new plumbing fixtures, whether installed as part of new construction or as replacements for existing fixtures, shall comply with the requirements of Health and Safety Code Section 17921.3.



- b. Multiple shower and lavatory installations within non-residential facilities shall be equipped with metering or self-closing valves except where necessary to protect the public health and safety.
- c. The flow limitation device in showerheads must be a permanent and integral part of the showerhead and must not be removable to allow flow rates in excess of the limits specified herein.
- d. Hot water pipes in all new construction shall be thermally insulated.

#### 4.3.3 Landscape Irrigation

Watering of all turf areas, shrubs, and other vegetation should be done before noon and after 6:00 p.m. (daylight savings time only).

#### 4.4 Additional Restrictions under Stage II Drought Water Conservation Conditions

In addition to minimum restrictions in Section 4.3, any or all of the following additional restrictions may be enacted under Drought conditions.

##### 4.4.1 Outdoor Water Use Schedule

Regulations shall be established by SSWA, which limits outdoor water use activities to specified days and times of day. Allowed irrigation times may be rotated among various users throughout the water system service area to equalize demands on the water system.

##### 4.4.2 Landscape Irrigation

Watering of all turf areas, trees, shrubs and other vegetation shall be done in accordance with the established outdoor water use schedule.

##### 4.4.3 Non-Irrigation Outdoor Use

All non-irrigation outdoor water use shall be done in accordance with the established outdoor water use regulations. This shall include but not be limited to washing of automobiles, trucks, boats, buildings, equipment, and structures, and refilling pools or ornamental bodies of water.

##### 4.4.4 Fountains

Only fountains which recycle at least 75% of their water may be operated, and if operated, a sign shall be posted stating that the water is recycled.

##### 4.4.5 Fire Hydrants

Use of fire hydrants will be limited to fire fighting and other activities necessary for protection of public health and safety. See Section 4.4.6

##### 4.4.6 Construction Water

Permits for construction water will only be granted if use of reclaimed wastewater or other sources of water is not feasible.

##### 4.4.7 Restaurant Water Service

Water shall be served in restaurants only upon request.

#### 4.5 Additional Restrictions under Stage III Severe Water Conservation Conditions

In addition to restrictions in Sections 4.3 and 4.4, any or all of the following additional restrictions may be enacted under Severe conditions.

##### 4.5.1 Outdoor Water Use Schedule

Regulations shall be established by SSWA which limits outdoor water use activities to specified days and times of day. This will be a more restrictive schedule than under Drought conditions per Section 4.4.1.

#### 4.5.2 Landscape Irrigation

- a. All Spray Irrigation and irrigating of turf shall be severely restricted.
- b. Watering of all trees, shrubs and other non-turf vegetation shall be done in accordance with the established outdoor water use schedule and only with a hand held hose, a hand held faucet-filled bucket of five gallons or less, or a drip irrigation system.

#### 4.5.3 Non-Irrigation Outdoor Use

All non-irrigation outdoor water use shall be prohibited except as necessary to protect public health and safety. Prohibited uses shall include but not be limited to washing of automobiles, trucks, boats, buildings, equipment, and structures, and refilling of ornamental bodies of water, except by tank truck services from outside Solano County.

#### 4.5.4 Fountains

Operation of fountains shall not be permitted.

#### 4.5.5 Drought Notice

Drought notices approved by SSWA shall be posted in motels, hotels, and other commercial establishments offering lodgings.

#### 4.5.6 New Service Connections

New service connections may be restricted.

#### 4.5.7 Landscape Installation

Irrigation of landscaping in new development shall not be permitted, except for relandscaping of existing areas which results in a decrease in water consumption.

### 4.6 Additional Restrictions under Stage IV Critical Water Conservation Conditions

In addition to restrictions in Sections 4.3, 4.4 and 4.5, the following additional restrictions may be enacted under Critical conditions.

#### 4.6.1 Outdoor Water Use Schedule

Regulations shall be established by SSWA, which limits outdoor water use. This will be a more restrictive schedule than under Severe conditions per Section 4.5.1.

#### 4.6.2 Landscape Irrigation

All landscape irrigation shall be prohibited except with approved greywater use practices.

### 4.7 Exemptions and Application Procedure for Exemptions

Exemptions from the requirements of this Section 4 may be granted by SSWA to Customers.

- a. To apply for an exemption, the Customer shall submit a written statement to SSWA identifying present uses of the water and complete justification for being exempt from the provisions of this Section 4. The SSWA Board will act to either grant or deny exemptions or to request additional information within 30 days of receipt of the written statement.
- b. In granting the exemption, SSWA can require alternative water conservation measures to be employed by the Customer. The extent of exemptions shall be no more than necessary to alleviate the condition which justified granting of the exemption.

## 4.8 Situations Warranting Exemptions

Situations, which may be eligible for exemptions, include the following:

### 4.8.1 Medical Requirements

Exemptions to provisions in Section 4.3, 4.4, 4.5 and 4.6 may be granted for medical requirements.

### 4.8.2 Single Family Homes with Livestock

Single-family home customers who provide water for livestock may have an adjustment in their normal block 1 water use of up to 30 gallons per day per horse, cow or other large animal.

### 4.8.3 Protections of Public Health and Safety

Water use may be exempt from requirements of this Section 4 for the protection of public health and safety. Examples include:

Cleanup of flammable or dangerous materials

Washing of garbage trucks and vehicles to transport food and perishables

### 4.8.4 Severe Economic Hardship

Exemptions from the requirements of Sections 4.2, 4.4, 4.5, and 4.6 may be granted due to severe economic hardship including but not limited to the threat of insolvency. Determination of hardship will be made by the SSWA Board of Directors with the advice of the Suisun City Director of Finance.

### 4.8.5 Replacement Plumbing Fixtures in Existing Construction

The requirement in Section 4.3.2 for replacement plumbing fixtures in existing construction may be exempted if substantial replumbing would be necessary to accept the required fixtures.

### 4.8.6 Commercial Car Wash

During Minimum conservation and Drought conditions, vehicle washing may be done at any time on the immediate premises of a commercial car wash whose primary business is car washing. During Severe and Critical conditions, vehicle washing at a commercial car wash shall only be done if the car wash is equipped with the capability to complete a wash/rinse cycle with a net consumption of 10 gallons of water or less either through recycling or through low flow spray nozzles. During Severe and Critical conditions, all commercial car washes shall submit proof of such low water use capabilities to SSWA for approval.

### 4.8.7 Golf Courses and Nurseries

Golf courses, nurseries, and similar establishments, which rely on landscape vegetation as their primary source of business, may be granted an exemption from the requirements of Sections 4.4, 4.5, and 4.6. Exemptions will only be granted following submission of a water conservation plan which is acceptable to SSWA and which meets the goals for water conservation contained in 3.2.

## **SECTION 5 SEVERABILITY**

If any provision of these Requirements or the application of any such provision to any person or circumstance is for any reason held to be invalid, such decision shall not affect the validity of the remaining portions of these Requirements. It is intended that each portion of these Requirements would have been adopted irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unenforceable or invalid.

## APPENDIX C – COMMUNICATION PROCEDURES

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Public communication is an ongoing activity where the purpose, audience, message, tools, and channels may change at any given moment. In the context of water shortage response, the purpose may be an immediate emergency water shortage situation (such as may result from an earthquake) or a longer-term emergency shortage condition (such as may result from a drought). In a catastrophic emergency under crisis conditions, SSWA will activate the communication protocol detailed in SSWA’s Emergency Response Plan. In a longer-term water shortage situation, SSWA will implement the procedures identified in this Water Shortage Communication Plan.

Timely and effective communication is a key element of the WSCP implementation. Per Section 10632 (a)(5) of the California Water Code, SSWA has established communication protocols and procedures to inform stakeholders regarding any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1, any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1, and any other relevant communications.

### C.1 Emergency Response Plan Communication

The ERP defines the actions to be taken by SSWA staff to reduce the loss of water and wastewater infrastructure, to respond effectively to a disaster, and to coordinate recovery operations in the aftermath of any emergency involving extensive damage to local and regional water and wastewater utilities. The ERP includes activation notification protocols that will be used to contact partner agencies to inform them of the situation, activation status of the ERP, known damage or impacts, or resource needs. The ERP is a standalone document that is reviewed annually and updated every five years.

### C.2 Suisun-Solano Water Authority Water Shortage Communication Plan

The Water Shortage Communication Plan serves as the baseline for how SSWA will provide information and value to its various stakeholders, partners, and employees during normal conditions where water efficiency is an everyday goal for water supply reliability. In times of water shortage, this Communications Plan can be enhanced for the purposes of a Water Shortage Communication Plan. The Public Works Department and Communications Department work to elevate public awareness and participation in water efficiency so, in the event of a water shortage, the community is aware of the importance of response actions and can identify as an active participant in SSWA’s demand reduction target levels. The Communications Plan is designed to provide transparent, reliable, and accurate information to the public and collaborating agencies. It does this by identifying goals and objectives for each shortage level and outlining the appropriate communication interface tools and implementation schedule for effective communication to assist customers with curtailing their water use.

#### Goals and Objectives

The goal of SSWA’s Water Shortage Communication Plan is to create a local awareness of water shortage conditions and to encourage water efficiency from all citizens. The Water Shortage Communication Plan objectives further refine the focus of the program goal to achieve a desired outcome at each shortage level. As a water shortage condition escalates, the objectives of the Communication Plan also escalate to ensure progress toward water supply reliability. The defined objectives for each water shortage level will determine the information that is communicated at each level.

#### Target Audiences

SSWA reviewed its water demand and customer class profile to develop a communication plan to be the most effective with its unique customer profile and water demands. Based on the 2025 projections in the 2020 UWMP,

SSWA's Single family (SF) water use is expected to account for approximately 65% of the total water demand in 2025. Commercial, industrial, and institutional (CII) water use is projected to account for about 6% of total demand. Multifamily (MF) and landscape use are projected to account for 6% and 11% of total demand, respectively based on recent trends. Remaining water uses are associated with losses and other potable uses (fire). By understanding the local customer and water use profile, SSWA can implement a Water Shortage Communication Plan that leverages the appropriate communications tools to reach the target audience most effectively during a water shortage.

SSWA has further refined its customer categories to identify the following target audiences for communication:

- Suisun-Solano Water Authority staff
- Homeowners and renters
- Business owners
- Local industries
- Property owners and managers
- School district administrators and teachers
- Elected officials and staff
- Environmental/public interest groups
- General public
- Local media
- Homeowners associations
- Golf courses

## Communications Interfaces and Tools

SSWA staff will work closely during a water shortage condition. SSWA will utilize a comprehensive set of communication interface tools to engage water customers. The interface options and tools include:

- Water bill communications
- Website information on SSWA's homepage
- Social media outreach
- Media coverage (print and electronic)
- Publications and handouts
- Water bill pay portal communication
- Presence at local events
- Mayor/manager public service announcements
- Direct mailings to homes and businesses
- School education programs

## Communication Tactics and Implementation Schedule

SSWA understands its responsibility to be transparent, accountable, have a positive impact on the community, and provide actionable guidance in times of water shortage. Carefully developed and executed communication tactics and implementation schedules will establish trust and credibility for all stakeholders by clearly communicating expectations and responsibilities. Below is a description of the Water Shortage Communication Plan tactics and schedule.

This Water Shortage Communication Plan is designed to have a standard set of tactics systematically aligned to the current water shortage level. For example, information that may be educational during Shortage Level 0 will shift to specific status information and shortage level response action requirements (as defined in Section 3.4 of this WSCP and Table 3-2) as water shortage levels increase from 1 to 6. In Shortage Level 0, communication will include a general overview of water efficiency and water shortage levels so, in the event of a water shortage, the understanding and response requirements are familiar. As the water shortage levels increase, messaging will align with specific shortage level response requirements and objectives.

### Website

- Suisun-Solano Water Authority Website: Provide water efficiency information and resources on Suisun-Solano Water Authority's website including water shortage level status.
- Water Shortage Indicator: Develop a permanent image on the website that identifies water shortage level status. Image will be updated promptly when status level changes and will link to additional shortage level information.

### Social Media

- Facebook/Instagram: Post water efficiency information and shortage level status on Suisun-Solano Water Authority's Facebook/Instagram page. This may include unique Suisun-Solano Water Authority content or reposting of regional messages and images.
- Twitter: Tweet water efficiency information and water shortage level status on Suisun-Solano Water Authority's account. This may include unique Suisun-Solano Water Authority content or reposting of regional messages and images.

### Digital and Print Media

- Flyers/Signage/Brochures: Create and provide informational materials on water efficiency actions, local/regional water resource awareness, and water shortage level status.
- Consumer Confidence Reports (CCRs): Provide a conservation reminder in CCRs along with conservation tips.

### Media Relations

- News Stories/News Releases/Newsletters: Provide news releases with information regarding water shortage level and expected trends.



- Briefing Papers/Talking Points: Provide briefing papers to local media outlets such as newspapers, magazines, and other publications. This may also include social media posts and infographics.

#### Community Outreach

- Public Events: Promote water efficiency and water awareness at local events such as parades, festivals, farmers markets, community organizations, and other events.
- Promotional Giveaways: Provide promotional water efficiency devices or messaging materials (i.e., hats, stickers, mugs, etc.) promoting water efficiency and response.

#### Educational Outreach

- School Programs: Provide water resource and efficiency presentations for local schools, including information and response to water shortage levels.
- Residential Water Efficiency Educational Classes: Provide educational classes to community on topics such as finding and fixing leaks, irrigation program scheduling, waterwise vegetation, etc.
- Non-residential Water Efficiency Training Classes/Programs: Provide training programs to local irrigation and cooling tower service technicians on water efficient practices and water shortage level requirements.

#### Suisun-Solano Water Authority Water Efficiency Programs

- Rebate/Incentive Programs: Promote regional rebate and incentive programs for local water users. Messaging frequency increases as the shortage levels increase.
- Turf Removal: Promote regional rebate and incentive programs for local water users. Messaging frequency increases as the shortage levels increase.
- Water Surveys – Commercial: Promote regional rebate and incentive programs for local water users. Messaging frequency increases as the shortage levels increase.
- Water Surveys – Residential: Promote regional rebate and incentive programs for local water users. Messaging frequency increases as the shortage levels increase. Suisun-Solano Water Authority staff may participate in limited residential surveys to assist with efficiency, identifying and correcting leaks, and providing communication to the customer.

#### Direct Customer Communication

- Billing Inserts: Include billing inserts in water utility billings, including water shortage level status and response actions.
- Water Use Notifications: Include a comparison of actual water use and information regarding penalties.
- Neighborhood Canvassing: Suisun-Solano Water Authority staff and/or representatives may canvas neighborhoods to educate residents of water shortage status and response action requirements.

#### Partnerships/Regional Initiatives

- Utilize regional messaging programs, messages, and resources to communicate with local water users.
- Coordinate messaging with other member agencies and public partnerships.

### **Monitor, Evaluate, and Amend**

The effectiveness of Suisun-Solano Water Authority’s Communication Plan depends on a large variety of factors including technological advancements or changes, the rise and fall of audience engagement, current news or media concentration, political changes in leadership and focus, and the weather. The Communication Plan will be evaluated for effectiveness and updated accordingly based on available metrics and stakeholder feedback.

## APPENDIX D – NOTICE OF PUBLIC HEARING

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### Notice of Public Hearing

The Suisun-Solano Water Authority (SSWA) intends to update its current Urban Water Management Plan (UWMP) and the Water Shortage Contingency Plan (WSCP). Updates are required every five (5) years in accordance with the California Water Code. This effort helps ensure we can provide the communities we serve with a reliable supply of high-quality water to meet current and future demands.

To ensure opportunity for public feedback and suggestions, the proposed plan will be available for review on both the City of Suisun's website ([www.suisun.com](http://www.suisun.com)) and the Solano Irrigation District's website ([www.sidwater.org](http://www.sidwater.org)). Public comments may be submitted in writing to:

Paul Fuchslin, Director of Engineering/District Engineer

Suisun-Solano Water Authority

810 Vaca Valley Pkwy, Suite 201

Vacaville, CA 95688

email: [pfuchslin@sidwater.org](mailto:pfuchslin@sidwater.org)

Public comments can also be made in person at the Public Hearing. The public commenting period will conclude with a Public Hearing at the SSWA Regular Board Meeting held on May 8, 2023. The meeting begins at 6:00pm and is located at 701 Civic Center Blvd, Suisun City, CA 94585. At the conclusion of the Public Hearing the SSWA Board will be considering the proposed plan adoption.

DR#00062793

Published: April 24, May 1, 2023

## **APPENDIX E – ADOPTION RESOLUTION**

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Documentation pending. It will be included in the Final Draft of this 2020 WSCP.

# APPENDIX F – SEISMIC RISK ASSESSMENT

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Solano County Multi-Jurisdictional Hazard Mitigation Plan:

<https://www.solanocounty.com/civicax/filebank/blobdload.aspx?blobid=37785>



U.S. Department of Homeland Security  
FEMA Region 9  
1111 Broadway, Suite 1200  
Oakland, CA 94607

**FEMA**

March 15, 2022

Don Ryan  
Director  
Solano County Office of Emergency Services  
530 Clay St.  
Fairfield, CA 94533

Dear Mr. Ryan:

The *Solano County 2021 Multi-Jurisdictional Hazard Mitigation Plan* was officially adopted by the Solano County Water Agency on February 10, 2022 and submitted for review and approval to the Federal Emergency Management Agency (FEMA). The review is complete, and FEMA finds the plan to be in conformance with the Code of Federal Regulations, Title 44, Part 201, Section 6 (44 C.F.R. 201.6). A list of the status of participating jurisdictions is enclosed with this letter.

This plan approval ensures the Solano County Water Agency's continued eligibility for funding under FEMA's Hazard Mitigation Assistance programs, including the Hazard Mitigation Grant Program (HMGP), the Building Resilient Infrastructure and Communities program (BRIC), and the Flood Mitigation Assistance (FMA) program. All requests for funding are evaluated individually according to eligibility and other program requirements. Approved hazard mitigation plans may also be eligible for points under the National Flood Insurance Program's Community Rating System (CRS).

FEMA's approval is for a period of five years, effective starting the date of this letter. Prior to **March 15, 2027**, the Solano County Water Agency and all participating jurisdictions must review, revise, and submit their plan to FEMA for approval to maintain eligibility for grant funding. The enclosed plan review tool provides additional recommendations to incorporate into future plan updates.

If you have any questions regarding the planning or review processes, please contact the FEMA Region 9 Hazard Mitigation Planning Team at [fema-r9-mitigation-planning@fema.dhs.gov](mailto:fema-r9-mitigation-planning@fema.dhs.gov).

Sincerely,

**KATHRYN J LIPIECKI**

Digitally signed by KATHRYN J  
LIPIECKI  
Date: 2022.03.16 08:11:18 -07'00'

Kathryn Lipiecki  
Director, Mitigation Division  
FEMA Region 9

[www.fema.gov](http://www.fema.gov)

Solano County Hazard Mitigation Plan Approval Notice  
March 15, 2022  
Page 2 of 3

Enclosures (2)

Solano County Plan Review Tool, dated March 15, 2022  
Status of Participating Jurisdictions, dated March 15, 2022

cc: Alison Kearns, Risk Analysis Branch Chief, FEMA Region 9  
Jennifer Hogan, State Hazard Mitigation Officer, California Governor's Office of  
Emergency Services  
Victoria LaMar-Haas, Hazard Mitigation Planning Chief, California Governor's Office of  
Emergency Services

[www.fema.gov](http://www.fema.gov)

Status of Participating Jurisdictions as of March 15, 2022

Jurisdictions – Adopted and Approved

#	Jurisdiction	Date of Adoption
1	Solano County Water Agency	February 10, 2022

Jurisdictions – Approvable Pending Adoption

#	Jurisdiction
1	Solano County
2	Benicia, City of
3	Dixon, City of
4	Fairfield, City of
5	Rio Vista, City of
6	Suisun City, City of
7	Vacaville, City of
8	Vallejo, City of
9	Vallejo Flood and Wastewater District