June 2021

2020 Urban Water Management Plan

for South San Joaquin Irrigation District









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ABBREVIATIONS

AF	acre-feet
AFY	acre-feet per year
AWMP	Agricultural Water Management Plan
CA	California
CEQA	California Environmental Quality Act
CVP	Central Valley Project
CWC	California Water Code
DDW	Division of Drinking Water
DMM	demand management measure
DOF	Department of Finance
DRA	Drought Risk Assessment
DWR	Department of Water Resources
ERP	Emergency Response Plan
ETo	reference evapotranspiration
ft	foot
GSP	Groundwater Sustainability Plan
kWh/AF	kilowatt hours per acre-feet
MCLs	Maximum Contaminant Levels
MG	million gallon
MGD	million gallons per day
OID	Oakdale Irrigation District
PG&E	Pacific Gas & Energy
PWS	public water systems
RUWMP	Regional Urban Water Management Plan
SB X7-7	Water Conservation Act of 2009
SCWSP	South County Water Supply Project
SSJID	supplier, the South San Joaquin Irrigation District
SWRCB	State Water Resources Control Board
TDS	total dissolved solids
USBR	United States Bureau of Reclamation
USEPA	United States Environmental Protection Agency
UV	ultraviolet
UWMP	Urban Water Management Plan
WCC	water conservation coordinator
WR P1	Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance
WSCP	Water Shortage Contingency Plan
WTP	Water Treatment Plant



1 INTRODUCTION AND OVERVIEW

This chapter discusses the importance and uses of this Urban Water Management Plan (UWMP or Plan), the relationship of this Plan to the California Water Code (CWC), the relationship of this Plan to other local and regional planning efforts, and how this Plan is organized and developed in general accordance with the Urban Water Management Plan Guidebook 2020 (Guidebook; DWR, 2021).¹

1.1 Background and Purpose

The South San Joaquin Irrigation District (SSJID or District) is located in the southeastern portion of San Joaquin County, California. SSJID is a public wholesale agency. The retail customers that SSJID is contracted to serve through the South County Water Supply Project (SCWSP) include the City of Escalon, City of Lathrop, City of Manteca, and City of Tracy (collectively the SCWSP agencies). During 2016 and 2020, SSJID supplied approximately 21,144 acre-feet per year (AFY) of water on average to a subset of the SCWSP agencies. In addition, SSJID supplies raw water to the agricultural customers within its service area and also to the City of Ripon for non-potable irrigation uses. However, these non-potable demands and supplies are tracked under SSJID's agricultural delivery system and are covered in SSJID's Agricultural Water Management Plan (AWMP) which was adopted by the SSJID Board of Directors on 23 March 2021 and submitted to the California Department of Water Resources (DWR) in April 2021². Therefore, they are not discussed in this Plan.

This UWMP is a foundational document and source of information about the SSJID's historical and projected water urban retail demands, water supplies, supply reliability and potential vulnerabilities, water shortage contingency planning, and demand management programs.

SSJID's last UWMP was completed in 2016, referred to herein as the "2015 UWMP." This Plan is an update to the 2015 UWMP and carries forward information from that plan that remains current and is relevant to this Plan, and provides additional information as required by amendments to the UWMP Act (CWC §10610 – 10657). Although this Plan is an update to the 2015 UWMP, it was developed to be a self-contained, stand-alone document and does not require readers to reference information contained in previous plans.

1.2 Urban Water Management Planning and the California Water Code

The UWMP Act requires urban water suppliers to prepare an UWMP every five years and to submit this plan to the DWR, the California State Library, and any city or county within which the supplier provides water supplies. All urban water suppliers, either publicly or privately owned, providing water for municipal

¹ The UWMP Guidebook 2020 is available at: https://water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Urban-Water-Management-Plans.

² The AWMP can be found at https://www.ssjid.com/district-services/agriculture-irrigation-water/.



purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acr feet annually are required to prepare an UWMP (CWC §10617).

The UWMP Act was enacted in 1983. Over the years it has been amended in response to water resource challenges and planning imperatives confronting California. A significant amendment was made in 2009 as a result of the governor's call for a statewide 20% reduction in urban water use by 2020, referred to as "20x2020," the Water Conservation Act of 2009, and "SB X7-7." This amendment required urban retail water suppliers to establish water use targets for 2015 and 2020 that would result in statewide water savings of 20% by 2020. Beginning in 2016, urban retail water suppliers were required to comply with the water conservation requirements in SB X7-7 in order to be eligible for state water grants or loans. Although SSJID as a wholesaler is not subject to this requirement, it has significant impacts on the SCWSP agencies and therefore affects SSJID's recent and projected demands.

A subsequent substantial revision to the UWMP Act was made in 2018 through a pair of bills (i.e., Assembly Bill 1668 and Senate Bill 606), referred to as "Making Water Conservation a California Way of Life" or the "2018 Water Conservation Legislation." These changes include significant revisions and additions to the required content for an UWMP and its associated Water Shortage Contingency Plan (WSCP). As applicable, SSJID's 2020 UWMP reflects the following significant revisions to the UWMP Act that have been made since 2015.

- *Five Consecutive Dry-Year Water Reliability Assessment*. The Legislature modified the dry-year water reliability planning from a "multiyear" time period to a "drought lasting five consecutive water years."
- **Drought Risk Assessment**. The Drought Risk Assessment (DRA) requires a supplier to assess water supply reliability over a five-year period from 2021 to 2025 that examines water supplies, water uses, and the resulting water supply reliability under a reasonable prediction for five consecutive dry years.
- **Energy Intensity Analysis**. UWMPs are now required to include water system energy usage information that can be readily obtained.
- **Seismic Risk**. The Water Code now requires suppliers to specifically address seismic risk to various water system facilities and to have a mitigation plan, and for this to be described in their WSCPs.
- *Water Shortage Contingency Plan*. In 2018, the UWMP Act was modified to require a WSCP with specific elements, including developing procedures to perform an annual water supply and demand assessment.
- **Groundwater Supplies Coordination**. The Water Code now requires that the 2020 UWMPs for suppliers that utilize groundwater as a supply source are consistent with Groundwater Sustainability Plans, in areas where those plans have been completed by the Groundwater Sustainability Agencies.
- Lay Description. The Legislature included a new statutory requirement for suppliers to include a lay description of the fundamental determinations of the UWMP, especially regarding water service reliability, challenges ahead, and strategies for managing reliability risks.

The UWMP Act contains numerous other requirements that an UWMP must satisfy. Appendix A to this Plan lists each of these requirements and where in the Plan they are addressed.

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1.3 Relationship to Other Planning Efforts



This Plan provides information specific to water management and planning by SSJID. However, water management does not happen in isolation; there are other planning processes that integrate with the UWMP to accomplish urban planning. Some of these relevant planning documents include the SCWSP agencies' UWMPs, Water Master Plans, AWMPs, Groundwater Sustainability Plan chapters for the Eastern San Joaquin Subbasin, Local Hazard Mitigation Plan, and others.

This Plan is informed by and helps to inform these other planning efforts. In particular, this Plan utilizes information contained in the SCWSP agencies' UWMPs and local and regional water resource plans to the extent data from these plans are applicable and available.

1.4 Plan Organization

The organization of this Plan follows the same sequence as outlined in the UWMP Guidebook 2020.

Chapter 1 Introduction and Overview Chapter 2 Plan Preparation Chapter 3 System Description Chapter 4 Water Use Characterization Chapter 5 SBX7-7 Baselines, Targets, and 2020 Compliance Chapter 6 Water Supply Characterization Chapter 7 Water Service Reliability and Drought Risk Assessment Chapter 8 Water Shortage Contingency Plan Chapter 9 Demand Management Measures Chapter 10 Plan Adoption, Submittal, and Implementation Chapter 11 References

In addition to these eleven chapters, this Plan includes a number of appendices providing supporting documentation and supplemental information. Pursuant to CWC §10644(a)(2), this Plan utilizes the standardized forms, tables, and displays developed by DWR for the reporting of water use and supply information required by the UWMP Act. This Plan also includes additional tables, figures, and maps to augment the set developed by DWR, as appropriate. The table headers indicate if the table is part of DWR's standardized set of submittal tables.

1.5 Demonstration of Consistency with the Delta Plan

Although not required by the UWMP Act, in the UWMP Guidebook 2020, DWR recommends that all suppliers that are participating in, or may participate in, receiving water from a proposed project that is considered a "covered action" under the Delta Plan—such as a (1) multiyear water transfer; (2) conveyance facility; or (3) new diversion that involves transferring water through, exporting water from, or using water in the Sacramento-San Joaquin Delta (Delta)—provide information in their UWMP to



demonstrate consistency with the Delta Plan policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code of Regulations, Title 23, Section 5003).

SSJID has determined that it does not receive water or plan to receive water from a "covered action" under the Delta Plan. As such, this requirement is not applicable.

1.6 Lay Description

☑ CWC § 10630.5

Each plan shall include a simple lay description of how much water the agency has on a reliable basis, how much it needs for the foreseeable future, what the agency's strategy is for meeting its water needs, the challenges facing the agency, and any other information necessary to provide a general understanding of the agency's plan.

This Urban Water Management Plan (UWMP or Plan) is prepared for the South San Joaquin Irrigation District (SSJID or District), which is a public wholesale agency and supplies drinking water to the retail cities (i.e., the South County Water Supply Project [SCWSP] agencies) in San Joaquin County. This UWMP serves as a foundational planning document and includes descriptions of historical and projected water demands, and water supplies and reliability over a 20-year planning horizon. This document also describes the actions SSJID is taking to promote water conservation, both by the District itself and by its retailers (referred to as "demand management measures"), and includes a plan to address potential water supply shortages such as drought or other impacts to supply availability (the Water Shortage Contingency Plan [WSCP]). This UWMP is updated every five years in accordance with state requirements under the Urban Water Management Planning Act and amendments (Division 6 Part 2.6 of the California Water Code [CWC] §10610 – 10656). Past plans developed for the District are available on the California Department of Water Resources (DWR) Water Use Efficiency Data Portal website: https://wuedata.water.ca.gov/. This document includes 11 chapters, which are summarized below.

Chapter 1 Introduction and Overview

This chapter presents the background and purpose of the UWMP, identifies the Plan organization, and provides this lay description overview of the document.

Chapter 2 Plan Preparation

This chapter discusses key structural aspects related to the preparation of the UWMP, and describes the coordination and outreach conducted as part of the preparation of the Plan, including coordination with local agencies (e.g., the SCWSP agencies) and the public.

Chapter 3 System Description

This chapter provides a description of SSJID's water system and general information regarding the SCWSP agencies. SSJID is a wholesale water agency that is contracted with the cities of Manteca, Tracy, Lathrop, and Escalon to supply treated water under the SCWSP and serves a total population of approximately 215,456 in 2020. Climate of its service area can be characterized by hot springs, summers, and falls and mild winters.

Chapter 4 Water Use Characterization



This chapter quantifies SSJID's historical, current, and projected demands through the year 2045. SSJID provides drinking water (also referred to as "potable water") to its retailers (i.e., the SCWSP agencies). Water demand was 21,144 acre-feet per year (AFY) on average between 2016 and 2020. Taking into account historical water use, expected population increase and other growth, climatic variability, and other assumptions, the SCWSP water demand is projected to increase to 43,090 AFY by 2045, an increase of 104% compared to the 2016-2020 average.

Chapter 5 SBX7-7 Baselines, Targets, and 2020 Compliance

As a wholesale water supplier, SSJID is not required to calculate, establish, or meet baseline targets for daily per capita water use.

Chapter 6 Water Supply Characterization

This chapter presents an analysis of SSJID's water supplies, as well as an estimate of water-related energy consumption. The intent of this chapter is to present a comprehensive overview of SSJID's water supplies, estimate the volume of available supplies over the 25-year planning horizon, and assess the sufficiency of supplies to meet projected demands under "normal" hydrologic conditions.

SSJID supplies surface water to several cities as a wholesaler through the SCWSP. The SCWSP water is exclusively from the Stanislaus River. Under its senior pre-1914 appropriative water rights, SSJID is expected to receive 225,000 to 300,000 acre-feet (AF) of water every year. SSJID does not directly recycle wastewater for either drinking water or irrigation.

Calculation and reporting of water system energy intensity is a new requirement for the 2020 UWMPs. SSJID tracks energy usage at the Nick C. DeGroot Water Treatment Plant (WTP). During 2020, the energy intensity for SSJID is estimated to be 175 kilowatt hours per acre-feet of water (kWh/AF).

Chapter 7 Water Service Reliability and Drought Risk Assessment

This chapter assesses the reliability of SSJID's water supplies, with a specific focus on potential constraints such as supply availability, water quality, and climate change. The intent of this chapter is to identify any potential constraints that could affect the reliability of SSJID's supply (such as drought conditions) to support SSJID's planning efforts. Water service reliability is assessed during normal, single dry-year, and multiple dry-year hydrologic conditions.

The reliability analysis was performed based on the assumption that the State Water Resources Control Board's (SWRCB's) released amendments to the Water Quality Control Plan for the San Francisco/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan Amendment) will not be implemented. Based on service reliability analysis, SSJID is expected to have adequate water supplies during normal years to meet SCWSP demands through 2045. However, supply shortfalls are projected during single dry years and multiple dry years.

A Drought Risk Assessment (DRA) was also conducted during this analysis which evaluates the effects on available water supply sources of an assumed five-year drought commencing the year after the assessment is completed (i.e., from 2021 through 2025). Based on the DRA, SSJID is expected to have sufficient water supply for the SCWSP in 2021, 2022, and 2025. However, supply shortfalls are projected in 2023 and 2024.

Chapter 8 Water Shortage Contingency Plan



This chapter describes the WSCP for SSJID. The WSCP serves as a standalone document to be engaged in the case of a water shortage event, such as a drought or supply interruption. The WSCP defines specific policies and actions that will be implemented at various shortage level scenarios (e.g., implementing customer water budgets and surcharges). Consistent with DWR requirements, the WSCP includes six "stages of action" to address shortage conditions ranging from up to 10% to greater than 50% shortage.

Chapter 9 Demand Management Measures

This chapter includes descriptions of past and planned conservation programs that SSJID operates within each demand management measure (DMM) category outlined in the UWMP Act, specifically: (1) metering, (2) public education and outreach, (3) water conservation program coordination and staffing support, and (4) "other" DMMs. Additionally, as a wholesaler, SSJID maintains and improves the distribution system through the asset management program and intends to assist the retailers with their demand management if needed.

Chapter 10 Plan Adoption, Submittal, and Implementation

This chapter provides information on a public hearing, the adoption process for the UWMP and WSCP, the adopted UWMP and WSCP submittal process, plan implementation, and the process for amending the adopted UWMP and WSCP. Prior to adopting the plans, the District held a formal public hearing at a regularly scheduled meeting of the Board of Directors to present information on its UWMP and WSCP on 22 June 2021 at 9:00 a.m. The UWMP and WSCP were submitted to DWR within 30 days of adoption and by the 1 July 2021 deadline.

Chapter 11 References

This chapter contains key references and sources used throughout the document.

6



2 PLAN PREPARATION

This chapter discusses the type of Urban Water Management Plan (UWMP or Plan) the South San Joaquin Irrigation District (SSJID or District) has prepared and includes information that will apply throughout the Plan. Coordination and outreach during the development of the Plan is also discussed.

Text from the UWMP Act has been included in grey text boxes with italicized font at beginning of relevant sections of this UWMP. The information presented in the respective UWMP sections and the associated text, figures, and tables are collectively intended to fulfill the requirements of that sub-section of the UWMP Act. To the extent practicable, supporting documentation has also been provided in Appendices A through F. Other sources for the information contained herein are provided in the references section of this document.

Per California Water Code (CWC) §10644(a)(2), selected information for the 2020 UWMP updates must be presented in standardized tables for electronic submittal to the California Department of Water Resources (DWR). The tables presented in this UWMP have been re-numbered, but the content has been preserved and the original DWR table numbers are included in parentheses in the table titles.

2.1 Basis for Preparing Plan

☑ CWC § 10617

"Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

☑ CWC § 10620

Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.

☑ CWC § 10621 (a)

Each urban water supplier shall update its plan at least once every five years on or before July 1, in years ending in six and one, incorporating updated and new information from the five years preceding each update.

✓ *CWC* § 10621 (*f*)(1)

Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.

☑ CWC § 10644 (a)(2)

The plan, or amendments to the plan, submitted to the department ... shall include any standardized forms, tables, or displays specified by the department.

In 1983, the California Legislature enacted the UWMP Act (CWC §10610 - §10657). The UWMP Act states that every urban water supplier that provides water to 3,000 or more connections, or that provides over 3,000 acre-feet of water per year (AFY) should make every effort to ensure the appropriate level of water service reliability to meet the needs of its customers during normal, dry, and multiple dry years.

Plan Preparation 2020 Urban Water Management Plan South San Joaquin Irrigation District



SSJID is a wholesale water agency. The retail suppliers that are contracted with SSJID through the South County Water Supply Project (SCWSP) include the City of Escalon, City of Lathrop, City of Manteca, and City of Tracy (collectively the SCWSP agencies). Information on SSJID's and the SCWSP agencies' public water systems (PWS) is shown in Table 2-1. SSJID supplied 23,935 AFY of water to a subset of the SCWSP agencies in 2020 and is therefore subject to the requirements of the UWMP Act.

SSJID also supplies raw water to the agricultural customers within its service area and to the City of Ripon for non-potable irrigation uses. However, these non-potable demands and supplies are covered in SSJID's Agricultural Water Management Plan (AWMP) which was submitted to the California Department of Water Resources (DWR) in April 2021³ and are not discussed in this Plan.

Public Water System Number	Public Water System Name
CA5010040	South San Joaquin Irrigation District
CA3910003	City of Escalon
CA3910015	City of Lathrop
CA3910005	City of Manteca
CA3910011	City of Tracy
NOTES:	

Table 2-1	Public Water Systems
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As indicated in Table 2-2, SSJID's 2020 UWMP has been prepared individually for the District in general accordance with the format suggested in DWR's Urban Water Management Plan Guidebook 2020 (Guidebook; DWR, 2021). Some sections of the outline presented in the Guidebook have been combined or arranged in a different order, but all the information requested in the UWMP Guidebook and Act is provided within this document. To the extent practicable, supporting documentation has also been provided in Appendices A through F. Other sources for the information contained herein are provided in the references section of the document.

Per the UWMP Guidebook 2020, the UWMP preparer is requested to complete a checklist of specific UWMP requirements to assist the DWR review of the submitted UWMP. The completed checklist is included in Appendix A.

³ The AWMP can be found at https://www.ssjid.com/district-services/agriculture-irrigation-water/.



Select Only One	Type of Plan		Name of RUWMP or Regional Alliance if applicable		
x	Individu	ial UWMP			
		Water Supplier is also a member of a RUWMP			
	Water Supplier is also a member of a Regional Alliance				
	Regiona (RUWM	al Urban Water Management Plan IP)			
NOTES:	NOTES:				

Table 2-2Plan Identification Type (DWR Table 2-2)

2.2 UWMP Structure, Standard Units, and Basis for Reporting

SSJID is a wholesale water supplier. As further summarized in Table 2-3, unless otherwise indicated, the data included in the following sections is presented in units of acre-foot (AF) or AFY. Information is reported on a calendar year basis.

Further, consistent with the UWMP Guidebook 2020, the terms "water use", "water consumption", and "water demand" are used interchangeably in this UWMP.



Туре с	f Supplier						
X Supplier is a wholesaler							
Supplier is a retailer							
Fiscal	or Calendar Year						
х	UWMP Tables are in calendar years						
UWMP Tables are in fiscal years							
lf usir	ng fiscal years provide month and date that the fiscal year begins (mm/dd)						
Units of measure used in UWMP							
Unit AF							
NOTES:							

Table 2-3Supplier Identification (DWR Table 2-3)

2.3 Coordination and Outreach

Coordination with other water suppliers, cities, counties, and other community organizations in the region is an important part of preparing a UWMP and Water Shortage Contingency Plan (WSCP). This section identifies the agencies and organizations SSJID sought to coordinate with during preparation of this Plan.

2.3.1 Wholesale and Retail Coordination

☑ CWC § 10631 (h)

An urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (f). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (f).

SSJID is a wholesale drinking water supplier to four retailers (i.e., the SCWSP agencies). As part of the coordination efforts for the 2020 UWMP, and in compliance with CWC §10631(h), SSJID provided the retailers listed below in Table 2-4 with information on current and projected water supply as well as water supply reliability. The retailers in turn provided their water demand projections through 2045 to SSJID.



Т	able 2-4Water Supplier Information Exchange (DWR Table 2-4)
	Supplier has informed more than 10 other water suppliers of water supplies available in accordance with Water Code Section 10631. Completion of the table below is optional. If not completed, include a list of the water suppliers that were informed.
	Provide page number for location of the list.
x	Supplier has informed 10 or fewer other water suppliers of water supplies available in accordance with Water Code Section 10631. Complete the table below.
/ater Su	pplier Name (Add additional rows as needed)
ity of Es	calon

С

V

City of Lathrop

City of Manteca

City of Tracy

NOTES:

2.3.2 Agency Coordination

☑ CWC § 10620 (d) (3)

Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.

CWC § 10631 (a) A plan shall be adopted in accordance with this chapter that shall do all of the following:

Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities, as developed pursuant to Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of Title 7 of the Government Code.

On 24 February 2021, SSJID sent a letter to the agencies identified in Table 2-5 to inform them that the District was in the process of updating its UWMP and WSCP and was soliciting their input. Another email was sent to these agencies on 8 June 2021 notifying them of the public hearing regarding the findings of the UWMP and WSCP. The letter also informed the agencies that the draft UWMP and WSCP would be available for public review at the District office and electronic versions were available upon request. A sample copy of the notification letters described above is included in Appendix B.

Plan Preparation 2020 Urban Water Management Plan South San Joaquin Irrigation District



Table 2-5 Notification to Cities and Counties (DWR Table 10-1)						
	Supplier has notified more than 10 cities or counties in accordance with Water Code Sections 10621 (b) and 10642. Completion of the table below is not required. Provide a separate list of the cities and counties that were notified.					
	Provide the page or lo	ocation of this list in the UWMP.				
X Supplier has notified 10 or fewer cities or counties. Complete the table below.						
City Name	60 Day Notice Notice of Public Hearing					
City of Escalon	х	Х				
City of Lathrop	Х	Х				
City of Manteca	х	Х				
City of Ripon	Х	Х				
City of Tracy	Х	Х				
County Name	60 Day Notice	Notice of Public Hearing				
San Joaquin County	Х	Х				
NOTES:						

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2.3.3 Public Participation

☑ CWC § 10642

Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of both the plan and the water shortage contingency plan. Prior to adopting either, the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon. Prior to any of these hearings, notice of the time and place of the hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of a hearing to any city or county within which the supplier provides water supplies. Notices by a local public agency pursuant to this section shall be provided pursuant to Chapter 17.5 (commencing with Section 7290) of Division 7 of Title 1 of the Government Code. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing or hearings, the plan or water shortage contingency plan shall be adopted as prepared or as modified after the hearing or hearings.

Water suppliers are required by the UWMP Act to encourage active involvement of the community within the service area prior to and during the preparation of its UWMP and WSCP. The UWMP Act also requires water suppliers to make a draft of the UWMP and WSCP available for public review and to hold a public hearing regarding the findings of the UWMP and WSCP prior to its adoption.

To facilitate public participation, SSJID published a notice in the Manteca Bulletin informing the public that the draft UWMP and WSCP would be available for public review at the District office and electronic versions were available upon request. The notice also informed the public that a public hearing would be held in the SSJID Board Room on 22 June 2021 to allow for public comment of the draft UWMP and WSCP. Public participation in the development of the 2020 UWMP and WSCP is documented in Appendix C.



3 SYSTEM DESCRIPTION

WC § 10631 (a) A plan shall be adopted in accordance with this chapter that shall do all of the following:

Describe the service area of the supplier, including current and projected population, climate, and other social, economic, and demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available. The description shall include the current and projected land uses within the existing or anticipated service area affecting the supplier's water management planning. Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities, as developed pursuant to Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of Title 7 of the Government Code.

This section provides an overview of the South San Joaquin Irrigation District (SSJID or District) and its service area, including discussions of the water supply program, the contracted retailers, demographics, and climate.

3.1 General Description

3.1.1 South San Joaquin Irrigation District

Formed in 1909 under the predecessor to the Irrigation District Act, SSJID was established to provide a reliable and economical source of irrigation water for the agricultural areas surrounding Escalon, Ripon, and Manteca. Since then, SSJID has expanded into providing domestic water service to several cities in South San Joaquin County through the South County Water Supply Project (SCWSP).

SSJID is located in the southeastern portion of San Joaquin County, in California's San Joaquin Valley. SSJID covers about 72,000 acres. The Cities of Manteca, Ripon and Escalon are located within SSJID boundaries. The Cities of Lathrop and Tracy are located west of SSJID. Figure 3-1 shows the SSJID service area and the surrounding cities. Neighboring districts include Stockton East Water District to the north, Oakdale Irrigation District to the east and Modesto Irrigation District to the south.

SSJID derives its water supply from three sources, including surface water diverted from the Stanislaus River at Goodwin Dam, groundwater pumped by the District and private landowners, and irrigation return flows from a neighboring water district.

SSJID owns and operates an extensive system of water and stormwater drainage conveyance facilities, pipelines, and canals. Surface water from the Stanislaus River watershed is stored in the reservoirs behind the Tulloch, New Melones, Beardsley, Goodwin, and Donnells Dams. SSJID also owns the off-channel Walter J. Woodward Reservoir, which has a storage capacity of 36,000 acre-feet (AF). Water is diverted from the Stanislaus River and stored in Woodward Reservoir before it is treated at the Nick C. DeGroot Water Treatment Plant (WTP). Treated water is delivered to the Cities of Manteca, Tracy, and Lathrop through a 36-mile concrete-lined steel pipeline that varies in diameter from 30 to 54 inches.

SSJID also supplies raw water to the agricultural customers within its service area and to the City of Ripon for non-potable irrigation uses. However, these non-potable demands and supplies are covered in SSJID's

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Agricultural Water Management Plan (AWMP) which was submitted to the California Department of Water Resources (DWR) in April 2021⁴ and are not discussed in this Plan.

3.1.2 South County Water Supply Project

The SCWSP is a collective effort between SSJID and the Cities of Manteca, Escalon, Lathrop, and Tracy to provide supplemental, high-quality drinking water for urban uses. SSJID constructed the Nick C. DeGroot WTP in 2005 and a water delivery pipeline system using funds provided by the SCWSP agencies. SSJID serves as the wholesale water agency and water treatment plant operator, and the cities are the retail water agencies. Each city has an agreement with SSJID to receive treated water through December 2049. Table 3-1 lists the current allotments (Phase I) to each city, which allocated a share of the water treatment plant capacity. Phase I contracts are currently active. Table 3-1 also shows possible future Phase II allotments that would become active only after future expansion of the Nick C. DeGroot WTP, which is contingent on funding and new agreements with the cities. It should be noted that the City of Escalon's allotment is currently transferred to Tracy as Escalon does not have the infrastructure to convey the water.

The water supply from the SCWSP comes from SSJID's senior pre-1914 appropriative water rights to the Stanislaus River. Treated water deliveries began in July 2005. SSJID is able to make this water available to the cities as a result of its existing firm water rights, numerous agricultural water conservation measures, and through the conversion of irrigated agriculture to urban development. When constructing the Nick C. DeGroot WTP and conveyances, the goals of SSJID and the SCWSP agencies were to protect and enhance the economic health of the region by providing reliable, safe supplemental water to cities; to use conserved surface water from SSJID to avoid adverse impacts to current agricultural customers; to meet local needs by keeping adequate water in the region; and, to reduce the area's reliance on groundwater.⁵

The SCWSP consists of an intake facility at Woodward Reservoir, a state-of-the-art membrane filtration water-treatment plant, and about 35 miles of pipe ending in the City of Tracy. The Nick C. DeGroot WTP currently has a maximum sustained capacity of approximately of 40 million gallons per day (MGD). The Nick C. DeGroot WTP includes pre-chlorination, coagulation, dissolved air flotation pretreatment for removal of solids and dissolved material, chemical stabilization to minimize internal pipe corrosion, membrane filtration, and chlorination for disinfection.

In efforts to extend the use of the District's Phase I system, an investigation into modifying the existing infrastructure to increase the plant's current capacity is underway. The Phase II includes a future plant expansion to increase the design capacity to approximately 60 MGD, which is further discussed in Section 6.8.

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⁴ The AWMP can be found at <u>https://www.ssjid.com/district-services/agriculture-irrigation-water/.</u>

⁵ See https://www.ssjid.com/district-services/357-2/.



City	Phase I Allotment (AFY)	Phase II Allotment (AFY)					
Escalon	2,015	2,799					
Lathrop	6,887	10,671					
Manteca	11,500	18,500					
Tracy	11,120	11,120					
Total 31,522 43,090							
NOTES:	NOTES:						
(a) Water Supply Development and Operating							
Agreement, November 2020.							
(b) Escalon's Phase I allotment of 2,015 AFY has been							
transferred to Tracy on a temporary basis.							

Table 3-1 City Allotments for Treated Water

3.1.3 City of Escalon

The City of Escalon is located in the eastern portion of SSJID. The City had a population of approximately 7,478 in 2020 (DOF, 2020). Escalon currently relies only on groundwater supplies and does not utilize the allotted water from SSJID as there is no infrastructure to convey the water to the City. Escalon intends to construct a pipeline to connect the City to the SCWSP in the near future. Escalon's allotment of SCWSP treated water (2,015 AFY) is currently sold to the City of Tracy.

3.1.4 <u>City of Lathrop</u>

The City of Lathrop is located west of SSJID. The City had a population of approximately 26,833 in 2020. Groundwater is the primary supply for domestic water for Lathrop. The City owns and operates six groundwater wells, five of which are currently active. SSJID delivered an average of 2,172 AFY to Lathrop between 2016 and 2020.

3.1.5 <u>City of Manteca</u>

The City of Manteca is located in the western portion of SSJID. The City had a population of approximately 84,800 in 2020. Manteca's water supply includes a combination of groundwater pumped by 15 city-owned wells and treated surface water purchased from SCWSP. To mitigate local groundwater overdraft conditions, Manteca uses the SCWSP water to supplement its groundwater supply and to meet projected future water demands. SSJID delivered an average of 8,484 AFY to Manteca between 2016 and 2020.



3.1.6 <u>City of Tracy</u>

The City of Tracy is located west of SSJID. The City had a population of approximately 96,345 in 2020. Tracy's water supplies mainly include treated surface water from the SCWSP, Central Valley Project (CVP) water, and groundwater. Tracy uses their surface water allotment to meet most demands, while relying on groundwater for peaking during the summer and for supplemental drought supplies. Overall, Tracy has a diverse portfolio of water supplies that helps to increase reliability. Tracy owns a water treatment plant and nine groundwater wells. SSJID delivered an average of 10,488 AFY to Tracy between 2016 and 2020.

3.2 Population within the Service Area

NOTES:

(a) Data from the SCWSP agencies.

Table 3-2 and the associated chart show the current and projected population served by SSJID under the SCWSP, including the cities of Escalon, Lathrop, Manteca, and Tracy. Population data were provided directly from the cities. SSJID currently serves a total population of approximately 215,456. The population is projected to double by 2040 to be approximately 432,001.

Table 5-2 Fobulation - Current and Projected (DWR Table 5-1)						
Population	2020	2025	2030	2035	2040	2045 (opt)
Served	215,456	263,950	314,992	369,393	432,001	

Table 3-2 Population - Current and Projected (DWR Table 3-1)





3.3 Other Social, Economic, and Demographic Factors

Demographics for the SCWSP agencies (Escalon, Lathrop, Manteca, and Tracy) are summarized in Table 3-3. The same data are also provided for the State of California as a whole. Relative to the whole State, the SCWSP agencies' population is slightly younger and more racially diverse except for within the City of Escalon. Attainment of higher education in the cities are lower than the rest of California. Median household income in Tracy and Lathrop are higher than for the State, while Manteca and Escalon's median household income is comparatively lower.

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Demographics (a)	City of Manteca	City of Tracy	City of Lathrop	City of Escalon	California
Age and Sex					
Persons under 5 years	7.0%	6.1%	7.9%	10.5%	6.0%
Persons under 18 years	26.2%	28.1%	27.7%	25.7%	22.5%
Persons 65 years and older	12.9%	8.9%	8.1%	13.4%	14.8%
Female persons 51.1% 50.2% 49.7% 49.9%				50.3%	
Race and Hispanic Origin					
White alone	67.9%	58.5%	44.0%	90.8%	71.9%
Black or African American alone	4.8%	4.5%	6.3%	1.0%	6.5%
American Indian and Alaska Native alone	0.8%	0.4%	1.1%	0.6%	1.6%
Asian alone	9.6%	16.3%	26.4%	0.9%	15.5%
Native Hawaiian and Other Pacific Islander alone	1.1%	1.2%	0.6%	0.1%	0.5%
Two or More Races	8.4%	9.3%	9.7%	3.0%	4.0%
Hispanic or Latino	39.8%	39.6%	43.0%	23.2%	39.4%
White alone, not Hispanic or Latino	39.9%	33.1%	20.4%	73.3%	36.5%
Families & Living Arrangements					
Persons per household	3.11	3.50	4.06	2.82	2.95
Living in same house 1 year ago, percent of persons age 1 year+	86.6%	86.6%	85.7%	88.3%	87.1%
Language other than English spoken at home, age 5 years+	29.8%	43.3%	51.4%	16.7%	44.2%
Education					
High school graduate or higher, persons age 25 years+	84.9%	85.4%	80.7%	87.6%	83.3%
Bachelor's degree or higher, persons age 25 years+	16.7%	22.0%	18.4%	17.5%	33.9%
Income & Poverty	•			•	l
Median Household Income (2019 dollars)	\$72,867	\$92,046	\$85,805	\$74,454	\$75,235
Per capita income in past 12 months (2019 dollars)	\$28,899	\$31,540	\$25,337	\$31,570	\$36,955
Persons in poverty	11.4%	8.1%	10.8%	8.1%	11.8%
NOTES: (a) Demographic data per the U.S. Census Bureau QuickFacts website					

Table 3-3 Demographic and Housing Characterist
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Bureau QuickFacts website,

(a) Demographic data per the U.S. Census Bureau QuickFacts website, https://www.census.gov/quickfacts/fact/table/CA/PST045219, accessed March 2021.

System Description 2020 Urban Water Management Plan South San Joaquin Irrigation District

3.4 Land Uses within Service Area



The SCWSP agencies are municipalities with urban land uses. The primary land use is residential. Significant growth is anticipated in this area, with numerous approved or pending large development projects within the cities. The planned development and land use changes are reflected in the SCWSP agencies' demand projections, detailed descriptions of which can be found in their Urban Water Management Plans (UWMPs or Plans) and/or General Plans.

3.5 Climate

SSJID has a climate typical of the San Joaquin Valley, as presented in Table 3-4 and its associated chart below. The climate can be characterized as generally warm to hot in the spring, summer, and fall with increasing temperatures reaching over 90° Fahrenheit (°F). Winters are usually mild with the lowest temperature above 35°F.

Rainfall in the area averages 12.2 inches per year and is generally confined to the wet season from late October to early May. The average reference evapotranspiration (ETo) is 52.6 inches per year. Since the average annual ETo is approximately 40.4 inches more than the average annual precipitation, and because more than 88% of the annual precipitation occurs between the months of November and April, growing turf or other plantings in this region requires a significant amount of irrigation during the dry season. This irrigation demand contributes to the overall and observed seasonal variation in water demand throughout SSJID's service area.

System Description 2020 Urban Water Management Plan South San Joaquin Irrigation District



D. d. a stal	Average Te	mperature	Average	Average
Month	Min (°F)	Max (°F)	ETO (inches)	Rainfall (inches)
January	38.0	59.2	1.1	2.6
February	39.6	62.7	1.9	2.0
March	42.4	68.2	3.5	1.8
April	45.6	72.9	5.0	1.0
May	50.1	79.5	6.8	0.5
June	54.8	85.8	7.6	0.1
July	57.3	91.2	8.0	0.0
August	56.6	89.8	7.1	0.0
September	53.5	88.4	5.2	0.1
October	47.3	82.5	3.5	0.6
November	40.4	70.9	1.7	1.2
December	37.2	60.8	1.1	2.1
Annual	46.9	76.0	52.6	12.2
NOTES				

Table 3-4 Climate Characteristics

(a) Data from California Irrigation Management Information System for Station 70-Manteca (January 1988 - December 2020).





3.6 Climate Change Considerations

☑ CWC § 10630

It is the intention of the Legislature, in enacting this part, to permit levels of water management planning... while accounting for impacts of climate change.

Projections of climate change in California indicate a further intensification of wet and dry extremes and shifting temperature. Changing climate can affect both water uses and supplies. For example, extreme and higher temperatures can lead to increases in water use; declining snowpack and earlier runoff patterns could result in changes in stream flows and reservoir operations; projection of frequent, severe, prolonged droughts could lead to not only less surface water available, but also exacerbating ongoing stressors in groundwater basins. Some of these pressures are already apparent in California as of 2021.

Several sections in the California Water Code (CWC) relevant to UWMPs refer to climate change. Pursuant to CWC requirements and the UWMP Guidebook, this Plan incorporates climate change considerations into following relevant sections:

- Chapter 3 System Description,
- Chapter 4 Water Use Characterization,
- Chapter 6 Water Supply Characterization, and
- Chapter 7 Water Service Reliability and Drought Risk Assessment.

Potential impacts of climate change on water system infrastructure are discussed in the SSJID's Emergency Response Plan (ERP), which is incorporated into this UWMP by reference (SSJID, 2020). The ERP assesses the District's vulnerabilities to various hazards, such as flooding and fire, and presents emergency response procedures.

Climate change impacts on the District's water demands are discussed in Section 4.4, while climate change impacts on the District's water supply are discussed in Section 6.10.1.



contributors, and the GIS User Community



4 WATER USE CHARACTERIZATION

CWC § 10631 (d) (1) A plan shall be adopted in accordance with this chapter that shall do all of the following:

For an urban retail water supplier, quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following:

- (A) Single-family residential.
- (B) Multifamily.
- (C) Commercial.
- (D) Industrial.
- (E) Institutional and governmental.
- (F) Landscape.
- (G) Sales to other agencies.

(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

- (I) Agricultural.
- (J) Distribution system water loss.
- (2) The water use projections shall be in the same five-year increments described in subdivision (a).

This chapter provides a description and quantifies the South San Joaquin Irrigation District's (SSJID's or District's) past, current, and projected water uses through 2045. As a wholesaler, SSJID's water use involves sales to its retail agencies. For the purposes of the Urban Water Management Plan (UWMP or Plan), the terms "water use" and "water demand" are used interchangeably.

4.1 Current and Historical Total Water Demand

As a wholesaler, SSJID is only required to report the direct uses, i.e., the sale of water to other agencies, as defined by California Water Code (CWC) §10631(d)(1)(G). Demand by water use sector is reported in each retailer's own UWMP.

4.1.1 Current and Historical Potable Water Demand

Table 4-1 and associated charts show SSJID's current and historical sales to its retail agencies under the South County Water Supply Project (SCWSP). In 2020, SSJID supplied a total of 23,935 acre-feet per year (AFY) of water. The majority of the water was delivered to the City of Tracy and the City of Manteca, while the remaining portion was supplied to the City of Lathrop. Between 2016 and 2020, the total demand for SCWSP water increased by 37%. It should be noted that these demands only account for SCWSP water delivered to the above-mentioned cities. Each city also has additional sources of water.



4.1.2 Current and Historical Non-Potable Water Demand

SSJID supplies raw water for agricultural irrigation within its service area and to the City of Ripon for nonpotable irrigation uses. However, these non-potable demands and supplies are covered in SSJID's Agricultural Water Management Plan (AWMP) and are not discussed in this UWMP. The retailers may have non-potable water demands within their service areas, which are discussed in their individual UWMPs as applicable.⁶

Table 4-1Demands for Potable and Non-Potable Water - Actual (DWR Table 4-1)

	Additional	Level of	Volume				
Use Type	Description (as needed)	Treatment When Delivered	2016	2017	2018	2019	2020
Sales to other agencies	City of Manteca	Drinking Water	6,107	8,240	9 <i>,</i> 537	9,120	9,416
Sales to other agencies	City of Lathrop	Drinking Water	250	912	1,946	4,319	3,436
Sales to other agencies	City of Tracy	Drinking Water	11,110	11,463	10,227	8,555	11,083
Sales to other agencies	City of Escalon	Drinking Water	0	0	0	0	0
		TOTAL	17,466	20,615	21,710	21,994	23,935

NOTES:

(a) SSJID also supplies raw water for agricultural irrigation within its service area and to the City of Ripon, which are covered in the 2020 SSJID AWMP and are not part of this UWMP.

(b) These demands only account for SCWSP water delivered to the cities. Each city also has additional sources of water.

(c) Tracy's demand includes the 2,015 AF that is purchased from Escalon every year.

(d) Volumes are in units of AF.

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⁶ The City of Escalon is not required to prepare an UWMP. Information on their water can be found at the City's website: http://www.cityofescalon.org/Government/Departments/Public_Works/Water_Department.













4.1.3 Distribution System Water Loss

CWC § 10631 (3)

(A) The distribution system water loss shall be quantified for each of the five years preceding the plan update, in accordance with rules adopted pursuant to Section 10608.34.

(B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.

(C) In the plan due July 1, 2021, and in each update thereafter, data shall be included to show whether the urban retail water supplier met the distribution loss standards enacted by the board pursuant to Section 10608.34.

As a wholesale water supplier, SSJID is not required to perform water loss audits and is not subject to the UWMP distribution system loss reporting.

4.2 Projected Total Water Demand

4.2.1 <u>Projected Potable Water Demand</u>

The projections were provided directly by the retail agencies, which match their SCWSP contract allotments. As shown in Table 4-2, the total request for SCWSP water is projected to increase from 31,522 AFY in 2025 to 43,090 AFY in 2045, assuming Phase II of the SCWSP will become effective in 2040.

The City of Ripon has been investigating the possibility of entering into the SCWSP for treated water delivery. This change will be contingent on funding, signing a contract with SSJID, constructing new conveyance facilities, California Environmental Quality Act (CEQA) and permitting. As such plans are still in the early phases, no demand projections for Ripon have been made in this UWMP.

4.2.2 Projected Non-Potable Water Demand

As mentioned above, non-potable water demand is covered in SSJID's AWMP and is not discussed in this UWMP. The retailers may have non-potable water demands within their service areas, which would be discussed in their individual UWMPs as applicable.⁷

⁷ The City of Escalon is not required to prepare an UWMP. Information on their water can be found at the City's website: http://www.cityofescalon.org/Government/Departments/Public_Works/Water_Department.



	Additional	Projected Water Use				
Use Type	Description (as needed)	2025	2030	2035	2040	2045
Sales to other agencies	City of Manteca	11,500	11,500	11,500	18,500	18,500
Sales to other agencies	City of Lathrop	6,887	6,887	6,887	10,671	10,671
Sales to other agencies	City of Tracy	13,135	11,120	11,120	11,120	11,120
Sales to other agencies	City of Escalon	0	2,015	2,015	2,799	2,799
Sales to other agencies	City of Ripon	0	0	0	0	0
	TOTAL	31,522	31,522	31,522	43,090	43,090
NOTES						

Table 4-2 Use for Potable and Non-Potable - Projected (DWR Table 4-2)

NOTES:

(a) Volumes are in units of AF.

(b) SSJID also supplies raw water for agricultural irrigation within its service area and to the City of Ripon, which are covered in the 2020 SSJID AWMP and are not part of this UWMP.

(c) Phase II production date is assumed to be 2040.

(d) The temporary transfer of 2,015 AFY between Tracy and Escalon is assumed to terminate in 2025.

4.2.3 **Projected Total Water Demand**

SSJID's total projected water demands are summarized in Table 4-3.

	2020	2025	2030	2035	2040	2045 (opt)
Potable and Raw Water From Tables 4-1W and 4- 2W	23,935	31,522	31,522	31,522	43,090	43,090
Recycled Water Demand From Table 6-4W	0	0	0	0	0	0
TOTAL WATER DEMAND	23,935	31,522	31,522	31,522	43,090	43,090
NOTES:						

Table 4-3	Gross Water Use (DWR Table 4-3)
-----------	---------------------------------

(a) Volumes are in units of AF.

(b) SSJID also supplies raw water for agricultural irrigation within its service area and to the City of Ripon, which are covered in the 2020 SSJID AWMP and are not part of this UWMP.



4.3 Water Use Sectors Not Included in the Demand Projections

Several water use sectors listed in CWC §10631(d)(1) are not included in the water demand projections described in Sections 4.2 because they are not applicable to SSJID as a wholesale supplier, or are addressed as part of another water management plan (e.g., SSJID's AWMP). The following sectors were not included in the demand projections in this Plan:

- Single-family residential.
- Multifamily.
- Commercial.
- Industrial.
- Institutional and governmental.
- Landscape.
- Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.
- Agricultural.⁸
- Distribution system water loss.

4.4 Climate Change Impacts to Demand

☑ CWC § 10635(b)

(4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.

The projections for the SCWSP water presented in Section 4.2 were provided directly by the retail agencies and were based on their contract allotment. Climate change can potentially impact customers' demand within the retail agencies' service area. Detailed discussions of how climate change was incorporated into their demand projections can be found in their individual UWMPs.

⁸ SSJID supplies water to the agricultural customers within its service area. However, the agricultural demand and supply is covered in SSJID's AWMP and is not discussed in this UWMP.
4.5 Coordinating Water Use Projections

☑ CWC § 10631 (h)

An urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available.

As discussed in Section 2.3, SSJID has been closely communicating with the retail agencies. The retail agencies notify SSJID each year of the deliveries that they expect to receive over the next three years. As part of the coordination effort for the 2020 UWMP, and in compliance with CWC §10631(h), the retail agencies supplied SSJID with their projected demand for the SCWSP water through 2045 or as far as data are available.





5 SBX7-7 BASELINES, TARGETS, AND 2020 COMPLIANCE

☑ CWC § 10608.12 (w)

Water Code Section 10608.12. (w) "Urban wholesale water supplier," means a water supplier, either publicly or privately owned, that provides more than 3,000 acre-feet of water annually at wholesale for potable municipal purposes.

☑ *CWC* § 10608.36

Water Code Section 10608.36. Urban wholesale water suppliers shall include in the urban water management plans required pursuant to Part 2.6 (commencing with Section 10610) an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part.

As a wholesale water supplier, the South San Joaquin Irrigation District (SSJID) is not required to calculate, establish, or meet baseline targets for daily per capita water use, nor are they required to complete the SB X7-7 Verification tables. Assessment of present and proposed future measures, programs, and policies which will help SSJID and its retail agencies conserve water are described in Chapter 9.



6 WATER SUPPLY CHARACTERIZATION

CWC § 10631 (b) A plan shall be adopted in accordance with this chapter that shall do all of the following:

Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a).

The South San Joaquin Irrigation District's (SSJID's or District's) water supply under the South County Water Supply Project (SCWSP) is obtained from surface water. The amount of water that SSJID receives varies from year to year based on various factors including contractual agreements and annual precipitation. SSJID's current and potential future water supplies are described in the following sections.

6.1 Purchased Water

CWC § 10631 (h) A plan shall be adopted in accordance with this chapter and shall do all of the following:

An urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (f). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (f).

SSJID does not currently, nor does it plan to in the future, purchase or import water for use by its SCWSP customers.



6.2 Groundwater

☑ CWC § 10631

(b) (4) If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information:

(A) The current version of any groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720), any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management for basins underlying the urban water supplier's service area.

(B) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For basins that a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For a basin that has not been adjudicated, information as to whether the department has identified the basin as a high- or medium-priority basin in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to coordinate with groundwater sustainability agencies or groundwater conditions in accordance with a groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720).

(C) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

Groundwater would only be used as a source of water delivered to the Nick C. DeGroot Water Treatment Plant (WTP) in the event of an emergency, and therefore is not considered in this Urban Water Management Plan (UWMP; Table 6-1). However, groundwater is an important resource used by the SCWSP agencies and farmers throughout the District. The SCWSP agencies use groundwater to meet portion of their demands, and some District growers use groundwater as a regular source for irrigation. In addition, groundwater provides important reserves that can supplement SCWSP water during droughts. SSJID has leased private wells during droughts to augment water supplies to farmers, which could help to minimize cutbacks to the SCWSP agencies' water supplies.

Х	Supplier does not pump groundwater. The supplier will not complete the table below.								
	All or part of the groundwater described below is desalinated.								
Groundwater Type	Location or Basin Name	2016	2017	2018	2019	2020			
*									
	TOTAL	0	0	0	0	0			
NOTES:									

Table 6-1Groundwater Volume Pumped (DWR Table 6-1)



6.3 Surface Water

SSJID's water supply for its SCWSP agencies is obtained exclusively from the Stanislaus River. These water supplies originate on the western slope of the Sierra Nevada Mountains in Alpine, Calaveras, Stanislaus, and Tuolumne Counties. The Stanislaus River watershed above Goodwin Dam encompasses a 980 square mile drainage basin that includes the Stanislaus River, New Melones Reservoir, Tulloch Reservoir as well as several smaller reservoirs, lakes, and streams.

SSJID's surface water rights are primarily held jointly with its neighbor, Oakdale Irrigation District (OID; OID and SSJID are collectively referred to as "the Districts"). These include water rights established prior to enactment of the Water Commission Act of 1914 (i.e., pre-1914 rights), as well as rights acquired after 1914. SSJID separately owns the right to store water in the Woodward Reservoir, an off-stream reservoir. SSJID's water deliveries are largely governed by a 1988 Agreement and Stipulation (1988 Agreement) between the United States Bureau of Reclamation (USBR) and the Districts. The 1988 Agreement is an operational agreement for the New Melones Reservoir system, which recognizes and protects the Districts' senior water rights on the Stanislaus River. Under the 1988 Agreement, the Districts are entitled to receive the first 600,000 acre-feet (AF) of inflow to New Melones every year, and in years when inflow is less than 600,000 AF, the Districts are entitled to receive the actual inflow plus one-third of the difference between 600,000 and the actual inflow. Since the 1988 Agreement has been in effect, the lowest supply of water for SSJID was 225,000 AF in both 2014 and 2015.

SSJID's water is diverted from the Stanislaus River at the Goodwin Dam, and is then conveyed through the main canal and stored at Woodward Reservoir. Raw water is delivered to the City of Ripon and the agricultural customers, while treated water is distributed to SCWSP customers.

SSJID's surface water production from the SCWSP over the period of 2016 through 2020 is presented in Table 6-6. Over this timeframe, the average supply of the SCWSP was 21,144 AFY.

6.4 Stormwater

SSJID does not currently, nor does it plan to in the future, use diverted stormwater as part of its water supply portfolio.

6.5 Wastewater and Recycled Water

☑ CWC § 10633

The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.

SSJID does not supplement raw or treated water with wastewater or recycled water for distribution. The District is open to receiving recycled wastewater from the local agencies within the service area if doing so becomes a cost-effective option.



6.5.1 <u>Recycled Water Coordination</u>

At this time, SSJID does not treat or deliver recycled water to any of the retail cities. The bulleted list below summarizes the SCWSP agencies collecting, treating, or discharging wastewater within their own service area.

- City of Escalon collects and treats wastewater within its own service area but does not serve recycled water.
- City of Manteca collects, treats, and recycles wastewater within its own service area.
- City of Lathrop collects, treats, and recycles wastewater within its own service area.
- City of Tracy collects and treats wastewater within its own service area and is currently completing construction to serve recycled water.

The SCWSP agencies' individual UWMPs provide information on their wastewater collection and treatment systems, quantities of treated wastewater, recycled water uses, incentives for using recycled water, and plans for optimizing use of recycled water.⁹

6.5.2 <u>Wastewater Collection, Treatment, and Disposal</u>

☑ CWC § 10633 (a)

A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

☑ CWC § 10633 (b)

A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.

As a wholesale supplier that does not provide supplemental treatment to recycled water, SSJID is not required to summarize wastewater generation or treatment within its surface area as part of the UWMP (Table 6-2). SSJID is open to receiving recycled wastewater from the local agencies within its service area in the future, if doing so becomes a cost-effective option.

⁹ The City of Escalon is not required to prepare an UWMP. Information on their wastewater system can be found at the City's website:

http://escalon.hosted.civiclive.com/government/departments/public_works/sewer_department.

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х	Wholesale Supplier neither distributes nor provides supplemental treatment to recycled water. The Supplier will not complete the table below.											
Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number (optional)	Method of Disposal	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level	Wastewater Treated	20 Discharged Treated Wastewater	20 volumes Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement	
						Total	0	0	0	0	0	
NOTES:								•			•	

Table 6-2Wastewater Treatment and Discharge Within Service Area in 2020 (DWR Table 6-3)



6.5.3 <u>Recycled Water System and Potential, Current, and Projected Uses of Recycled Water</u>

☑ CWC § 10633 (c)

A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.

☑ CWC § 10633 (d)

A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

☑ CWC § 10633 (e)

The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years.

As a wholesaler, SSJID does not directly recycle wastewater for either drinking water or irrigation (Table 6-3). The City of Manteca sells a small portion of their recycled water to SSJID for agricultural irrigation only, which is covered in SSJID's Agricultural Water Management Plan (AWMP). SSJID intends to work with the cities to expand recycled water services for agricultural needs in the future.

Table 6-3Current and Projected Retailers Provided Recycled Water Within Service Area (DWR
Table 6-4)

x	Recycled water is not directly treated or distributed by the Supplier. The Supplier will not complete the table below.							
Name of Receiving Supplier or Direct Use by Wholesaler	Level of Treatment	2020	2025	2030	2035	2040	2045	
	0	0	0	0	0	0		
NOTES:								

6.5.4 Comparison of Previously Projected Use and Actual Use

☑ CWC § 10633 (e)

A description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

Recycled water was not used or distributed by SSJID in 2015, nor in 2020.



Table 6-42015 UWMP Recycled Water Use Projection Compared to 2020 Actual (DWR Table 6-5)

x	Recycled water was not used in 2015, nor projected for use The wholesale supplier will no	or distributed by the supplier e or distribution in 2020. ot complete the table below.		
Name of Receiving Supplier or Direct Use by Wholesaler	2015 Projection for 2020	2020 Actual Use		
Total	0	0		
NOTES:				

6.6 Desalinated Water Opportunities

CWC § 10631 (g) A plan shall be adopted in accordance with this chapter and shall do all of the following:

Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.

SSJID is approximately 80 miles from the Pacific Ocean and therefore the production and use of desalinated sea water is not a practical option. SSJID does not have a need to directly treat high-salinity groundwater to increase water supplies. Some local groundwater, used for irrigation purposes by others, has high salinity and is blended with untreated surface water to improve its quality.

6.7 Water Exchanges and Transfers

CWC § 10631 (c) A plan shall be adopted in accordance with this chapter and shall do all of the following:

Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

SSJID does not exchange or transfer SCWSP water with other agencies at this time. The SCWSP agencies may participate in exchanges or transfers and may have emergency interties with other agencies, which are discussed in their individual UWMPs as applicable.



6.8 Future Water Projects

W CWC § 10631 A plan shall be adopted in accordance with this chapter and shall do all of the following:

(b) (3) For any planned sources of water supply, a description of the measures that are being undertaken to acquire and develop those water supplies.

(f) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use, as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in normal and single-dry water years and for a period of drought lasting five consecutive water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

SSJID and some of the SCWSP agencies are investigating potential expansion of the Nick C. DeGroot WTP, which is referred to as the Phase II Project. Based on the SCWSP water supply agreement, if the demand exceeds 80% of plant capacity during the month of July or if two or more agencies request it, SSJID will commence discussions regarding implementation the Phase II Project. For purposes of this UWMP, the Phase II Project is assumed to start production in 2040.

The Phase II Project is anticipated to be a 20 million gallons per day (MGD) mirror image of the existing 40 million gallons (MG) plant with similar pre-treatment and membrane filtration systems, as well as an additional 3.0 MG treated water storage tank, two additional drying beds, an on-site booster pump station, and potentially a flocculation/sedimentation basin. In addition, an ultraviolet (UV) disinfection system is being contemplated to help with treating organics in the recycled water stream from the drying beds and back pulse system. SSJID anticipates that the Phase II Project will be able to supply an additional 11,568 AFY to the participating SCWSP agencies.



Table 6-5 Expected Future Water Supply Projects or Programs (DWR Table 6-7)

	No ex the ag	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.								
Х	Some with t	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.								
Section 6.8	Provi	Provide page location of narrative in the UWMP								
Name of Future Projects or Programs	Joir otł	nt Project with ner suppliers?	Description	Planned	Planned for	Expected Increase in				
	Y/N	lf Yes, Supplier Name	(if needed)	Year	Use in Year Type	Water Supply to Supplier				
Nick C. DeGroot WTP Phase II	Yes	Cities of Manteca, Escalon, Lathrop, and Tracy		2040	All Year Types	11,568 AFY				
NOTES:										

6.9 Summary of Existing and Planned Sources of Water

CWC § 10631 (b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a).

CWC § 10631 (b) (4) (D) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

Table 6-6 summarizes the water supply volume from the SCWSP for 2016 to 2020. Over this timeframe, supply from the SCWSP increased from 17,466 AFY in 2016 to 23,935 AFY in 2020 (to reflect increasing demands from the SCWSP agencies), with the average supply being 21,144 AFY.

Demand for the SCWSP water is expected to continue increasing as the participating agencies grow and supplement their groundwater supplies with surface water deliveries. Table 6-7 shows projected water supplies available under the SCWSP contracts. SSJID projects that they will be able to supply the total Phase I allotment of 31,522 AFY between 2025 and 2035 and the total Phase II allotment of 43,090 AFY between 2040 and 2045, assuming the Phase II Project starts production in 2040.

As the water demands of the SCWSP agencies increase, it is possible that certain cities' demands will only be able to be fully met by signing new agreements with SSJID, or by purchasing unused SCWSP water from other cities. For instance, the City of Tracy is currently purchasing Escalon's contracted water supply.

The City of Ripon intends to purchase treated water from SSJID in the future. Ripon's ability to purchase treated water is subject to negotiating an agreement with SSJID, permitting, California Environmental

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Quality Act (CEQA), funding, and constructing necessary facilities. As the plans are still in early phases, no supply projections for City of Ripon have been made in this UWMP.



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Table 6-6Water Supplies - Actual (DWR Table 6-8)

Water Supply	Additional Detail on		Ac	tual Volur	ne			Total Right		
water Supply	Water Supply	2016	2017	2018	2019	2020	water Quality	(optional)		
Surface water (not desalinated)		17,466	20,615	21,710	21,994	23,935	Drinking Water			
	Total	17,466	20,615	21,710	21,994	23,935				
NOTES:										
(a) SSJID also supplies raw water for agricultural irrigation within its service area and to the City of Ripon, which are covered in the										
2020 SSJID AWMP and ar	2020 SSJID AWMP and are not part of this UWMP.									
(b) Volumes are units of A	AF.									

Table 6	-7	Water	Sι

Water Supplies - Projected (DWR Table 6-9)

		Projected Water Supply									
		2025		20	2030 20		35	2040		2045 (opt)	
Water Supply	Additional Detail on Water Supply	Reasonably Available Volume	Total Right or Safe Yield (optional)								
Surface water (not desalinated)	Pre-1914 water rights	31,522	300,000	31,522	300,000	31,522	300,000	43,090	300,000	43,090	300,000
Tota		31,522	300,000	31,522	300,000	31,522	300,000	43,090	300,000	43,090	300,000
NOTES:											

(a) Volumes are in units of AF.

(b) SSJID also supplies raw water for agricultural irrigation within its service area and to the City of Ripon, which are covered in the 2020 SSJID AWMP and are not part of this UWMP. The total right of 300,000 AFY includes supplies for both agricultural and urban uses. (c) The SCWSP Phase II production date is assumed to be 2040.



6.10 Special Conditions

6.10.1 Climate Change Effects

According to California's Climate Adaptation Strategy, also referred to as "Safeguarding California Plan: 2018 Update", climate change is likely to significantly diminish California's future water supply. As a result, the State must change its water management, as climate change will create greater competition for limited water supplies. These water management concerns will impact SSJID, the SCWSP agencies, and other neighboring water management agencies.

As discussed in SSJID's 2020 AWMP, climate change is projected to result in shift in runoff toward the winter period and reduction in total runoff. While the timing of runoff will not affect SSJID's annual allotment, which is based on the total annual inflows to New Melones Reservoir under the 1988 Agreement, reduced runoff has the potential to impact SSJID's supply. Additionally, climate change can lead to increased erosion and warmer water, which will pose additional challenges on maintaining water quality. SSJID is committed to mitigating climate change impacts through an adaptive management approach in cooperation with the stakeholders.

6.10.2 Regulatory Conditions and Project Development

Emerging regulatory conditions may affect planned future projects and the characterization of future water supply availability and analysis. Potential impacts of the 2018 amendments to the Water Quality Control Plan for the San Francisco/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan Amendment) on SSJID's supply reliability are described in Section 7.1.1. If SSJID moves forward with any plans to develop additional new supply projects, emerging regulatory conditions will be considered, and the associated water supply reliability impacts will be assessed in future UWMP updates.

6.10.3 Other Locally Applicable Criteria

Other locally applicable criteria may affect characterization and availability of an identified water supply. For example, as discussed in the AWMP, SSJID's groundwater supply reliability for agricultural use may be impacted as the Groundwater Sustainability Plan (GSP) for the Eastern San Joaquin Subbasin is implemented. Reliability of SSJID's surface water supply is further discussed in Section 7. If SSJID moves forward with any plans to develop additional new supply projects, locally applicable criteria will be considered, and the associated water supply reliability impacts will be assessed in future UWMP updates.



6.11 Energy Use

☑ CWC § 10631.2

(a) In addition to the requirements of Section 10631, an urban water management plan shall include any of the following information that the urban water supplier can readily obtain:

(1) An estimate of the amount of energy used to extract or divert water supplies.

(2) An estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems.

(3) An estimate of the amount of energy used to treat water supplies.

(4) An estimate of the amount of energy used to distribute water supplies through its distribution systems.

(5) An estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies.

(6) An estimate of the amount of energy used to place water into or withdraw from storage.

(7) Any other energy-related information the urban water supplier deems appropriate.

(b) The department shall include in its guidance for the preparation of urban water management plans a methodology for the voluntary calculation or estimation of the energy intensity of urban water systems. The department may consider studies and calculations conducted by the Public Utilities Commission in developing the methodology.

(c) The Legislature finds and declares that energy use is only one factor in water supply planning and shall not be considered independently of other factors.

SSJID tracks the energy usage for the operation of the Nick C. DeGroot WTP. During 2020, a total of 4,178,374 kilowatt hours (kWh) of energy was consumed. As the total volume of water entering the system in 2020 was 23,935 AF, the energy intensity was calculated to be 175 kWh/AF (Table 6-8). To offset the power used by the WTP and to maintain low water rates for its customers, SSJID constructed a solar farm at the WTP. The solar project which includes nearly 7,000 photovoltaic panels installed on 14 acres of land offsets the power used to operate the WTP, reducing electrical costs by approximately \$400,000 per year.

Water Supply Characterization

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Table 6-8Recommended Energy Reporting - Total Utility Approach (DWR Table O-1B)

Urban Water Supplier:

SSJID

Water Delivery Product

Wholesale Potable Deliveries

Enter Start Date for Reporting Period	1/1/2020	Urban Water Supplier Operational Co				
End Date	12/31/2020					
Is upstream embedded in the values reported?	No	Sum of All Water Management Processes	ater nt Non-Consequenti Hydropower			
Water Volume Units Used	AF	Total Utility	Hydropower	Net Utility		
Volume of Water Entering	Process (volume unit)	23,935	0	23,935		
En	ergy Consumed (kWh)	4,178,374	0	4,178,374		
Energy Ir	174.6	0.0	174.6			

Quantity of Self-Generated Renewable Energy

1,550,531 kWh

Data Quality

Metered Data

Data Quality Narrative:

Data are from SSJID's water and energy meters.

Narrative:

Energy usage is for the operation of the Nick C. DeGroot WTP. SSJID constructed a solar farm at the WTP in 2008, which offsets the power used for the WTP.



7 WATER SERVICE RELIABILITY AND DROUGHT RISK ASSESSMENT

☑ CWC § 10620 (f)

An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

☑ CWC § 10630.5

Each plan shall include a simple lay description of how much water the agency has on a reliable basis, how much it needs for the foreseeable future, what the agency's strategy is for meeting its water needs, the challenges facing the agency, and any other information necessary to provide a general understanding of the agency's plan.

This section describes the constraints on the South San Joaquin Irrigation District's (SSJID's or District's) water supply sources, as well as the management strategies that SSJID has employed or will employ to address these constraints. This section also provides an estimate of the supply volumes available to SSJID and the corresponding supply and demand assessments in normal years, single dry years, and multiple dry year periods. Assessment of water supply reliability is complex and dependent upon a number of factors, such as regulatory and legal constraints, hydrological and environmental conditions, climate change, and expected growth, among others. SSJID has made its best determination of future water supply reliability based on the available information, as described below.

7.1 Water Service Reliability Assessment

The following sections describe SSJID's water service reliability assessment, which presents SSJID's expected water service reliability for a normal year, single dry year, and five consecutive dry years projections in five-year increments between 2025 and 2045.

7.1.1 Service Reliability – Constraints on Water Sources

Several potential constraints have been identified on SSJID's water supply and are summarized in the following sections.

7.1.1.1 <u>Stanislaus River Water Supply Constraints</u>

As described in Section 6.3, SSJID's water supply for the South County Water Supply Project (SCWSP) is obtained exclusively from the Stanislaus River. This supply is based on SSJID's senior, pre-1914 appropriative water rights to the Stanislaus River, coupled with an agreement with the United States Bureau of Reclamation (USBR) to store water in the New Melones Reservoir. The reliability of the SCWSP water is influenced by variations in annual weather patterns which affect the volume of the Sierra snowpack and the resulting runoff in the spring and summer months. Furthermore, supply reliability is complicated by regulatory conditions, as described below.

Water Service Reliability and Drought Risk Assessment 2020 Urban Water Management Plan South San Joaquin Irrigation District



Impacts of Bay-Delta Plan Amendment

In December 2018, the State Water Resources Control Board (SWRCB) adopted amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan Amendment) which, if and when implemented, may have an impact on the Stanislaus River. The SWRCB is required by law to regularly review this plan. The adopted Bay-Delta Plan Amendment was developed with the stated goal of increasing salmonid populations in three San Joaquin River tributaries (the Stanislaus, Merced, and Tuolumne Rivers) and the Bay-Delta. The Bay-Delta Plan Amendment requires the release of up to 30-50% of the unimpaired flow on the three tributaries from February through June in every year type.

If the Bay-Delta Plan Amendment is implemented as adopted, there are significant impacts in some years to the ability of the USBR to meet its obligations under the 1988 Stipulation and Agreement to provide formula water to both the Oakdale Irrigation District (OID) and SSJID in years when inflow into New Melones is below 600,000 acre-feet per year (AFY) which typical occur in dry and critically dry years. This could reduce the minimum projected supply amount of 26,448 AFY as planned for by SSJID in this Urban Water Management Plan (UWMP; see Section 7.1.2). The SWRCB has stated that it intends to implement the Bay-Delta Plan Amendment on the Stanislaus River by the year 2022, assuming all required approvals are obtained by that time; however, implementation of the Bay-Delta Plan Amendment remains uncertain for multiple reasons.

Over a dozen lawsuits have been filed in both state and federal courts, including challenges filed by the OID and SSJID, challenging the SWRCB's adoption of the Bay-Delta Plan Amendment are in the early stages and there have been no consequential court rulings as of this date. Secondly, the Bay-Delta Plan Amendment did not include an allocation of responsibility for meeting the flow requirements. Such an allocation of responsibility must consider the senior water rights of both OID and SSJID who have adjudicated pre-1914 rights and other senior appropriative rights. In recognition of the difficult legal process ahead, many stakeholders throughout California including the State and Federal Government have opted to explore the possibility of voluntary agreements to achieve outcomes comparable to those described in the Bay-Delta Plan Amendment balancing the needs of all water users. Both OID and SSJID have participated in voluntary agreement negotiations.

Based on these uncertainties, SSJID has opted to make no near-term planning assumptions related to the implementation of the Bay-Delta Plan Amendment for the purposes of this 2020 UWMP. Should conditions change or consequential resolution of the issues aforementioned come to be, SSJID will revise and re-adopt a 2020 UWMP to reflect changes to its impacted water supply.

7.1.1.2 Water Quality Impacts

☑ CWC § 10634

The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

Impaired water quality has the potential to affect water supply reliability. All drinking water standards are set by the U.S. Environmental Protection Agency (USEPA) under the authorization of the Federal Safe Drinking Water Act of 1974. In California, the SWRCB, Division of Drinking Water (DDW) can either adopt

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the USEPA standards or set more stringent standards, which are then codified in Title 22 of the California Code of Regulations. There are two general types of drinking water standards:

- **Primary Maximum Contaminant Levels (MCLs)** are health protective standards and are established using a very conservative risk-based approach for each constituent that takes into potential health effects, detectability and treatability, and costs of treatment. Public water systems may not serve water that exceeds Primary MCLs for any constituent.
- Secondary MCLs are based on the aesthetic qualities of the water such as taste, odor, color, and certain mineral content, and are considered limits for constituents that may affect consumer acceptance of the water.

SSJID routinely monitors the raw and treated water. The Stanislaus River water generally has high quality and low total dissolved solids (TDS) concentrations. Reservoir storage on the Stanislaus River also helps to reduce suspended solids. However, during flood events and times of elevated flows, TDS and suspended solid levels can increase. The Nick C. DeGroot Water Treatment Plant (WTP) provides several levels of treatment for the raw water supply. The resulting treated water is considered to be of excellent quality. SSJID has and will continue to meet all state and federal water quality regulations.¹⁰

A sanitary survey for the upper portion of the Stanislaus River watershed was completed in 2016 (WQTS and Karen E. Johnson, 2016) and is currently being updated. The purpose of the sanitary survey is to identify potential sources of contamination and identify remedial measures. The potential contaminant sources that present a medium risk to water quality in the Stanislaus River watershed include livestock, mining, on-site wastewater treatment systems, wildfires, and wildlife. Source control measures for these problems have been ongoing to help preserve good water quality. These programs have been successful and are expected to maintain the existing quality of the Stanislaus River with continued implementation. If the quality begins to degrade, the watershed management program will be reevaluated and/or SSJID will evaluate whether modifications to water treatment processes are necessary.

7.1.1.3 Climate Change Impacts

☑ CWC § 10635(b)

(4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.

Section 6.10.1 provides a summary of potential climate change impacts on supplies. As described therein, SSJID's supply can potentially be impacted by reduced runoff and water quality issues due to climate change.

¹⁰ Water quality monitoring results can be found at the Safe Drinking Water Information System: https://sdwis.waterboards.ca.gov/PDWW/JSP/MonitoringResults.jsp?tinwsys_is_number=5582&tinwsys_st_code= CA&counter=0.



7.1.2 Service Reliability - Year Type Characterization

☑ CWC § 10631 (b)

Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a), providing supporting and related information, including all of the following:

☑ CWC § 10631 (b)(1)

A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.

☑ CWC § 10635 (a)

Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

Per the UWMP Guidebook 2020, the water service reliability assessment includes three unique year types:

- A <u>normal</u> hydrologic year represents the water supplies available under normal conditions, this could be an averaged range of years or a single representative year;
- A single dry year represents the lowest available water supply; and
- A <u>five-consecutive year drought</u> represents the driest five-year period in the historical record.

A summary of the water supply by each year type, consistent with the UWMP Guidebook 2020 methodology, is provided in Table 7-2. As described in Section 7.1.1.1, the reliability assessment presented in this UWMP assumes that the Bay-Delta Plan Amendment will <u>not</u> be implemented.

In normal water years, SSJID expects to supply 100% of the SCWSP allotment, which is up to 31,522 AFY under Phase I and up to 43,090 AFY under Phase II based on the current contracts.¹¹ This UWMP assumes a Phase II production date of 2040.

The projected supply under a single dry year is estimated based on the analog of 2020 delivery. 2020 was projected to be a dry year and SSJID's total supply was projected to be less than the minimum amount SSJID would likely receive in any year under the 1988 Agreement. The actual amount that SSJID managed to deliver to the SCWSP agencies in 2020 was 23,935 AFY. It is likely that more water will be available in the future based on trends in more efficient water management and urban growth displacing irrigated agriculture. For purposes of the UWMP, SSJID assumes that its agricultural demands during single dry year

¹¹ Water Supply Development and Operating Agreement, November 2020.

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and multiple dry year events will be linearly reduced by 0.25% per year from 2020 levels, freeing up an additional 10,053 AFY to be delivered under Phase II in 2040. Collectively, the supply available under a single dry year is projected to be 26,448 AFY to 36,501 AFY between 2025 and 2045.

Similarly, supplies available during a five consecutive year drought are estimated based on the analog of historical supplies during the 2012 to 2016 drought period and the assumed additional supplies from reduced agricultural demand. In a multiple dry year scenario between 2025 and 2045, SSJID projects to deliver 26,448 AFY to 36,501 AFY during the third and fourth dry years, and full contract amounts of 31,522 AFY to 43,090 AFY in the remaining years, as detailed in Table 7-2.

	Base Year	Available Supplies if Year Type Repeats						
Year Type		X	Quantification of ava compatible with this elsewhere in the UW LocationTable 7- Quantification of ava in this table as either or both.	ilable supplies is not table and is provided MP. 2 ilable supplies is provided volume only, percent only,				
		Vo	olume Available	% of Average Supply				
Average Year				100%				
Single-Dry Year								
Consecutive Dry Years 1st Year								
Consecutive Dry Years 2nd Year								
Consecutive Dry Years 3rd Year								
Consecutive Dry Years 4th Year								
Consecutive Dry Years 5th Year								
NOTES:								

Table 7-1 Basis of Water Year Data (Reliability Assessment) (DWR Table 7-1)



١	ear Type	2025	2030	2035	2040	2045
Normal Year		31,522	31,522	31,522	43,090	43,090
Single-	Dry Year	26,448	28,962	31,475	33,988	36,501
	First year	31,522	31,522	31,522	43,090	43,090
ded sht	Second year	31,522	31,522	31,522	43,090	43,090
enc	Third year	26,448	28,962	31,475	33,988	36,501
D EX	Fourth year	26,448	28,962	31,475	33,988	36,501
	Fifth year	31,522	31,522	31,522	43,090	43,090
NOTES	:					

Table 7-2 Basis of Water Year Data (Responds to DWR Table 7-1)

(a) Volumes are in units of AF.

(b) Volumes represent surface water available for urban use under the SCWSP. SSJID also supplies raw water for agricultural irrigation within its service area and to the City of Ripon, which are covered in the 2020 SSJID AWMP and are not part of this UWMP.

7.1.3 Service Reliability - Supply and Demand Assessment

☑ CWC § 10635 (a)

Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

The projected water demands, which match the total of the SCWSP agencies' contract allotments, are compared to SSJID's water supplies in normal years, single dry years, and multiple dry year periods.

7.1.3.1 Water Service Reliability - Normal Year

As shown in Table 7-3, SSJID is expected to have adequate water supplies during normal years to meet the SCWSP agencies' projected demands through 2045.



	2025	2030	2035	2040	2045				
Supply totals From DWR Table 6-9	31,522	31,522	31,522	43,090	43,090				
Demand totals From DWR Table 4-3	31,522	31,522	31,522	43,090	43,090				
Difference	0	0	0	0	0				
NOTES: (a) Volumes are in units of AF.									

Table 7-3	Normal Year Supply and Demand Comparison (DWR Table 7-2)
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7.1.3.2 Water Service Reliability - Single Dry Year

The reliability of SSJID's surface water supply is estimated to be reduced during a single dry year. As a result, water supply is projected to be less than the projected demands for SCWSP water. As shown in Table 7-4, demand for the SCWSP water will exceed the available supply by amounts ranging up to 9,102 AFY in 2040, or 21% of demand in 2040. The difference is anticipated to be met individually by the SCWSP agencies using groundwater supplies, transfers, and/or other alternate supplies.

Table 7-4	Single Dry Year Supply and Demand Comparison (DWR Table 7-3)
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	2025	2030	2035	2040	2045	
Supply totals	26,448	28,962	31,475	33,988	36,501	
Demand totals	31,522	31,522	31,522	43,090	43,090	
Difference	Difference (5,074) (2,561) (47) (9,102) (6,589)					
NOTES:						
(a) Volumes are in units of AF.						

7.1.3.3 <u>Water Service Reliability – Five Consecutive Dry Years</u>

During multiple dry years, the sufficiency of SSJID's water supply to meet the projected SCWSP demand depends on the drought year. During the first, second, and fifth year of drought, SSJID is projected to have sufficient supply. However, during the third and fourth year, the projected SCWSP water demand is estimated to exceed total supply. The largest difference is approximately 9,102 AFY in 2040, or 21% of the projected demands (Table 7-5). As mentioned before, the difference is anticipated to be met individually by the SCWSP agencies using groundwater supplies, transfers, and/or other alternate supplies.

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		2025	2030	2035	2040	2045
First	Supply totals	31,522	31,522	31,522	43,090	43,090
FIISt	Demand totals	31,522	31,522	31,522	43,090	43,090
year	Difference	0	0	0	0	0
Second	Supply totals	31,522	31,522	31,522	43,090	43,090
voar	Demand totals	31,522	31,522	31,522	43,090	43,090
уеаг	Difference	0	0	0	0	0
Third	Supply totals	26,448	28,962	31,475	33,988	36,501
year	Demand totals	31,522	31,522	31,522	43,090	43,090
	Difference	(5,074)	(2,561)	(47)	(9,102)	(6,589)
Fourth year	Supply totals	26,448	28,962	31,475	33,988	36,501
	Demand totals	31,522	31,522	31,522	43,090	43,090
	Difference	(5,074)	(2,561)	(47)	(9,102)	(6,589)
Fifth year	Supply totals	31,522	31,522	31,522	43,090	43,090
	Demand totals	31,522	31,522	31,522	43,090	43,090
	Difference	0	0	0	0	0
NOTES: (a) Volumes are in units of AF.						

Table 7-5 Multiple Dry Years Supply and Demand Comparison (DWR Table 7-4)

7.1.4 Uncertainties in Dry Year Water Supply Projections

As shown in the above tables, water supply shortfalls are currently projected in future single and multiple dry years. However, there are currently numerous sources of uncertainty in the dry year water supply projections as summarized below:

- Implementation of the Bay-Delta Plan Amendment is under negotiation. SSJID and others are continuing negotiations with the SWRCB on implementation of the Bay-Delta Plan Amendment for water supply cutbacks, particularly during droughts. This is a dynamic situation and the projected drought cutback allocations may need to be revised before the next (i.e., 2025) UWMP depending on the outcome of ongoing negotiations.
- Benefits of the SCWSP Phase II Project are accounted for in current supply projections. However, timing of this project is uncertain. In addition, the future reliability of water provided under Phase II is likely to require a combination of additional conservation measures that reduce the amount of water consumed by SSJID's agricultural customers. Prior to undertaking Phase II, the cities and SSJID will need to further investigate how municipal water deliveries would be coordinated with agricultural operations in accordance with the Water Supply Development and Operations Agreement.
- The SCWSP agencies' projected water demands are subject to change in the future based upon future housing needs, increased conservation, and development of additional local supplies or policies to limits water demand associated with current and future development.

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• Frequency and duration of cutbacks are also uncertain. While the projected shortfalls presented in the UWMP appear severe, the actual frequency and duration of such shortfalls are uncertain. In addition to the supply volumes, the above listed uncertainties would also impact the projected frequency and duration of shortfalls.

7.1.5 Description of Water Management Tools and Options

Although there remains large uncertainty in future supply availability, SSJID and the SCWSP agencies have developed strategies and actions to address the projected supply shortfalls.

As described in Section 6.8, some of the SCWSP agencies are investigating potential expansion of the Nick C. DeGroot WTP (i.e., the Phase II Project). The SCWSP agencies are also developing other sources of supplies, such as recycled water, which are described in their own UWMPs. In addition, the SCWSP agencies have been implementing, and plan to continue to implement, the demand management measures described in Section 9. Further, in response to the anticipated future shortfalls, SSJID has developed a robust Water Shortage Contingency Plan (WSCP) that systematically identifies ways in which SSJID can reduce water demands. The WSCP is included in Section 8.

7.2 Drought Risk Assessment

☑ CWC § 10635(b)

Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the fiveyear cycle of its urban water management plan update. The drought risk assessment shall include each of the following:

(1) A description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts five consecutive water years, starting from the year following when the assessment is conducted.

(2) A determination of the reliability of each source of supply under a variety of water shortage conditions. This may include a determination that a particular source of water supply is fully reliable under most, if not all, conditions.

(3) A comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.

(4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.

7.2.1 DRA Data, Methods, and Basis for Water Shortage Conditions

In addition to the long-term water service reliability assessment presented above, the Drought Risk Assessment (DRA) considers the effects on available water supply sources of an assumed five-year drought commencing the year after the assessment is completed, i.e., from 2021 through 2025. Sections 7.1.1, 7.1.2, and 7.1.3 present an evaluation of the sufficiency of SSJID's supplies to meet projected water

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demands in dry year conditions. The DRA presented herein is performed using the same methodology and assumptions as discussed above. The DRA is intended to inform the water supply projects and demand management measures to be included in the UWMP (see Chapters 6 and 9). Suppliers may conduct an interim update or updates to this DRA within the five-year cycle of its UWMP update, i.e., before the 2025 UWMP.

7.2.1.1 Characteristic Five-Year Water Use

As a first step to the DRA, water suppliers are advised to estimate unconstrained water demand for the next five years (2021-2025). Unconstrained water demand is the expected water use in the absence of drought water use restrictions. The demand for the next five years is assumed to be equal to the current SCWSP total contract allotments of 31,522 AFY, as shown in Table 7-6 below.

2021	2022	2023	2024	2025
31,522	31,522	31,522	31,522	31,522

7.2.2 DRA Individual Water Source Reliability

As previously described, SSJID's water supply for the SCWSP comes exclusively from the Stanislaus River. The DRA presented herein is based on the same reliability assumptions as discussed in Section 7.1 for five consecutive years of drought. Specifically, 100% of the contractual allotment, or 31,522 AFY, is projected to be available during 2021, 2022, and 2025. The supply reliability is projected to reduce to 84%, or 26,448 AFY, in 2023 and 2024.

7.2.3 DRA Total Water Supply and Use Comparison

Table 7-7 provides a comparison of the water supplies available with the total projected water use for an assumed drought period from 2021 through 2025. SSJID is expected to have sufficient supply in 2021, 2022, and 2025. However, in 2023 and 2024, the SCWSP demands are estimated to exceed supplies by 5,074 AFY.

SSJID has developed a WSCP (Chapter 8) to address water shortage conditions resulting from any cause (e.g., droughts, impacted distribution system infrastructure, regulatory-imposed shortage restrictions, etc.). The WSCP identifies a variety of actions that SSJID will implement to reduce demands and further ensure supply reliability at various levels of water shortage.



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

2021	Total
Total Water Use	31,522
Total Supplies	31,522
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

2022	Total
Total Water Use	31,522
Total Supplies	31,522
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

2023	Total
Total Water Use	31,522
Total Supplies	26,448
Surplus/Shortfall w/o WSCP Action	(5,074)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	5,074
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	16%



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

2024	Total
Total Water Use	31,522
Total Supplies	26,448
Surplus/Shortfall w/o WSCP Action	(5,074)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	5,074
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	16%

2025	Total
Total Water Use	31,522
Total Supplies	31,522
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%
NOTES:	
(a) Volumes are in units of AF.	



8 WATER SHORTAGE CONTINGENCY PLAN

☑ CWC § 10640

(a) Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630). The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

(b) Every urban water supplier required to prepare a water shortage contingency plan shall prepare a water shortage contingency plan pursuant to Section 10632. The supplier shall likewise periodically review the water shortage contingency plan as required by paragraph (10) of subdivision (a) of Section 10632 and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

The South San Joaquin Irrigation District's (SSJID's or District's) Water Shortage Contingency Plan (WSCP) is included as Appendix D. The WSCP serves as a standalone document to be engaged in the case of a water shortage event, such as a drought or supply interruption, and defines specific policies and actions that will be implemented at various shortage level scenarios. The primary objective of the WSCP is to ensure that SSJID has in place the necessary resources and management responses needed to protect health and human safety, minimize economic disruption, and preserve environmental and community assets during water supply shortages and interruptions. Consistent with California Water Code (CWC) §10632, the WSCP includes six levels to address shortage conditions ranging from up to 10% to greater than 50% shortage, identifies a suite of demand mitigation measures for SSJID to implement at each level, and identifies procedures for SSJID to annually assess whether or not a water shortage is likely to occur in the coming year, among other things.

A summary of the key elements of the WSCP including water shortage levels and demand-reduction actions is shown in Table 8-1, Table 8-2, and Table 8-3. Additional details are provided in Appendix D.

Shortage Level	Percent Shortage Range	Shortage Response Actions
1	Up to 10%	Implement voluntary cutbacks and conservation (see Table 8-2 and Table 8-3).
2	Up to 20%	Implement voluntary cutbacks and conservation (see Table 8-2 and Table 8-3).
3	Up to 30%	Implement proportional cutbacks and supply augmentation actions (see Table 8-2 and Table 8-3).
4	Up to 40%	Implement proportional cutbacks and supply augmentation actions (see Table 8-2 and Table 8-3).
5	Up to 50%	Implement proportional cutbacks and supply augmentation actions (see Table 8-2 and Table 8-3).
6	>50%	Implement proportional cutbacks and supply augmentation actions (see Table 8-2 and Table 8-3).
NOTES:		

Table 8-1 Wholesa	e Stages of Water Shortage	Contingency Plan
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Table 8-2Supply Augmentation and Other Actions (DWR Table 8-3)

Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier	How much is this going to reduce the shortage gap?	Additional Explanation or Reference (optional)
1	Other	0	Inter-Agency Transfer
3	Other	Unknown	Private Well Leasing
3	Other	Variable	Additional Groundwater Pumping
3	Other	Unknown	Continued investments in SCADA controls, water measurement, and efficient water management practice to increase agricultural water use efficiency
NOTES:			

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Table 8-3	Demand Reduction Actions	(DWR Table 8-2)
		· /

Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap?	Additional Explanation or Reference (optional)	Penalty, Charge, or Other Enforcement?
1	Other	N/A	Voluntary cutbacks per individual cities. Available supply is 28,370 AFY.	No
1	Other	N/A	Agricultural water conservation	No
2	Other	N/A	Voluntary cutbacks per individual cities. Available supply is 25,218 AFY.	No
3	Other	1,870 AFY	Under catastrophic interruptions, cutbacks are proportionately applied to each city based on assigned WTP capacity. Available supply is 22,065 AFY.	Yes
3	Other	N/A	Reduction in delivery to the City of Ripon	Yes
3	Other	N/A	Agricultural water reduction – Tier 2	Yes
4	Other	5,022 AFY	Under catastrophic interruptions, cutbacks are proportionately applied to each city based on assigned WTP capacity. Available supply is 18,913 AFY.	Yes
5	Other	8,174 AFY	Under catastrophic interruptions, cutbacks are proportionately applied to each city based on assigned WTP capacity. Available supply is 15,761 AFY.	Yes
6	Other	Greater than 8,174 AFY	Under catastrophic interruptions, cutbacks are proportionately applied to each city based on assigned WTP capacity. Available supply is less than 15,761 AFY.	Yes
NOTES: (a) Base de reduced by	emand is conside y percentages as	red the Phase I contractuprescribed. Cutbacks due	al amount of 31,522 AFY. Water supply available from the WTP fo e to catastrophic events are based off the 23,935 AFY available in a	or the SCWSP is then a single drought year.

Cutback provisions are applied per agreement by and between SSJID and its municipal customers.



9 DEMAND MANAGEMENT MEASURES

✓ *CWC* § 10631 (e)

Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) (B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:

(i) Water waste prevention ordinances.

(ii) Metering.

(iv) Public education and outreach.

(vi) Water conservation program coordination and staffing support.

(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.

(2) For an urban wholesale water supplier, as defined in Section 10608.12, (provide) a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (B) of paragraph (1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs.

Demand Management Measures (DMMs) are policies, programs, practices, rules, regulations and ordinances, or the use of devices, equipment or facilities that result in more efficient use or conservation of water. More simply described, DMMs are mechanisms that a water supplier implements to conserve water and to meet its reduction targets.

This section provides an overview of the South San Joaquin Irrigation District's (SSJID's or District's) current and planned DMMs, which include specific types and groupings of water conservation measures typically implemented by wholesale water suppliers. As a wholesale supplier, SSJID is only required to address its own DMMs. DMMs implemented by the retail agencies are not discussed in this section. Please refer to the retail agencies' individual Urban Water Management Plans (UWMPs) for detailed information on their water conservation programs.



9.1 DMM 1 – Metering

☑ CWC § 526 (a)

Notwithstanding any other provision of law, an urban water supplier that, on or after January 1, 2004, receives water from the federal Central Valley Project under a water service contract or subcontract ... shall do both of the following:

(1) On or before January 1, 2013, install water meters on all service connections to residential and nonagricultural commercial buildings constructed prior to January 1, 1992, located within its service area.

(2) On and after March 1, 2013, or according to the terms of the Central Valley Project water contract in operation, charge customers for water based on the actual volume of deliveries, as measured by a water meter.

☑ CWC § 527 (a)

(a) An urban water supplier that is not subject to Section 526 shall do both of the following:

(1) Install water meters on all municipal and industrial service connections located within its service area on or before January 1, 2025.

SSJID meters the South County Water Supply Project (SCWSP) deliveries to the Cities of Tracy, Manteca, and Lathrop. This metering is performed for billing purposes and to track allotments. Meter readings are recorded by SSJID staff and the Cities are billed for water on a volumetric basis derived from meter readings. Future connections to the City of Escalon and potentially City of Ripon will also be metered.¹²

All three accounts are metered with high-accuracy electromagnetic meters. SSJID staff evaluate the meter readings monthly by comparing water deliveries into the pipeline system to the total deliveries to the three cities. The difference between the two values gives an indication of meter accuracy and pipeline leakage. If the difference exceeds 2% then the meters will be inspected and possibly recalibrated or replaced. The meters are routinely calibrated twice each year.

9.2 DMM 2 – Public Education and Outreach

SSJID implements a Wholesale Agency Program directed at schools in the District. SSJID provides education on water-sources; multiple uses of water for power generation, recreation, drinking and irrigation; water safety, including canal safety; and general water conservation. The District provides personnel for presentations in schools and arranges field trips to promote these educational messages. In the future, the District will expand these efforts in cooperation with the retail cities to prepare educational brochures for the cities' water customers on the subject of water conservation.

The District's website posts educational materials for students as well as articles responding to water shortages within the region (https://www.ssjid.com/education/).

¹² The City of Ripon currently receives raw water from SSJID, which is metered and tracked under SSJID's agricultural deliveries.



9.3 DMM 3 – Water Conservation Program Coordination and Staffing Support

SSJID has one overall District water conservation coordinator (WCC) and staff who each devote part of their time to conservation efforts. The District's conservation formally began in 2005. The current WCC assists with tracking, planning, reporting on DMM implementation focusing primarily on agricultural water management, and assisting with school education programs. The Water Treatment Plant (WTP) Manager and other WTP staff are responsible for reading and maintaining flowmeters, evaluating system losses, communicating with the retail agencies regarding future programs, and providing tours of SCWSP facilities. Contact information for SSJID's water conservation program related to municipal deliveries is listed below:

Name: Ed Erisman, Water Treatment Plan Manager

Phone: (209) 844-1506

Email: <u>eerisman@ssjid.com</u>

9.4 DMM 4 – Other DMMs

SSJID does not implement other DMMs than the ones described in the previous sections. Additional DMMs implemented by the retail cities can be found in their individual UWMPs.

9.5 Asset Management

SSJID's asset management includes regularly evaluating the capital assets and repairing or replacing based on asset condition and service life. Leak detection and repair is done on an as needed basis. SSJID's distribution system is fairly new and does not have significant leakage issues.

9.6 Wholesale Supplier Assistance Programs

Wholesale Agency Programs involve assistance relationships between the wholesale agency and retail agencies. These relationships can include financial assistance, technical support, program management of DMMs, DMM reporting and documentation, and developing water shortage policies.

SSJID's retail agencies are geographically spread out and therefore implementing some water management programs from a central location may not be effective. SSJID's obligation to supply water to the SCWSP agencies is fixed by contract. Implementing a larger Wholesale Agency Program would require financial assistance from each SCWSP agency and an interest in a more centralized water management program. Currently, the SCWSP agencies are successfully operating their own water systems and water conservation programs. Nevertheless, SSJID recognizes that larger Wholesale Agency Programs have been effective in some areas and may have merit for the SCWSP in the future.

To maintain low water rates for its customers, SSJID constructed a solar farm at the Nick C. DeGroot WTP. The solar project, including nearly 7,000 photovoltaic panels installed on 14 acres of land, offsets the need for a portion of PG&E power used to operate the WTP.



10 PLAN ADOPTION, SUBMITTAL, AND IMPLEMENTATION

This chapter provides information on a public hearing, the adoption process for the Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP), the adopted UWMP and WSCP submittal process, plan implementation, and the process for amending the adopted UWMP or WSCP.

10.1 Inclusion of All 2020 Data

This UWMP is based on calendar year and includes the water use and planning data for the entire year of 2020, as required by the UWMP Guidebook 2020 (DWR, 2021).

10.2 Notice of Public Hearing

☑ *CWC* § 10642

Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of both the plan and the water shortage contingency plan. Prior to adopting either, the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon. Prior to any of these hearings, notice of the time and place of the hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of a hearing to any city or county within which the supplier provides water supplies. Notices by a local public agency pursuant to this section shall be provided pursuant to Chapter 17.5 (commencing with Section 7290) of Division 7 of Title 1 of the Government Code. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing or hearings, the plan or water shortage contingency plan shall be adopted as prepared or as modified after the hearing or hearings.

The South San Joaquin Irrigation District (SSJID) is required to hold a public hearing prior to adopting the UWMP and WSCP. Two audiences were notified of the public hearing: (1) cities, counties, and other agencies, and (2) the general public.

10.2.1 Notice to Cities and Counties

On 24 February 2021, SSJID sent a letter to the agencies identified in Table 2-5 to inform them that the District was in the process of updating its UWMP and WSCP and was soliciting their input. Another email was sent to these agencies on 8 June 2021 notifying them of the public hearing regarding the findings of the UWMP and WSCP. The letter also informed the agencies that the draft UWMP and WSCP would be available for public review at the District office and electronic versions were available upon request. Copies of these letters are provided in Appendix B.

10.2.2 <u>Notice to the Public</u>

To facilitate public participation, SSJID published a notice in the Manteca Bulletin on 8 June 2021 and 15 June 2021 informing the public that the draft UWMP and WSCP would be available for public review at the District office and electronic versions were available upon request. The notice also informed the public

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that a public hearing would be held in the SSJID Board Room on 22 June 2021 to allow for public comment of the draft UWMP and WSCP. A copy of this notice is included in Appendix C.

10.3 Public Hearing and Adoption

☑ CWC § 10608.26

(a) In complying with this part, an urban retail water supplier shall conduct at least one public hearing to accomplish all of the following:

(1) Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.

(2) Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.

(3) Adopt a method, pursuant to subdivision (b) of Section 10608.20, for determining its urban water use target.

Prior to adopting the UWMP and WSCP, SSJID held a formal public hearing to present information on the 2020 UWMP and WSCP on 22 June 2021 at 9:00 AM. The meeting was held in the SSJID Board Room.

The final plans were formally adopted by the District on 22 June 2021 and were submitted to California Department of Water Resources (DWR) within 30 days of approval. Appendix E presents a copy of the signed Resolutions of Plan Adoption.

10.4 Plan Submittal

☑ CWC § 10621

(f) (1) Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.

☑ *CWC* § 10635 (c)

The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

☑ CWC § 10644

(a) (1) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

(2) The plan, or amendments to the plan, submitted to the department pursuant to paragraph (1) shall be submitted electronically and shall include any standardized forms, tables, or displays specified by the department.

(b) If an urban water supplier revises its water shortage contingency plan, the supplier shall submit to the department a copy of its water shortage contingency plan prepared pursuant to subdivision (a) of Section 10632 no later than 30 days after adoption, in accordance with protocols for submission and using electronic reporting tools developed by the department.
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This UWMP and WSCP were submitted to DWR within 30 days of adoption and by the 1 July 2021 deadline. The submittal was done electronically through Water Use Efficiency Data Portal, an online submittal tool. The adopted plans were also sent to the California State Library, San Joaquin County, and the Cities of Escalon, Lathrop, Tracy, Manteca, and Ripon.

10.5 Public Availability

☑ CWC § 10645

(a) Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

(b) Not later than 30 days after filing a copy of its water shortage contingency plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

On or about 8 June 2021, printed hard-copies of the adopted 2020 UWMP and WSCP were made available for review during normal business hours at the District's office. Electronic versions were also made available at the District's website (https://www.ssjid.com/).

10.6 Amending an Adopted UWMP or WSCP

☑ CWC § 10621 (d)

The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).

☑ CWC § 10644

(a)(1) Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

(b) If an urban water supplier revises its water shortage contingency plan, the supplier shall submit to the department a copy of its water shortage contingency plan prepared pursuant to subdivision (a) of Section 10632 no later than 30 days after adoption, in accordance with protocols for submission and using electronic reporting tools developed by the department.

If SSJID amends the UWMP or WSCP in the future, each of the steps for notification, public hearing, adoption, and submittal will be followed for the amended plans as required by the Water Code.





- DOF, 2020. Population Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Benchmark, May 2020.
- DWR, 2021. Urban Water Management Plan Guidebook 2020, March 2021.
- SSJID, 2020. Emergency Response Plan Nick C. DeGroot WTP, May 2020.
- SSJID, 2021. 2020 Agricultural Water Management Plan, March 2021.
- WQTS and Karen E. Johnson, 2016. *Stanislaus River 2016 Watershed Sanitary Survey*, prepared by Water Quality and Treatment Solutions, Inc. and Karen E. Johnson, October 2016.

Appendices 2020 Urban Water Management Plan South San Joaquin Irrigation District



APPENDIX A

COMPLETED UWMP CHECKLIST



Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Chapter 1	10615	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and Overview	Chapter 1
x	x	Chapter 1	10630.5	Each plan shall include a simple description of the supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a supplier may also choose to include a simple description at the beginning of each chapter.	Summary	Section 1.6
x	x	Section 2.2	10620(b)	Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.	Plan Preparation	Section 2.1
x	x	Section 2.6	10620(d)(2)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	Section 1.3 and 2.3 and Table 2- 5



Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 2.6.2	10642	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan and contingency plan.	Plan Preparation	Section 2.3.3
x		Section 2.6, Section 6.1	10631(h)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) - if any - with water use projections from that source.	System Supplies	N/A
	x	Section 2.6	10631(h)	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	Section 2.3.1 and Table 2-4
x	x	Section 3.1	10631(a)	Describe the water supplier service area.	System Description	Chapter 3
x	x	Section 3.3	10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.5
x	x	Section 3.4	10631(a)	Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.	System Description	Section 3.2 and Table 3-2
x	x	Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the supplier's water management planning.	System Description	Section 3.3 and Table 3-3

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Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Sections 3.4 and 5.4	10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Sections 3.2 and Table 3-2
x	x	Section 3.5	10631(a)	Describe the land uses within the service area.	System Description	Section 3.4
x	x	Section 4.2	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Chapter 4, Tables 4-1 to 4- 3
x	x	Section 4.2.4	10631(d)(3)(C)	Retail suppliers shall provide data to show the distribution loss standards were met.	System Water Use	N/A
x	x	Section 4.2.6	10631(d)(4)(A)	In projected water use, include estimates of water savings from adopted codes, plans, and other policies or laws.	System Water Use	N/A
x	x	Section 4.2.6	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System Water Use	N/A
x	optional	Section 4.3.2.4	10631(d)(3)(A)	Report the distribution system water loss for each of the 5 years preceding the plan update.	System Water Use	N/A
x	optional	Section 4.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	N/A
x	x	Section 4.5	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System Water Use	Section 4.4



Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x		Chapter 5	10608.20(e)	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	N/A
x		Chapter 5	10608.24(a)	Retail suppliers shall meet their water use target by December 31, 2020.	Baselines and Targets	N/A
	x	Section 5.1	10608.36	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	Chapter 9
x		Section 5.2	10608.24(d)(2)	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	N/A
x		Section 5.5	10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5-year baseline. This does not apply if the suppliers base GPCD is at or below 100.	Baselines and Targets	N/A



Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x		Section 5.5 and Appendix E	10608.4	Retail suppliers shall report on their compliance in meeting their water use targets. The data shall be reported using a standardized form in the SBX7-7 2020 Compliance Form.	Baselines and Targets	N/A
x	x	Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought.	System Supplies	Section 7.1.2
x	x	Sections 6.1	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, <i>including changes in supply due to climate</i> <i>change.</i>	System Supplies	Section 6.10.1, Section 7.1.2
x	x	Section 6.1	10631(b)(2)	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System Supplies	Chapter 6
x	х	Section 6.1.1	10631(b)(3)	Describe measures taken to acquire and develop planned sources of water.	System Supplies	Sections 6.8
x	x	Section 6.2.8	10631(b)	Identify and quantify the existing and planned sources of water available for 2020, 2025, 2030, 2035, 2040 and optionally 2045.	System Supplies	Section 6.9 and Table 6-7



Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	х	Section 6.2	10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.2
x	x	Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	N/A
x	х	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System Supplies	N/A
x	x	Section 6.2.2	10631(b)(4)(B)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	N/A
x	x	Section 6.2.2.1	10631(b)(4)(B)	For unadjudicated basins, indicate whether or not the department has identified the basin as a high or medium priority. Describe efforts by the supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	System Supplies	N/A

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Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 6.2.2.4	10631(b)(4)(C)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	System Supplies	N/A
x	x	Section 6.2.2	10631(b)(4)(D)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	N/A
x	x	Section 6.2.7	10631(c)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System Supplies	Section 6.7
x	x	Section 6.2.5	10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System Supplies (Recycled Water)	Section 6.5.2
x	x	Section 6.2.5	10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.1 and 6.5.3
x	x	Section 6.2.5	10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	Section 6.5.3



Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 6.2.5	10633(e)	Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	Section 6.5.3 and 6.5.4
x	x	Section 6.2.5	10633(f)	Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System Supplies (Recycled Water)	Section 6.5.1 and 6.5.3
x	x	Section 6.2.5	10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.1 and 6.5.3
x	x	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.6
x	x	Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area with quantified amount of collection and treatment and the disposal methods.	System Supplies (Recycled Water)	Section 6.5.2
x	x	Section 6.2.8, Section 6.3.7	10631(f)	Describe the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and for a period of drought lasting 5 consecutive water years.	System Supplies	Sections 6.8 and Table 6-5



Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 6.4 and Appendix O	10631.2(a)	The UWMP must include energy information, as stated in the code, that a supplier can readily obtain.	System Suppliers, Energy Intensity	Section 6.11 and Table 6-8
x	x	Section 7.2	10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	Section 7.1.1.2
x	x	Section 7.2.4	10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	Section 7.1.5
x	x	Section 7.3	10635(a)	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	Section 7.1.3
x	x	Section 7.3	10635(b)	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water Supply Reliability Assessment	Section 7.2



Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 7.3	10635(b)(1)	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts 5 consecutive years.	Water Supply Reliability Assessment	Section 7.2.1
x	x	Section 7.3	10635(b)(2)	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water Supply Reliability Assessment	Section 7.1.2 and Table 7-2
x	x	Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.	Water Supply Reliability Assessment	Section 7.1.3 and Tables 7-3 to 7-5
x	x	Section 7.3	10635(b)(4)	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water Supply Reliability Assessment	Sections 6.10 and 7.1.1
x	x	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	Chapter 8, Appendix D
x	x	Chapter 8	10632(a)(1)	Provide the analysis of water supply reliability (from Chapter 7 of Guidebook) in the WSCP	Water Shortage Contingency Planning	Appendix D – Chapter 2



Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the water shortage contingency plan to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water Shortage Contingency Planning	Appendix D – Chapters 11
x	x	Section 8.2	10632(a)(2)(A)	Provide the written decision- making process and other methods that the supplier will use each year to determine its water reliability.	Water Shortage Contingency Planning	Appendix D – Chapter 3
x	x	Section 8.2	10632(a)(2)(B)	Provide data and methodology to evaluate the supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water Shortage Contingency Planning	Appendix D – Chapter 3
x	x	Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10, 20, 30, 40, 50 percent shortage and greater than 50 percent shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water Shortage Contingency Planning	Appendix D– Chapter 4
x	x	Section 8.3	10632(a)(3)(B)	Suppliers with an existing water shortage contingency plan that uses different water shortage levels must cross reference their categories with the six standard categories.	Water Shortage Contingency Planning	Appendix D – Chapter 4

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Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 8.4	10632(a)(4)(A)	Suppliers with water shortage contingency plans that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water Shortage Contingency Planning	Appendix D – Section 5.1 and Table 5-1
x	x	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency Planning	Appendix D – Section 5.2 and Table 5-2
x	x	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	Appendix D – Section 5.3
x	x	Section 8.4	10632(a)(4)(D)	Specify additional mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions are appropriate to local conditions.	Water Shortage Contingency Planning	N/A
x	x	Section 8.4	10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water Shortage Contingency Planning	Appendix D – Section 5.6
x	x	Section 8.4.6	10632.5	The plan shall include a seismic risk assessment and mitigation plan.	Water Shortage Contingency Plan	Appendix D – Section 5.5
x	x	Section 8.5	10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water Shortage Contingency Planning	Appendix D – Chapter 6

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Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 8.5 and 8.6	10632(a)(5)(B) 10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water Shortage Contingency Planning	Appendix D – Chapter 6
x		Section 8.6	10632(a)(6)	Retail supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water Shortage Contingency Planning	N/A
x	x	Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the supplier to enforce shortage response actions.	Water Shortage Contingency Planning	Appendix D – Chapter 8
x	x	Section 8.7	10632(a)(7)(B)	Provide a statement that the supplier will declare a water shortage emergency Water Code Chapter 3.	Water Shortage Contingency Planning	Appendix D – Chapter 8
x	x	Section 8.7	10632(a)(7)(C)	Provide a statement that the supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local emergency.	Water Shortage Contingency Planning	Appendix D – Chapter 8
x	x	Section 8.8	10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	Appendix D – Chapter 9
x	x	Section 8.8	10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	Appendix D – Chapter 9

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Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x		Section 8.8	10632(a)(8)(C)	Retail suppliers must describe the cost of compliance with Water Code Chapter 3.3: Excessive Residential Water Use During Drought	Water Shortage Contingency Planning	N/A
x		Section 8.9	10632(a)(9)	Retail suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water Shortage Contingency Planning	N/A
x		Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water Shortage Contingency Planning	N/A
x	x	Sections 8.12 and 10.4	10635(c)	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 30 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Section 10.4
x	x	Section 8.14	10632(c)	Make available the Water Shortage Contingency Plan to customers and any city or county where it provides water within 30 after adopted the plan.	Water Shortage Contingency Planning	Section 10.4



Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
	x	Sections 9.1 and 9.3	10631(e)(2)	Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and supplier assistance program.	Demand Management Measures	Chapter 9
x		Sections 9.2 and 9.3	10631(e)(1)	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	N/A
x		Chapter 10	10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan Adoption, Submittal, and Implementation	N/A
x	x	Section 10.2.1	10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Reported in Table 10-1.	Plan Adoption, Submittal, and Implementation	Section 2.3.2 and Table 2-5
x	x	Section 10.4	10621(f)	Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.	Plan Adoption, Submittal, and Implementation	Section 10.4



Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the urban water supplier made the plan and contingency plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan and contingency plan.	Plan Adoption, Submittal, and Implementation	Section 10.2 and Appendix C
x	x	Section 10.2.2	10642	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	Section 10.2
x	x	Section 10.3.2	10642	Provide supporting documentation that the plan and contingency plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Section 10.3 and Appendix E
x	x	Section 10.4	10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	Section 10.4 and Appendix F
x	x	Section 10.4	10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	Section 10.4 and Appendix F
x	x	Sections 10.4.1 and 10.4.2	10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Section 10.4



Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
x	x	Section 10.5	10645(a)	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.5
x	x	Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its water shortage contingency plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.5
x	x	Section 10.6	10621(c)	If supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Plan Adoption, Submittal, and Implementation	N/A
x	x	Section 10.7.2	10644(b)	If revised, submit a copy of the water shortage contingency plan to DWR within 30 days of adoption.	Plan Adoption, Submittal, and Implementation	Section 10.6

Appendices 2020 Urban Water Management Plan South San Joaquin Irrigation District



APPENDIX B

UWMP AGENCY NOTIFICATION LETTERS



Sent Via Email

Tammy Alcantor Escalon City Manager 2060 McHenry Avenue Escalon, CA 95320

SUBJECT: NOTICE OF PREPARATION SOUTH SAN JOAQUIN IRRIGATION DISTRICT URBAN WATER MANAGEMENT PLAN AND WATER SHORTAGE CONTINGENCY PLAN -2020 UPDATE

adanyy Ms. Alcantor:

On behalf of the South San Joaquin Irrigation District (District), I am writing to notify you of the District's preparation of its Urban Water Management Plan (UWMP) 2020 Update. The Urban Water Management Planning Act (California Water Code §10608–10656) requires the District to update its UWMP and associated Water Shortage Contingency Plan (WSCP) every 5 years. The District is currently reviewing its existing 2015 UWMP and WSCP, and is considering revisions and updates. Adoption by the District Board of Directors of the UMWP and WSCP and submittal to the State Department of Water Resources must occur prior to July 1, 2021.

The District welcomes your agency's participation in this revision process. The 2015 UWMP and WSCP are located on the District's website at <u>www.SSJID.com</u>. Once available, the public review draft of the UWMP 2020 Update and WSCP will also be made available on the District's website. The Board intends to schedule a public hearing for adoption sometime in June 2021 and will notify you in advance of the public hearing date and location. Should you have any questions or concerns as the District moves forward, please feel free to contact me, at (209) 305-8442 or <u>bnakagawa@ssjid.com</u>.

Sincerely

BRANDON W. NAKAGAWA, P.E. Water Resources Coordinator South San Joaquin Irrigation District

cc: Ed Erisman, Water Treatment Plant Manager



Sent Via Email

Michael King Lathrop Public Works Director 390 Towne Centre Drive Lathrop, CA 95330

SUBJECT: NOTICE OF PREPARATION SOUTH SAN JOAQUIN IRRIGATION DISTRICT URBAN WATER MANAGEMENT PLAN AND WATER SHORTAGE CONTINGENCY PLAN -2020 UPDATE

Michael

Mr. King:

On behalf of the South San Joaquin Irrigation District (District), I am writing to notify you of the District's preparation of its Urban Water Management Plan (UWMP) 2020 Update. The Urban Water Management Planning Act (California Water Code §10608–10656) requires the District to update its UWMP and associated Water Shortage Contingency Plan (WSCP) every 5 years. The District is currently reviewing its existing 2015 UWMP and WSCP, and is considering revisions and updates. Adoption by the District Board of Directors of the UMWP and WSCP and submittal to the State Department of Water Resources must occur prior to July 1, 2021.

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Sincerely.

BRANDON W. NAKAGAWA, P.E. Water Resources Coordinator South San Joaquin Irrigation District

cc: Ed Erisman, Water Treatment Plant Manager



Sent Via Email

Leigh Ann Sutton Manteca Director of Engineering 1001 W. Center Street Manteca, CA 95337

SUBJECT: NOTICE OF PREPARATION SOUTH SAN JOAQUIN IRRIGATION DISTRICT URBAN WATER MANAGEMENT PLAN AND WATER SHORTAGE CONTINGENCY PLAN -2020 UPDATE

Ms. Sutton:

On behalf of the South San Joaquin Irrigation District (District), I am writing to notify you of the District's preparation of its Urban Water Management Plan (UWMP) 2020 Update. The Urban Water Management Planning Act (California Water Code §10608–10656) requires the District to update its UWMP and associated Water Shortage Contingency Plan (WSCP) every 5 years. The District is currently reviewing its existing 2015 UWMP and WSCP, and is considering revisions and updates. Adoption by the District Board of Directors of the UMWP and WSCP and submittal to the State Department of Water Resources must occur prior to July 1, 2021.

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Sincerely,

BRANDON W. NAKAGAWA, P.E. Water Resources Coordinator South San Joaquin Irrigation District

cc: Ed Erisman, Water Treatment Plant Manager



Sent Via Email

Kevin Werner Ripon City Administrator 259 N. Wilma Avenue Ripon, CA 95366 February 24, 2021

SUBJECT: NOTICE OF PREPARATION SOUTH SAN JOAQUIN IRRIGATION DISTRICT URBAN WATER MANAGEMENT PLAN AND WATER SHORTAGE CONTINGENCY PLAN -2020 UPDATE



On behalf of the South San Joaquin Irrigation District (District), I am writing to notify you of the District's preparation of its Urban Water Management Plan (UWMP) 2020 Update. The Urban Water Management Planning Act (California Water Code §10608–10656) requires the District to update its UWMP and associated Water Shortage Contingency Plan (WSCP) every 5 years. The District is currently reviewing its existing 2015 UWMP and WSCP, and is considering revisions and updates. Adoption by the District Board of Directors of the UMWP and WSCP and submittal to the State Department of Water Resources must occur prior to July 1, 2021.

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Sincerely,

BRANDON W. NAKAGAWA, P.E. Water Resources Coordinator South San Joaquin Irrigation District

cc: Ed Erisman, Water Treatment Plant Manager



Sent Via Email

Matt Zidar Water Resources Coordinator San Joaquin County Public Works PO Box 1810 Stockton, CA 95201

SUBJECT: NOTICE OF PREPARATION SOUTH SAN JOAQUIN IRRIGATION DISTRICT URBAN WATER MANAGEMENT PLAN AND WATER SHORTAGE CONTINGENCY PLAN -2020 UPDATE

Matt

Mr. Zidar:

On behalf of the South San Joaquin Irrigation District (District), I am writing to notify you of the District's preparation of its Urban Water Management Plan (UWMP) 2020 Update. The Urban Water Management Planning Act (California Water Code §10608–10656) requires the District to update its UWMP and associated Water Shortage Contingency Plan (WSCP) every 5 years. The District is currently reviewing its existing 2015 UWMP and WSCP, and is considering revisions and updates. Adoption by the District Board of Directors of the UMWP and WSCP and submittal to the State Department of Water Resources must occur prior to July 1, 2021.

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Sincerely,

BRANDON W. NAKAGAWA, P.E. Water Resources Coordinator South San Joaquin Irrigation District

cc: Ed Erisman, Water Treatment Plant Manager



Sent Via Email

Kul Sharma Tracy Utilities Director 3900 Holly Drive Tracy, CA 95304

SUBJECT: NOTICE OF PREPARATION SOUTH SAN JOAQUIN IRRIGATION DISTRICT URBAN WATER MANAGEMENT PLAN AND WATER SHORTAGE CONTINGENCY PLAN -2020 UPDATE

KU

Mr. Sharma

On behalf of the South San Joaquin Irrigation District (District), I am writing to notify you of the District's preparation of its Urban Water Management Plan (UWMP) 2020 Update. The Urban Water Management Planning Act (California Water Code §10608–10656) requires the District to update its UWMP and associated Water Shortage Contingency Plan (WSCP) every 5 years. The District is currently reviewing its existing 2015 UWMP and WSCP, and is considering revisions and updates. Adoption by the District Board of Directors of the UMWP and WSCP and submittal to the State Department of Water Resources must occur prior to July 1, 2021.

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Sincerely,

BRANDON W. NAKAGAWA, P.E. Water Resources Coordinator South San Joaquin Irrigation District

cc: Ed Erisman, Water Treatment Plant Manager



Tammy Alcantor Escalon City Manager 2060 McHenry Avenue Escalon, CA 95320

Sent Via Email

SUBJECT: NOTICE OF A PUBLIC HEARING TO ADOPT THE 2020 URBAN WATER MANAGEMENT PLAN AND WATER SHORTAGE CONTINGENCY PLAN

Ms. Alcantor:

On behalf of the South San Joaquin Irrigation District (District), I am writing to notify you of the District's intent to adopt the 2020 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP). The District has posted the public review draft of the UWMP and WSCP on our website, and will hold a public hearing prior to considering adoption at the next regularly scheduled meeting of the Board of Directors at 9:00 a.m. on Tuesday, June 22, 2021.

Due to the COVID-19 pandemic, the District is able to accommodate limited in-person attendance at meetings of its Board of Directors and will also provide information on how to participate remotely via teleconference on the District's Board Meeting Agenda which will be available at the District's website at <u>www.ssjid.com</u>. Should you have any questions or concerns, please contact me, at (209) 305-8442 or <u>bnakagawa@ssjid.com</u>.

Sincerely,

BRANDON W. NAKAGAWA, P.E. Water Resources Coordinator South San Joaquin Irrigation District



Michael King Lathrop Public Works Director 390 Towne Centre Drive Lathrop, CA 95330

Sent Via Email

SUBJECT: NOTICE OF A PUBLIC HEARING TO ADOPT THE 2020 URBAN WATER MANAGEMENT PLAN AND WATER SHORTAGE CONTINGENCY PLAN

Mr. King:

On behalf of the South San Joaquin Irrigation District (District), I am writing to notify you of the District's intent to adopt the 2020 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP). The District has posted the public review draft of the UWMP and WSCP on our website, and will hold a public hearing prior to considering adoption at the next regularly scheduled meeting of the Board of Directors at 9:00 a.m. on Tuesday, June 22, 2021.

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Sincerely,

BRANDON W. NAKAGAWA, P.E. Water Resources Coordinator South San Joaquin Irrigation District



Leigh Ann Sutton Manteca Director of Engineering 1001 W. Center Street Manteca, CA 95337

Sent Via Email

SUBJECT: NOTICE OF A PUBLIC HEARING TO ADOPT THE 2020 URBAN WATER MANAGEMENT PLAN AND WATER SHORTAGE CONTINGENCY PLAN

Ms. Sutton:

On behalf of the South San Joaquin Irrigation District (District), I am writing to notify you of the District's intent to adopt the 2020 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP). The District has posted the public review draft of the UWMP and WSCP on our website, and will hold a public hearing prior to considering adoption at the next regularly scheduled meeting of the Board of Directors at 9:00 a.m. on Tuesday, June 22, 2021.

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Sincerely,

BRANDON W. NAKAGAWA, P.E. Water Resources Coordinator South San Joaquin Irrigation District



Kevin Werner Ripon City Administrator 259 N. Wilma Avenue Ripon, CA 95366

Sent Via Email

SUBJECT: NOTICE OF A PUBLIC HEARING TO ADOPT THE 2020 URBAN WATER MANAGEMENT PLAN AND WATER SHORTAGE CONTINGENCY PLAN

Mr. Werner:

On behalf of the South San Joaquin Irrigation District (District), I am writing to notify you of the District's intent to adopt the 2020 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP). The District has posted the public review draft of the UWMP and WSCP on our website, and will hold a public hearing prior to considering adoption at the next regularly scheduled meeting of the Board of Directors at 9:00 a.m. on Tuesday, June 22, 2021.

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Sincerely,

BRANDON W. NAKAGAWA, P.E. Water Resources Coordinator South San Joaquin Irrigation District



Matt Zidar Water Resources Coordinator San Joaquin County Public Works PO Box 1810 Stockton, CA 95201

Sent Via Email

SUBJECT: NOTICE OF A PUBLIC HEARING TO ADOPT THE 2020 URBAN WATER MANAGEMENT PLAN AND WATER SHORTAGE CONTINGENCY PLAN

Mr. Zidar:

On behalf of the South San Joaquin Irrigation District (District), I am writing to notify you of the District's intent to adopt the 2020 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP). The District has posted the public review draft of the UWMP and WSCP on our website, and will hold a public hearing prior to considering adoption at the next regularly scheduled meeting of the Board of Directors at 9:00 a.m. on Tuesday, June 22, 2021.

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Sincerely,

BRANDON W. NAKAGAWA, P.E. Water Resources Coordinator South San Joaquin Irrigation District



Kul Sharma Tracy Utilities Director 3900 Holly Drive Tracy, CA 95304

Sent Via Email

SUBJECT: NOTICE OF A PUBLIC HEARING TO ADOPT THE 2020 URBAN WATER MANAGEMENT PLAN AND WATER SHORTAGE CONTINGENCY PLAN

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Sincerely,

BRANDON W. NAKAGAWA, P.E. Water Resources Coordinator South San Joaquin Irrigation District

Appendices 2020 Urban Water Management Plan South San Joaquin Irrigation District



APPENDIX C

UWMP PUBLIC HEARING NOTICES

NOTICE OF A PUBLIC HEARING TO ADOPT THE SOUTH SAN JOAQUIN IRRIGATION DISTRICT 2020 URBAN WATER MANAGEMENT PLAN AND WATER SHORTAGE CONTINGENCY PLAN

NOTICE IS HEREBY GIVEN that the Board of Directors of the South San Joaquin Irrigation District will hold a Public Hearing at its regularly scheduled meeting on Tuesday, June 22, 2021, at 9:00 a.m. in the SSJID Board Room, 11011 E. Highway 120, Manteca, California, to consider public comments on whether to adopt the 2020 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP). All interested persons are invited to participate in said hearing and may provide comments on the matter. Due to the COVID-19 pandemic, SSJID is able to accommodate limited in-person attendance at SSJID Board of Director meetings and will also provide information on how to participate remotely via teleconference on the District's Board Meeting Agenda which will be available at the District's webpage at www.ssjid.com.

NOTICE IS HEREBY FURTHER GIVEN that the SSJID Board of Directors may take action to adopt the 2020 UWMP and WCSP immediately following the close of the Public Hearing.

A COPY OF THE 2020 UWMP AND WSCP may be downloaded from the SSJID website, at <u>www.ssjid.com</u>. A physical copy may be made available for inspection located at the South San Joaquin Irrigation District Main Office, 11011 E. Highway 120, Manteca, California. Should you have any questions, please contact Brandon Nakagawa, SSJID Water Resources Coordinator, at 209-305-8442 or <u>bnakagawa@ssjid.com</u>. Publication Date: 6/8/21 & 6/15/21 **MB06-15**

NOTICE OF A PUBLIC HEARING TO ADOPT THE SOUTH SAN JOAQUIN IRRIGATION DISTRICT 2020 URBAN WATER MANAGEMENT PLAN AND WATER SHORTAGE CONTINGENCY PLAN

NOTICE IS HEREBY GIVEN that the Board of Directors of the South San Joaquin Irrigation District will hold a Public Hearing at its regularly scheduled meeting on Tuesday, June 22,, 2021, at 9:00 a.m. in the SSJID Board Room, 11011 E. Highway 120, Manteca, California, to consider public comments on whether to adopt the 2020 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP). All interested persons are invited to participate in said hearing and may provide comments on the matter. Due to the COVID-19 pandemic, SSJID is able to accommodate limited in-person attendance at SSJID Board of Director meetings and will also provide information on how to participate remotely via teleconference on the District's Board Meeting Agenda which will be available at the District's webpage at www.ssjid.com.

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PUBLIC NOTICE

PETITIONER OR ATTOPHIC

two court do be heard and must appear scheduled to be heard and must appear at the hearing to show cause why the at the hearing to show cause why the petition should not be granted. If no petition should not be granted. If no written objection is timely filed, the written objection is timely filed, the court may grant the petition without a

hearing. NOTICE OF HEARING: July 23, 2021 Time: 8:30 a.m.

Department L2. The address of the court is same as noted above.

noted abor COURT OF CALIFORNIA, 315 SUPERIOR COURT OF CALIFORNIA, 315 W. ELM STREET, LODI, CA 95240 A copy of this Order to Show Cause shall be published at least once each week for four successive weeks prior to the date set for hearing on the petition in the following newspaper of general circulation, printed in this county Manteca Bulletin. Dated: June 2, 2021 Publication Dates: 6/10, 6/17, 6/24, & 7/1, 2021 MB#06-24

PUBLIC NOTICE

Manteca Unified School District requests for Architectural/Engineering individuals/firms to submit their qualifications for professional services. The Manteca Unified School District will select individual/firms based upon selection criteria deemed necessary to perform the required services. All interested parties are invited to request a copy of the Request For Qualifications document package by email from Erika Leandro at eleandro@musd.net.

All materials must be submitted to the Facilities Department at Manteca Unified School District, 2271 West Louise Avenue, Manteca, CA 95337 or Post Office Box 32, Manteca, CA 95336 before 4:00 p.m. on July 14, 2021. If selected, interviews will begin on July 19, 2021-July 21, 2021. The District reserves the right to reject any/all submittals. Publication Dates: 6/10/21 & 6/21/21 MB#06-26

PUBLIC NOTICE

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Appendices 2020 Urban Water Management Plan South San Joaquin Irrigation District



APPENDIX D

WATER SHORTAGE CONTINGENCY PLAN



Water Shortage Contingency Plan 2020 Update

South San Joaquin Irrigation District

June 2021



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Water Shortage Contingency Plan 2020 Update South San Joaquin Irrigation District

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ATTACHMENTS

Attachment 1. Water Shortage Contingency Plan Resolutions

3



1 INTRODUCTION

☑ CWC § 10640

(a) Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630). The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

(b) Every urban water supplier required to prepare a water shortage contingency plan shall prepare a water shortage contingency plan pursuant to Section 10632. The supplier shall likewise periodically review the water shortage contingency plan as required by paragraph (10) of subdivision (a) of Section 10632 and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

The South San Joaquin Irrigation District's (SSJID's or District's) Water Shortage Contingency Plan (WSCP) has been developed to serve as a flexible framework of planned response measures to mitigate future water supply shortages. This WSCP builds upon and supersedes the WSCP that was presented in the 2015 Urban Water Management Plan (UWMP). Updates to the WSCP reflect lessons learned during the recent drought and implementation of SSJID's 2015 WSCP and are intended to improve SSJID's ability to respond effectively and efficiently in the event of a future water supply shortage or emergency.

SSJID is a public wholesale water supplier under contract to serve drinking water to the cities of Manteca, Tracy, Lathrop, and Escalon through the South County Water Supply Project (SCWSP). SSJID also supplies raw water to agricultural customers within its service area and to the City of Ripon for non-potable irrigation uses. These non-potable demands and supplies are covered in SSJID's Agricultural Water Management Plan (AWMP) which was adopted by the SSJID Board of Directors on 23 March 2021 and submitted to the California Department of Water Resources (DWR) in April 2021¹ and therefore are not discussed in the main portion of the UWMP. This WSCP, however, does include some discussions related to non-potable demand cutbacks and shortage response actions, in the context of minimizing reductions to potable demand (i.e., SCWSP demand) by reducing non-potable demands.

In addition, each SCWSP agency has their own contingency plans for dealing with surface water reductions. They have a variety of options including groundwater, water transfers, stored water, water conservation measures, water use prohibitions, and recycled water. Please refer to the SCWSP agencies' individual UWMPs for more information.²

¹ The AWMP can be found at https://www.ssjid.com/district-services/agriculture-irrigation-water/.

² The City of Escalon is not required to prepare an UWMP. Relevant information can be found at the City's website: http://www.cityofescalon.org/cms/one.aspx?pageId=13056650.



2 WATER SUPPLY RELIABILITY ANALYSIS

WC § 10632 (a) (1) The analysis of water supply reliability conducted pursuant to Section 10635.

This section provides a summary of SSJID's water supply reliability analysis, recognizing that the WSCP is intended to be a standalone document that can be adopted and amended independently.

Based on the service reliability analysis, SSJID is expected to have adequate water supplies during normal years to meet the SCWSP demands through 2045. However, in single dry years and multiple dry years, SSJID is projecting that demand for the SCWSP water will exceed the available supply by amounts ranging up to 9,102 acre-feet per year (AFY) in 2040. The difference is anticipated to be met individually by the SCWSP agencies using groundwater supplies, transfers, and/or other alternate supplies.

A Drought Risk Assessment (DRA) was also conducted during the water supply reliability assessment, which evaluates the effects on available water supply sources of an assumed five-year drought commencing the year after the assessment is completed (i.e., from 2021 through 2025). Based on the DRA, SSJID is expected to have sufficient water supply in 2021, 2022, and 2025. However, in 2023 and 2024, the SCWSP demands are estimated to exceed supplies by 5,074 AFY. This WSCP addresses such water shortage conditions and identifies a variety of actions that SSJID will implement to reduce demands and further ensure supply reliability at various levels of water shortage.³

³ In December 2018, the State Water Resources Control Board (SWRCB) adopted amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan Amendment) which, if and when implemented, may have an impact on the availability of water from the Stanislaus River.

Implementation of the Bay-Delta Plan Amendment remains uncertain for multiple reasons. Over a dozen lawsuits have been filed in both state and federal courts challenging the SWRCB's adoption of the Bay-Delta Plan Amendments including challenges filed by SSJID and others. These legal actions are in the early stages and there have been no consequential court rulings to date. Secondly, the Bay-Delta Plan Amendments do not include an allocation of responsibility for meeting the new flow requirements. Such an allocation of responsibility must consider the senior water rights of SSJID's adjudicated pre-1914 rights and other senior appropriative rights jointly held with the Oakdale Irrigation District. Based on these uncertainties, SSJID has opted to make no near-term planning assumptions related to the implementation of the Bay-Delta Plan Amendment for the purposes of the 2020 UWMP. Should conditions change or consequential resolution of the issues aforementioned come to be, SSJID will revise and re-adopt its 2020 UWMP to reflect changes to its impacted water supply.



3 ANNUAL WATER SUPPLY AND DEMAND ASSESSMENT PROCEDURES

☑ CWC § 10632 (a) (2)

The procedures used in conducting an annual water supply and demand assessment that include, at a minimum, both of the following:

(A) The written decision making process that an urban water supplier will use each year to determine its water supply reliability.

(B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:

(i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.

(ii) Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the urban water supplier.

(iii) Existing infrastructure capabilities and plausible constraints.

(iv) A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.

(v) A description and quantification of each source of water supply.

☑ CWC § 10632.1

An urban water supplier shall conduct an annual water supply and demand assessment pursuant to subdivision (a) of Section 10632 and, on or before July 1 of each year, submit an annual water shortage assessment report to the department 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. An urban water supplier that relies on imported water from the State Water Project or the Bureau of Reclamation shall submit its annual water supply and demand assessment within 14 days of receiving its final allocations, or by July 1 of each year, whichever is later.

☑ CWC § 10632.2

An urban water supplier shall follow, where feasible and appropriate, the prescribed procedures and implement determined shortage response actions in its water shortage contingency plan, as identified in subdivision (a) of Section 10632, or reasonable alternative actions, provided that descriptions of the alternative actions are submitted with the annual water shortage assessment report pursuant to Section 10632.1. Nothing in this section prohibits an urban water supplier from taking actions not specified in its water shortage contingency plan, if needed, without having to formally amend its urban water management plan or water shortage contingency plan.

On an annual basis, SSJID will conduct an Annual Supply-Demand Assessment (Annual Assessment) to identify whether there is likely to be a water shortage condition in the following year. For purposes of this assessment, a water shortage condition is defined as an anticipated shortfall whereby SSJID would receive less than 300,000 AFY of water. Each element of the Annual Assessment is described below, along with the key data inputs and methodologies for determining these elements.



3.1 Evaluation Criteria

The evaluation criteria that will be used to identify whether SSJID is likely to experience a water shortage in the coming year include:

- <u>Surface Water Available Supply</u> SSJID uses forecasts of unimpaired runoff from both the DWR Bulletin 120 which is updated monthly and periodically throughout the spring, and the California-Nevada River Forecast Center (CNRFC) which is updated daily. The May publication of Bulletin 120 is used to make final determination of drought conditions and supply availability.
- <u>Requests from SCWSP Agencies</u> As part of the annual budget process,⁴ SSJID receives a delivery schedule request from each of its municipal customers on a monthly basis for the duration of the next year. The requested delivery schedule is used both as an annual fiscal budgetary tool and also used in SSJID's water supply forecast and demand projections. The SCWSP agencies may be required to by State mandate or may voluntarily revise their requested delivery volumes in times of drought.
- <u>State Regulatory Conditions</u> State mandated drought curtailments restricting urban water users are implemented by the SCWSP agencies and are reflected in their requested delivery schedule.

These criteria will be assessed by the SSJID General Manager and appropriate staff. The data used to support these assessments may include, but are not limited to, SSJID water balance information prepared as part of its 2020 AWMP, historical operations data, and updated system demands (i.e., re-connections, new services/plantings, new urban development, etc.).

3.2 Water Supply

On the basis of the evaluation criteria above and available supporting information, SSJID will quantify the projected available supply over the forthcoming year. This quantification will likely be a range, and subject to revision as new data are available and as conditions evolve. Prior to the start of the irrigation season in March and throughout the spring, the SSJID Board receives regular briefings from staff on water supply conditions.

3.3 Unconstrained Customer Demand

As part of the annual budget process,⁴ SSJID receives a delivery schedule request from each of its municipal customers on a monthly basis for the duration of the next year. The requested delivery schedule is used both as an annual fiscal budgetary tool and also used in SSJID's water supply forecast and demand projections.

⁴ SSJID uses a standard calendar fiscal year.



3.4 Planned Water Use for Current Year Considering Dry Subsequent Year

SSJID will compare the unconstrained demands as requested by the SCWSP agencies to the anticipated supplies for the current year, assuming that the following year will be less than its full entitlement of 300,000 AFY, using the Evaluation Criteria identified above.

3.5 Infrastructure Considerations

SSJID will evaluate how infrastructure capabilities and constraints may affect its ability to deliver supplies to meet expected customer water demands in the coming year. The constraints and capabilities are expected to include, among other things:

- Anticipated capital projects and upgrades;
- Anticipated maintenance and repairs; and
- Unanticipated power outages (i.e., Public Safety Power Shutoffs [PSPS], brownouts, system outages, etc.).

In addition, the capacity of the water treatment plant is a key consideration, as the plant typically operates at near capacity during the hotter months of the year, while demands are typically lower in the cooler months.

3.6 Other Factors

Alternative supplies available to municipal customers taken in-lieu of SSJID water including local groundwater, other water transfers, Central Valley Project (CVP) supplies, and others.

3.7 Team Members and Decision Makers

Team members and decision makers include the following personnel of SSJID:

- Board of Directors;
- General Manager;
- General Counsel;
- Assistant General Manager;
- Engineering Manager;
- Water Treatment Plant Manager;
- Irrigation Operations Manager; and
- Water Resources Coordinator.

3.8 Timeline

Table 3-1 shows the timeline for preparing the annual assessment.

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Annual Assessment Procedures Decision-Making Timeline

Decision-Making Step	Responsible Party	Start Date	End Date
Convening the team members	General Manager	January	January
Determining water supplies by source for the current year	Water Resources Coordinator	January	January
Calculating the water supply reliability using spreadsheet, computer model, or other method	Water Resources Coordinator	February	Мау
Determining shortages and response actions	Board of Directors	April	May
Preparing and presenting preliminary report to the Board	General Manager	January	Мау
Updating assessment based on final water supplies	Water Resources Coordinator	Мау	May
Using WSCP to activate the appropriate protocols	General Manager	May	October (end of irrigation season)
Preparing annual water shortage assessment report	Water Resources Coordinator	May	June
Preparing decision-making documents for approval	General Manager	June 1	June
Implementing WSCP actions as approved	Water Resources Coordinator	May	October (end of irrigation season)
Sending final annual water shortage assessment report to the State	Water Resources Coordinator	June	No later than July 1 st of each year beginning in 2022
NUTES:			

Consistent with California Water Code (CWC) § 10632.1, SSJID will perform and submit an Annual Assessment to DWR by July 1st of each year beginning in 2022.

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4 WATER SHORTAGE LEVELS

☑ CWC § 10632 (a) (3)

(A) Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the suppliers' water supply conditions, including percentage reductions in water supply, changes in groundwater levels, changes in surface elevation or level of subsidence, or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other potential emergency events.

(B) An urban water supplier with an existing water shortage contingency plan that uses different water shortage levels may comply with the requirement in subparagraph (A) by developing and including a cross-reference relating its existing categories to the six standard water shortage levels.

Consistent with the requirements of CWC § 10632(a)(3), this WSCP is based on the six water shortage levels (also referred to as "stages") shown in Table 4-1. These shortage stages are intended to address shortage caused by any condition, including the catastrophic interruption of water supplies. Each stage of the WSCP is implemented by the reduction in available flow and enacting a specific stage of action due to a water supply shortage or emergency. Table 4-1 summarizes the water supply reduction and response actions associated with each stage of action.

Shortage Level	Percent Shortage Range	Shortage Response Actions
1	Up to 10%	Implement voluntary cutbacks and conservation (see Table 5-1 and Table 5-2).
2	Up to 20%	Implement voluntary cutbacks and conservation (see Table 5-1 and Table 5-2).
3	Up to 30%	Implement proportional cutbacks and supply augmentation actions (see Table 5-1 and Table 5-2).
4	Up to 40%	Implement proportional cutbacks and supply augmentation actions (see Table 5-1 and Table 5-2).
5	Up to 50%	Implement proportional cutbacks and supply augmentation actions (see Table 5-1 and Table 5-2).
6	>50%	Implement proportional cutbacks and supply augmentation actions (see Table 5-1 and Table 5-2).
NOTES:		

Table 4-1	Water Shortage Contingency Plan Levels (DWR Table 8-1)	

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SHORTAGE RESPONSE ACTIONS

☑ CWC § 10632 (a) (4)

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Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:

(A) Locally appropriate supply augmentation actions.

(B) Locally appropriate demand reduction actions to adequately respond to shortages.

(C) Locally appropriate operational changes.

(D) Additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions.

(E) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.

☑ CWC § 10632 (b)

For purposes of developing the water shortage contingency plan pursuant to subdivision (a), an urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

This section describes the response actions SSJID will take to deal with the shortages associated with each of the six stages enumerated in Section 4.

5.1 Supply Augmentation

In the case of a water shortage, SSJID has developed the following supply-related actions.

- <u>Private Well Leasing</u>. SSJID has leased private wells to supplement surface water supplies during droughts. While intended to meet agricultural water demands, this practice could also help to minimize reductions to urban water users.
- <u>Additional Groundwater Pumping</u>. Some farmers own private wells, and it is likely that they would increase groundwater pumping during droughts. This could help avert crop losses and may reduce demands for surface water.
- <u>Continued investments in Supervisory Control and Data Acquisition (SCADA) controls, water</u> measurement, and efficient water management practice to increase agricultural water use <u>efficiency</u>. Implementation of these practices have a limited ability to reduce applied water for SSJID agricultural customers, freeing up additional water for other uses including SCWSP deliveries.
- <u>Inter-Agency Transfers</u>. According to their contract with SSJID, each SCWSP agency can transfer a
 portion or all of their water allotment to one of the other agencies without SSJID's approval. Inter
 -agency transfers have already taken place between Lathrop and Tray as well as Escalon and Tracy
 (although they are not driven by water shortages but rather Lathrop's determination that it would

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not have immediate needs for the supply and Escalon's lack of infrastructure to accept the treated water). Such transfers can help to redistribute water to SCWSP agencies with the greatest need.

It should be noted that the SCWSP agencies have alternative supplies to meet their customers' demands, such as groundwater pumping, short and long-term water transfers, and CVP water. Please refer to the SCWSP agencies' individual WSCP for more information.

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Table 5-1Supply Augmentation and Other Actions (DWR Table 8-3)

Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier	How much is this going to reduce the shortage gap?	Additional Explanation or Reference (optional)
1	Other	0	Inter-Agency Transfer
3	Other	Unknown	Private Well Leasing
3	Other	Variable	Additional Groundwater Pumping
3	Other	Unknown	Continued investments in SCADA controls, water measurement, and efficient water management practice to increase agricultural water use efficiency
NOTES:	•	•	

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5.2 Demand Reduction

The SCWSP was originally possible because SSJID implemented water conservation measures since the mid-1980's, resulting in significant reductions in water use which allowed for sale of the surplus water to the SCWSP agencies. In the case of a water shortage, SSJID has developed the following demand-related actions, which are also summarized in Table 5-2:

- <u>Voluntary Reductions</u>. If water shortages are likely or eminent, SSJID would first ask the SCWSP agencies and irrigation customers to make voluntary reductions in water use. This could free up some water for SCWSP agencies that have a more critical need.
- <u>Reduction in Delivery to the City of Ripon</u>. If inflow to New Melones Reservoir results in a supply to SSJID of 225,000 AFY or less, delivery of raw water to the City of Ripon for non-potable uses may be reduced to zero.⁵
- <u>Agricultural Water Conservation</u>. During a drought, SSJID encourages farmers to expand their water conservation efforts by increasing the time between irrigations, imposing time restrictions on irrigation, lowering the level of its off-stream storage reservoir, pumping more ground water, and/or instituting an irrigation quantity limit for the season.
- <u>Agricultural Water Reduction Tier 2</u>. SSJID has established a second tier of agricultural land which is the first to be restricted in the event of shortages in water supply. The second tier includes land newly annexed to the District and land that becomes newly eligible to use surface water through a services abandonment agreement with the District after previously having not been irrigated or irrigated solely with groundwater.
- <u>Rationing for the SCWSP agencies and the Agricultural Users</u>. Water shortages will be allocated by SSJID between the SCWSP agencies and the agricultural users such that any percentage reduction in the delivery of water to the SCWSP agencies is approximately equal to the percentage reduction in the delivery of water to SSJID's in-District agricultural customers who joined the District before October 1, 1995. Deliveries to each of the SCWSP agencies will be reduced pro rata based on their contract allotment.⁶

In addition, each SCWSP agency has their own contingency plans for dealing with demand reductions, including water conservation measures and water use prohibitions. Please refer to the SCWSP agencies' individual WSCP for more information.

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⁵ Water Service Agreement By and Between SSJID and City of Ripon, August 1999.

⁶ These policies are included in the Water Supply Development and Operating Agreements between SSJID and each SCWSP agency.

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Table 5-2Demand Reduction Actions (DWR Table 8-2)

(a) Base demand is considered the Phase I contractual amount of 31,522 AFY. Water supply available from the WTP for the SCWSP is then reduced by percentages as prescribed. Cutbacks due to catastrophic events are based off the 23,935 AFY available in a single drought year. Cutback provisions are applied per agreement by and between SSJID and its municipal customers.





5.3 Operational Changes

The supply augmentation options described in Section 5.1 include operational changes that the District will implement during the appropriate stages of action, including measures to increase groundwater pumping and to invest in additional SCADA controls, water measurement, and efficient water management practices.

5.4 Emergency Response Plan

SSJID has an Emergency Response Plan (ERP) which addresses many emergency scenarios including catastrophic supply interruptions. The ERP was last updated in 2020 and is incorporated into this WSCP by reference (SSJID, 2020). The primary objectives of the ERP are to: (1) protect the public health and welfare; and (2) avoid and minimize hazards that may occur during natural and man-made catastrophes. The ERP includes emergency response procedures for the following situations:

- Natural disasters
- Chemical spill response
- Vandalism and terrorist attacks
- Suspicious mail or package
- Plant power failures
- Major equipment failures
- Woodward Dam emergency procedures

The ERP also includes an emergency notification plan which includes public notification procedures for unsafe water and water outages/shortages.

5.5 Seismic Risk Assessment and Mitigation Plan

☑ CWC § 10632.5

(a) In addition to the requirements of paragraph (3) of subdivision (a) of Section 10632, beginning January 1, 2020, the plan shall include a seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and mitigate those vulnerabilities.

(b) An urban water supplier shall update the seismic risk assessment and mitigation plan when updating its urban water management plan as required by Section 10621.

(c) 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.

Per the CWC § 10632.5, Suppliers are required include a seismic risk assessment and mitigation plan as part of their WSCP. The District's WTP and conveyance facilities are located within low seismic risk areas per the revised 2017 Stanislaus and San Joaquin Counties Local Hazard Mitigation Plan (LHMP). A copy of

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and

the LHMPs can be found at <u>http://www.stanoes.com/lhmp.shtm</u> https://www.sjgov.org/department/oes/mitigation/default.

5.6 Shortage Response Action Effectiveness

The abovementioned mechanisms for reducing water use can be measured or estimated using water budget calculations. If they are implemented during a drought, SSJID will attempt to quantify them to determine their impact and effectiveness. A proposed method by SSJID for determining actual restrictions is described below.

Under normal water supply conditions, potable water production figures are recorded daily. During a Stage 1 and Stage 2 water shortage, weekly production figures shall be reported to the General Manager. The General Manager shall compare the weekly production to the target weekly production to verify that the reduction goal is being met. Monthly reports shall be sent to the Board. If reduction goals are not met, the General Manager will notify the Board so that corrective action can be taken.

During a Stage 3 or worse water shortage, the procedure listed above will be followed, with the addition of a daily production report to the General Manager. During emergency shortages, production figures shall be reported hourly to the General Manager daily. Daily reports shall also be provided to the Board.



6 COMMUNICATION PROTOCOLS

☑ CWC § 10632 (a) (5)

Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding, at a minimum, all of the following:

(A) Any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1.

(B) Any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1.

(C) Any other relevant communications.

Even before formal declaration of a water shortage, SSJID's municipal customers will be given as much advance notice as possible. Coordination between SSJID, the SCWSP agencies and with other public agencies can begin prior to formal declaration of a water shortage and can be accomplished through regular meetings, e-mail group updates, and presentations. SSJID and the SCWSP agencies has formed an Operating Committee that meets quarterly to discuss any issues related to the water supply, among other matters.



7 COMPLIANCE AND ENFORCEMENT

CWC § 10632 (a) (6) For an urban retail water supplier, customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions as determined pursuant to Section 10632.2.

This section does not apply as SSJID is not an urban water retailer.



8 LEGAL AUTHORITIES

☑ CWC § 10632 (a) (7)

(A) A description of the legal authorities that empower the urban water supplier to implement and enforce its shortage response actions specified in paragraph (4) that may include, but are not limited to, statutory authorities, ordinances, resolutions, and contract provisions.

(B) A statement that an urban water supplier shall declare a water shortage emergency in accordance with Chapter 3 (commencing with Section 350) of Division 1.

(C) A statement that an urban water supplier shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code.

☑ *CWC* § 10632.3

It is the intent of the Legislature that, upon proclamation by the Governor of a state of emergency under the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code) based on drought conditions, the board defer to implementation of locally adopted water shortage contingency plans to the extent practicable.

SSJID is a public wholesale water supplier to the cities of Manteca, Tracy, Lathrop, and Escalon through the SCWSP. The entities have each entered into a Water Supply Development and Operating Agreement with SSJID which prescribes in general how water supply shortages will be allocated among the cities. Ultimately, each city is responsible to manage its available water supplies among its retail customers.

Additionally, SSJID shall declare a water shortage emergency in accordance with Water Code Chapter 3 (commencing with Section 350) of Division 1. SSJID shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency.

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9 FINANCIAL CONSEQUENCES OF WSCP

☑ CWC § 10632 (a) (8)

A description of the financial consequences of, and responses for, drought conditions, including, but not limited to, all of the following:

(A) A description of potential revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(B) A description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(C) A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1.

SSJID bills the SCWSP agencies for all operating, maintenance, and capital costs of the water treatment and delivery system. For billing purposes, these costs fall into two categories: fixed costs and variable costs. Variable costs vary with the volume of water treated and delivered to the SCWSP agencies. Fixed costs are fully billed to the SCWSP agencies regardless of the volume of water treated and delivered. Total fixed costs are allocated among the SCWSP agencies pro rata on the basis of their annual volume allotments. Because only variable costs are billed volumetrically, and all fixed costs are always fully billed to the SCWSP agencies without regard to the volume of water treated and delivered, SSJID revenue is always sufficient to recover all costs of the water treatment system. Therefore, net cash flow of the Nick C. DeGroot WTP would not be significantly affected by severe drought conditions. Because this is the case, changes in flows due to water shortage would not likely require use of SSJID's financial reserves.



10 MONITORING AND REPORTING

CWC § 10632 (a) (9) For an urban retail water supplier, 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.

This section does not apply as SSJID is not an urban water retailer.



11 WSCP REFINEMENT PROCEDURES

CWC § 10632 (a) (10) 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 as needed.

The WSCP is implemented as an adaptive management plan. SSJID will evaluate the need for revise its WSCP every year after performing its Annual Assessment. The evaluation will consider effectiveness of WSCP actions and any anticipated water supply shortages assessed by the Annual Assessment. If the WSCP is revised, SSJID will adopt a new resolution adopting the revised WSCP, and if necessary, declare a water shortage level to implement.



12 PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY

CWC § 10632 (c) The urban water supplier shall make available the water shortage contingency plan prepared pursuant to this article to its customers and any city or county within which it provides water supplies no later than 30 days after adoption of the water shortage contingency plan.

SSJID informed the public and the appropriate agencies of: (1) its intent to prepare a WSCP, (2) where the WSCP was available for public review, and (3) when the public hearing regarding the WSCP would be held. All notifications were completed in compliance with the stipulations of Section 6066 of the Government Code.

A copy of the adopted 2020 WSCP including any amendments will be provided to DWR, the California State Library, San Joaquin County, and the cities that receive or are planning to receive water from SSJID (including Escalon, Lathrop, Tracy, Manteca and Ripon) within 30 days of the adoption (Attachment 1). An electronic copy of the adopted 2020 WSCP will be submitted to the DWR using the DWR online submittal tool.

A copy of the adopted 2020 WSCP will be available for public review at the District Main Office during normal business hours and on SSJID's website within 30 days after filing the plan with DWR.

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13 REFERENCES

SSJID, 2020. Emergency Response Plan Nick C. DeGroot WTP, May 2020.



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ATTACHMENT 1

WATER SHORTAGE CONTINGENCY PLAN RESOLUTIONS

SOUTH SAN JOAQUIN IRRIGATION DISTRICT RESOLUTION 21-19-W

ADOPTION OF 2020 URBAN WATER MANAGEMENT PLAN AND WATER SHORTAGE CONTINGENCY PLAN

WHEREAS, the South San Joaquin Irrigation District ("SSJID)" is a California irrigation district operating under and by virtue of Division 11 of the California Water Code; and,

WHEREAS, the Urban Water Management Planning Act, California Water Code Section 10610 *et seq.*, requires urban water suppliers to prepare and adopt an Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) every five years on or before July 1; and,

WHEREAS, the SSJID is an urban water supplier and wholesaler as defined by the Urban Water Management Planning Act; and,

WHEREAS, California Water Code Section 10652 exempts from the California Environmental Quality Act the preparation, adoption, and amendment of UWMPs; and,

WHEREAS, SSJID notified the County of San Joaquin and the Cities of Escalon, Lathrop Manteca, Ripon, and Tracy of the opportunity to participate in the development of the 2020 UWMP; and,

WHEREAS, SSJID prepared a draft 2020 UWMP and WSCP pursuant to the Urban Water Management Planning Act and DWR guidance; and,

WHEREAS, on June 8, 2021, District staff posted the draft 2020 UWMP and appendices to the SSJID website for public review; and.

WHEREAS, in accordance with Government Code Section 6066, the District published a legal notice in the Manteca Bulletin on June 8, 10, and 15, 2001 notifying the public of the availability of the draft 2020 UWMP and appendices on the District's website and of the time and place for the public hearing to be held at 9:00 a.m. on June 22, 2021 at a regularly scheduled meeting of the SSJID Board of Directors; and,

WHEREAS, due to the COVID-19 pandemic, SSJID offers limited in-person and teleconference participation in the public hearing; and,

WHEREAS, the District Board of Directors duly held a public hearing at its regular meeting on June 22, 2021.

NOW, THEREFORE BE IT RESOLVED AND ORDERED, by the Board of Directors of the South San Joaquin Irrigation District as follows:

- 1. The 2020 UWMP and WSCP are hereby adopted; and,
- 2. Staff is hereby directed to file the adopted UWMP and WSCP with DWR and other required agencies; and,
- 3. The General Manager is hereby authorized and directed to take appropriate action to implement the 2020 UWMP and WSCP.

NOW, THEREFORE BE IT FURTHER RESOLVED, that this Board of Directors hereby reserves the right to modify and adopt the UWMP consistent with the California Water Code and DWR guidance should conditions change or if new information becomes available.

PASSED AND ADOPTED on this 22nd day of June 2021 by the following vote:

AYES:HOLBROOK HOLMES KAMPER WESTSTEYNNOES:NONEABSTAIN:NONEABSENT:ROOS

BY:

ROBERT HOLMES, President Board of Directors

ATTEST:

PETER M. RIETKERK, Secretary

Appendices 2020 Urban Water Management Plan South San Joaquin Irrigation District



APPENDIX E

RESOLUTION 21-19-W ON UWMP AND WSCP 2020 UPDATE

SOUTH SAN JOAQUIN IRRIGATION DISTRICT RESOLUTION 21-19-W

ADOPTION OF 2020 URBAN WATER MANAGEMENT PLAN AND WATER SHORTAGE CONTINGENCY PLAN

WHEREAS, the South San Joaquin Irrigation District ("SSJID)" is a California irrigation district operating under and by virtue of Division 11 of the California Water Code; and,

WHEREAS, the Urban Water Management Planning Act, California Water Code Section 10610 *et seq.*, requires urban water suppliers to prepare and adopt an Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) every five years on or before July 1; and,

WHEREAS, the SSJID is an urban water supplier and wholesaler as defined by the Urban Water Management Planning Act; and,

WHEREAS, California Water Code Section 10652 exempts from the California Environmental Quality Act the preparation, adoption, and amendment of UWMPs; and,

WHEREAS, SSJID notified the County of San Joaquin and the Cities of Escalon, Lathrop Manteca, Ripon, and Tracy of the opportunity to participate in the development of the 2020 UWMP; and,

WHEREAS, SSJID prepared a draft 2020 UWMP and WSCP pursuant to the Urban Water Management Planning Act and DWR guidance; and,

WHEREAS, on June 8, 2021, District staff posted the draft 2020 UWMP and appendices to the SSJID website for public review; and.

WHEREAS, in accordance with Government Code Section 6066, the District published a legal notice in the Manteca Bulletin on June 8, 10, and 15, 2001 notifying the public of the availability of the draft 2020 UWMP and appendices on the District's website and of the time and place for the public hearing to be held at 9:00 a.m. on June 22, 2021 at a regularly scheduled meeting of the SSJID Board of Directors; and,

WHEREAS, due to the COVID-19 pandemic, SSJID offers limited in-person and teleconference participation in the public hearing; and,

WHEREAS, the District Board of Directors duly held a public hearing at its regular meeting on June 22, 2021.

NOW, THEREFORE BE IT RESOLVED AND ORDERED, by the Board of Directors of the South San Joaquin Irrigation District as follows:

- 1. The 2020 UWMP and WSCP are hereby adopted; and,
- 2. Staff is hereby directed to file the adopted UWMP and WSCP with DWR and other required agencies; and,
- 3. The General Manager is hereby authorized and directed to take appropriate action to implement the 2020 UWMP and WSCP.

NOW, THEREFORE BE IT FURTHER RESOLVED, that this Board of Directors hereby reserves the right to modify and adopt the UWMP consistent with the California Water Code and DWR guidance should conditions change or if new information becomes available.

PASSED AND ADOPTED on this 22nd day of June 2021 by the following vote:

AYES:HOLBROOK HOLMES KAMPER WESTSTEYNNOES:NONEABSTAIN:NONEABSENT:ROOS

BY:

ROBERT HOLMES, President Board of Directors

ATTEST:

PETER M. RIETKERK, Secretary



2001 Junipero Serra Blvd., Suite 300 | Daly City, CA 94014 (650) 292-9100 | Fax (650) 552-9012 | Ekiconsult.com