

South San Joaquin Irrigation District Urban Water Management Plan 2015 Update

June 2016



Prepared for:



Prepared by:



URBAN WATER MANAGEMENT PLAN 2015 UPDATE

June 2016

Prepared for:
South San Joaquin Irrigation District
11011 E. Highway 120, Manteca, California 95366

Prepared by:
Provost & Pritchard Consulting Group
4701 Sisk Road, Suite 102, Modesto, California 95356



Date
Signed June 30, 2016

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Abbreviations

AB.....	State Assembly Bill
AF	acre-feet
afy	acre-feet per year
bgs.....	below ground surface
BMP	Best Management Practice
CASGEM	California Statewide Groundwater Elevation Monitoring Program
CII	Commercial, Industrial, Institutional, water use sectors
CIMIS	California Irrigation Management Information System
CUWCC.....	California Urban Water Conservation Council
CWC	California Water Code
DMM	Demand Management Measures
DOF	Department of Finance
DWR.....	Department of Water Resources
eARDWP	electronic Annual Reports to the Drinking Water Program (SWRCB)
ET _o	Reference Evapotranspiration
ft.....	feet
GIS	Geographic Information System
gpcd.....	gallons per capita per day
gpd	gallons per day
IRWM	Integrated Regional Water Management
MGD	million gallons per day
NPDES.....	National Pollutant Discharge Elimination System
psi.....	pounds per square inch
PWS	Public Water System
RWQCB.....	Regional Water Quality Control Board
SB.....	State Senate Bill
SGMA.....	Sustainable Groundwater Management Act
SWRCB	State Water Resources Control Board
SWRCB	State Water Resources Control Board
UWMP.....	Urban Water Management Plan
UWMPA	Urban Water Management Plan Act
WDR.....	Waste Discharge Requirement
WRR	Water Recycling Requirement
WSCP.....	Water Shortage Contingency Plan

1 Introduction and Overview

1.1 Background and Purpose

The Urban Water Management Plan (UWMP or Plan) is a requirement of the Urban Water Management Planning Act (UWMPA) (Division 6, Part 2.6 of the California Water Code (CWC) §10610-10656). The UWMPs must be filed every five years and submitted to the Department of Water Resources (DWR). The submittal is required to meet the requirements of the UWMPA, including the most current amendments that have been made. The UWMPA applies to urban water suppliers with 3,000 or more connections being served or supplying more than 3,000 acre-feet (AF) of water annually.

UWMPs are required of the state's urban water suppliers in an effort to assist their resource planning and to ensure adequate water supplies are available for future use. A secondary purpose of the UWMP is to provide for a plan or series of plans during water drought situations. This report was prepared according to the requirements of the CWC, UWMPA and the 2015 UWMP Guidebook for Urban Water Suppliers, for South San Joaquin Irrigation District.

This UWMP reports on activities from 2011 to 2015 and provides projections for future activities.

1.2 Urban Water Management Planning and the California Water Code

To ensure that all CWC requirements and applicable laws have been met, the sections below are summarized.

1.2.1 Urban Water Management Planning Act of 1983

In 1983, SB797 altered Division 6 of the CWC by producing the UWMPA. Since 1983, several amendments to the original document have increased the requirements of the UWMPs submitted today. One such amendment required projections for water use to extend 20 years at 5-year intervals. Recently, this has been increased to a 25 year projection providing for a minimum 20-year projection up until the next UWMP is completed.

Various other amendments have increased requirements to include sections on recycled water use, demand management measures (DMMs), and water shortage contingency plans. Recycled water use sections were added to assist in evaluation of alternate water supplies for future use when projects exceed the current water supplies. Demand management measures must be clearly described including which measures are being implemented and which are scheduled for implementation in the future. Water contingency plans are to be prepared and coordinated with other water suppliers in the area for use during times of drought. Pertinent bills that have passed are as follows.

<i>Bill</i>	<i>Requirements</i>
<i>SB610 and AB901</i>	<i>Consideration of water availability when reviewing new large developments</i>
<i>SB318</i>	<i>Investigate possibilities of developing desalinated water</i>
<i>AB105</i>	<i>Submit UWMP to State Library</i>
<i>Water Conservation Bill (2009)</i>	<i>Urban water suppliers to reduce the statewide average per capita daily water consumption by 20% by December 31, 2020</i>
<i>AB 2067</i>	<i>Revises requirements on Demand Management Measures</i>
<i>SB 1420</i>	<i>Requires electronic submittal, standard forms and tables, and a report on distribution system losses</i>
<i>SB 1036</i>	<i>Urban suppliers to include energy-related information (optional) and analyze and define artificial water features</i>

1.2.2 Applicable Changes to the Water Code since 2010 UWMPs

South San Joaquin Irrigation District (SSJID or District) has previously prepared an UWMP in 2010, which was approved and adopted by the SSJID Board of Directors on September 13, 2011. Following adoption, the 2010 UWMP was submitted to and approved by DWR. A copy of this UWMP resides in the State Library.

This 2015 UWMP serves as an update to the 2010 UWMP and complies with all new requirements and regulations.

Some of the more significant changes include:

- The Demand Management Measures in AB 2067 now require water suppliers to provide narratives that describe their water demand management measures and require retailers to describe their management measure if implemented over a five year period, in order to assure they will meet water use targets. Wholesalers are not subject to this requirement.
- The Submittal Date specified in AB 2067 has been changed and now requires submission to the DWR by July 1, 2016.
- All Submittals shall also be electronically submitted.
- All Standardized Forms must be included to display all standardized tables and figures.
- Water Loss as defined in SB 1420 must include a plan to quantify and report distribution system loss.

1.3 Urban Water Management Plans in Relation to Other Planning Efforts

This document was written with the contribution of information provided by SSJID and its contracted cities. Concurrently, the majority of the contracted cities are required to provide their own UWMP update.

1.4 UWMP Organization

As recommended by DWR, this updated Plan was prepared according to organization provided in *The Guidebook for Urban Water Suppliers* (Guidebook) for SSJID. The Plan's format includes all of the required sections and tables in the order found in the Guidebook; therefore, there are sections in this Plan where the tables are not presented in numeric order. The general organization is presented by topic, and supporting documents are included in the appendices of this Plan.

1.5 UWMPs and Grant or Loan Eligibility

1.5.1 Funding Eligibility for Retail and Wholesale Suppliers

In order for the District to be eligible for any water grant or loan administered by DWR, this updated 2015 UWMP addresses requirements set by the CWC.

2 Plan Preparation

2.1 Basis for Preparing a Plan

Legal Requirements:

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...

CWC 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.

CWC 10621(a)

Each urban water supplier shall update its plan at least once every five years on or before December 31, in years ending in five and zero, except as provided in subdivision (d).

CWC 10621(d)

Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.

The California Urban Water Planning Act (Act) requires urban water suppliers that have 3,000 or more service connections or supply 3,000 or more acre-feet (AF) of water per year to develop an Urban Water Management Plan, which is submitted to the California DWR every five years. The Plan is required to describe and evaluate water deliveries, uses, sources of supply, reasonable and practical efficient water uses, demand management activities and water shortage contingency planning. Since 2005, legislation has been implemented that interrelates with the Act. SB X7-7 (Water Conservation Bill of 2009) requires urban water suppliers to develop baseline daily per capita water use and urban water use targets with the goal of reducing statewide per capita water use by 20 percent by 2020. Also, urban water suppliers must include projected water demands for lower income households in their future water use projections.

In accordance with California Water Code 10631.5(a), submittal of an UWMP that includes discussion of the status of the water supplier’s implementation of the demand management measures (DMMs), as defined in CWC 10631, is required in order for an urban water supplier to be eligible for a water management grant or loan administered by the DWR, State Water Resources Control Board, or the Delta Stewardship Council.

This is not a regional UWMP, this is an individual plan covering SSJID and all of the Cities that it serves; this document is an update of the District’s 2010 UWMP. SSJID is a public wholesaler supplying approximately 17,089 acre-feet of water in 2015 alone.

2.1.1 Public Water Systems

Legal Requirements:

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.

CWC 10608.52 (a)

The department, in consultation with the board, the California Bay-Delta Authority or its successor agency, the State Department of Public Health, and the Public Utilities Commission, shall develop a single standardized water use reporting form to meet the water use information needs of each agency, including the needs of urban water suppliers that elect to determine and report progress toward achieving targets on a regional basis as provided in subdivision of Section 10608.28.

CWC 10608.52 (b)

At a minimum, the form shall be developed to accommodate information sufficient to assess an urban water supplier's compliance with conservation targets pursuant to Section 10608.24... The form shall accommodate reporting by urban water suppliers on an individual or regional basis as provided in subdivision (a) of Section 10608.28.

California Health and Safety Code 116275 (h)

"Public Water System" means a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year.

The retail suppliers that are contracted by SSJID are the City of Escalon, City of Lathrop, City of Manteca, City of Tracy, and the City of Ripon, as shown in Table 2.1 below. Each individual retailer is to provide information on their own Public Water System (PWS) with their UWMP update.

Table 2-1: Public Water Systems

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
CA3910007	City of Ripon
CA3910011	City of Tracy

SSJID is exclusively a wholesale water agency and is not required to provide further detail information on the retail suppliers' PWS.

2.1.2 Agencies Serving Multiple Service Areas/Public Water Systems

The District exceeds the UWMP size threshold of 3,000 acre-feet of water supplied and it also serves several PWS. The District will only provide an individual plan for its own distribution system.

2.2 Regional Planning

SSJID does not extend its planning process beyond the limits of its own system, nor does it intend to do so in the future.

2.3 Individual or Regional Planning and Compliance

SSJID falls within the Eastern San Joaquin and East Stanislaus Integrated Regional Water Management group (IRWM); however, this Plan is only representative of the District and the information provided by the agencies served. Furthermore, this plan reports solely on its own service area as indicated by “Individual Reporting” in the Guidebook.

The District is not collaborating with any other agency to establish a Regional Alliance for the completion of the SB X7-7 requirements in determining its 2020 Urban Water Use Targets. See Table 2-2 below.

Table 2-2: Plan Identification

Table 2-2: Plan Identification			
Select Only One	Type of Plan		Name of RUWMP or Regional Alliance if applicable
☒	Individual UWMP		
	☐	Water Supplier is also a member of a RUWMP	
	☐	Water Supplier is also a member of a Regional Alliance	
☐	Regional Urban Water Management Plan (RUWMP)		
NOTES:			

2.4 Fiscal or Calendar Year and Units of Measure

Legal Requirements:

CWC 1608.20 (a)(1)

Urban retail water suppliers...may determine the targets on a fiscal year or calendar year basis.

2.4.1 Fiscal or Calendar Year

As preferred by DWR, reporting is completed in calendar year bases for this UWMP.

2.4.2 Reporting Complete 2015 Data

SSJID presents all past and current data through December of 2015.

2.4.3 Units of Measure

This plan will report all volumes in acre-feet; these units will remain consistent throughout this 2015 UWMP. Table 2-3 below, Agency Identification, identifies type of agency, reporting period and units of measure as required by the guidelines.

Table 2-3: Agency Identification

Table 2-3: Agency Identification	
Type of Agency (select one or both)	
☒	Agency is a wholesaler
☐	Agency is a retailer
Fiscal or Calendar Year (select one)	
☒	UWMP Tables Are in Calendar Years
☐	UWMP Tables Are in Fiscal Years
If Using Fiscal Years Provide Month and Date that the Fiscal Year Begins (mm/dd)	
Units of Measure Used in UWMP (select from Drop down)	
Unit	AF
NOTES:	

2.5 Coordination and Outreach

Legal Requirements:

CWC 10631 (j)

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 (c). 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 (c).

2.5.1 Wholesale and Retail Coordination

In the event that a retailer is dependent on a wholesale agency for its water supply, both suppliers must provide information to each other about projected water supply and demand. SSJID is a wholesaler and the agencies it serves are dependent on it. As required by CWC 10631, the District provided information to its customers identifying and quantifying the current and projected water supply available to them. Table 2-4 below, Water Supplier Information Exchange, notes the relationship between SSJID and any Retailers as required by the guidelines.

Table 2-4: Wholesale: Water Supplier Information Exchange

Table 2-4 Wholesale: Water Supplier Information Exchange (select one)	
☐	Supplier has informed more than 10 other water suppliers of water supplies available in accordance with CWC 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.	
☒	Supplier has informed 10 or fewer other water suppliers of water supplies available in accordance with CWC 10631. Complete the table below.
Water Supplier Name <i>(Add additional rows as needed)</i>	
City of Escalon	
City of Lathrop	
City of Manteca	
City of Tracy	
City of Ripon	
NOTES:	

2.5.2 Coordination with Other Agencies and the Community

Legal Requirements:

CWC 10620 (d)(2)

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 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 the plan...

SSJID encouraged active involvement and participation of others in the preparation of this plan. SSJID outreached to contracted agencies, farmers, city residents, rural county residents, and people in surrounding areas through letters, newspaper notices, public hearings, and by sending draft copies of the UWMP to nearby cities.

2.5.3 Notice to Cities and Counties

Legal Requirements:

CWC 10621 (b)

Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.

The District met with their consultant on January 15, 2016 to initiate the update of this Plan. Following the meeting, information was requested from the cities on their water supply. Copies and letters formally notifying retail customers of the intent to update the 2010 UWMP can be found in Appendix A.

Notification of public hearing notifying cities and the public that are served by SSJID were advertised in the Manteca Bulletin on April 29, May 13, May 27, and June 10 prior to the public hearing. Copies of ad proofs and receipts for ads can be found in Appendix A. A public hearing was held on June 28, 2016 at the SSJID main office in Manteca, California to allow for public comment of the Draft UWMP. Draft copies were made available for public review at the District office and electronic versions were available upon request on May 27, 2016.

3 System Description

3.1 General Description

Legal Requirements:

CWC Section 10631

Describe the service area of the supplier.

This updated Plan addresses surface water supplies that SSJID delivers to several municipalities in southern San Joaquin County. The Cities of Lathrop, Manteca and Tracy currently receive treated surface water from the South County Water Supply Program (SCWSP). The City of Escalon is under contract to purchase water from the SCWSP but has not yet constructed a pipeline to convey the water to its facilities. Escalon is expected to construct the pipeline and begin purchasing water by 2020. Escalon currently sells its water allotment to the City of Tracy but is expected to start accepting surface water from the District in approximately ten years. The City of Ripon currently receives untreated raw water from SSJID through the SSJID irrigation distribution system.

South County Water Supply Program

The SCWSP is a collective effort between SSJID and the Cities of Manteca, Escalon, Lathrop and Tracy to provide supplemental, high-quality drinking water. SSJID constructed the Nick C. DeGroot Water Treatment Plant (WTP) in 2005 and a water delivery pipeline system using funds provided by the Cities of Manteca, Lathrop, Escalon and Tracy. 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 2029. If the District and Cities do not agree to extend the contract past 2029, then the District agrees to transfer the project to a Joint Powers Authority composed of the four cities, which would run it at their cost. The Cities would also need to enter into an agreement with the District to supply 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 loss of irrigated agriculture to urban development. When constructing the Nick C. DeGroot WTP and conveyances, the District's goals were to provide a reliable, supplemental potable water supply for south San Joaquin County; put to beneficial use conserved water from SSJID entitlements; keep conserved water within SSJID and San Joaquin County; and reduce the heavy reliance on groundwater for the urban areas of south San Joaquin County.

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 40 million gallons per day (MGD). The 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 demand is underway. Phase II includes a future plant expansion to increase the design capacity to approximately 60 MGD. Developers approaching the District

with proposed projects and the moderately increased rate of residential development have increased the overall plant demand. With increased demand, increasing the capacity of the plant may require the Phase II expansion as a viable alternative.

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 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. Refer to Section 3.2 for a map of SSJID and 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 land owners, and irrigation return flows from a neighboring water district. The District's main source of water is the Stanislaus River, which provides the District's surface water. The District's water rights, which are primarily held jointly with its neighbor, Oakdale Irrigation District, include pre-1914 rights, as well as rights acquired after 1914.

SSJID's water deliveries are largely governed by a 1988 Agreement and Stipulation ("1988 Agreement") with the United States Bureau of Reclamation (USBR) and Oakdale irrigation District. The District's water supply has ranged from approximately 64,000 AF in 1977 to more than 300,000 AF. Since the 1988 Agreement has been in effect, the District's lowest water supply was 225,000 AF in 2014 and 2015. If the hydrology in 1977 were to recur, with the 1988 Agreement in effect, the District would receive 225,000 AF, assuming sufficient water was available from previous years' storage in the conservation account established in the 1988 Agreement.

SSJID's primary water demand is from irrigated agricultural land. SSJID provided irrigation water to about 53,000 acres in 2014. The irrigation season typically runs from about March 15 to October 15, depending on the weather. SSJID owns and operates an extensive system of water and stormwater drainage conveyance facilities, pipelines and canals. SSJID's surface water comes from the Stanislaus River watershed. Water is stored in the reservoirs behind the Tulloch, New Melones, Beardsley, Goodwin, and Donnell's Dams. SSJID also owns the off-channel Walter J. Woodward Reservoir, which has a storage capacity of 36,000 AF. Water is diverted from the Stanislaus River and stored in Woodward Reservoir before it is treated at the Nick C. DeGroot 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. The location of the Nick C. DeGroot WTP and treated water pipeline are shown in Section 3.2.

Each city has an agreement with SSJID to purchase treated water through December 2029. Table 3-1 lists the current allotments (Phase I) to each City, based on contracts signed in the 1990's, 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. Currently, SSJID has no immediate plans to implement Phase II.

Table 3-1: City Allotments for Treated Water

City	Phase I Allotment	Phase II Allotment
Escalon	2,015	2,799
Lathrop	8,007	11,791
Manteca	11,500	18,500
Tracy	10,000	10,000
Total	31,552	43,090

Source: Water Supply Development Agreements between the cities and SSJID

The City of Ripon also has an allotment of 1,200 AF annually of irrigation water from SSJID which is used for groundwater recharge. Ripon has not taken delivery of this water since 2013.

City of Escalon

The City of Escalon is located in the eastern portion of SSJID, about 11 miles north of downtown Modesto. The population of the City of Escalon has remained steady at 7,400. Escalon currently relies only on groundwater supplies and does not utilize the allotted water from SSJID. Escalon intends to construct a pipeline to convey SCWSP treated water to their city limits by 2020. Escalon is currently selling their SCWSP allotment of treated water to the City of Tracy.

The City of Escalon currently operates its water system under the State Water Resource Control Board (SWRCB) Division of Drinking Water. It has approximately 2,500 service connections and water is supplied from four active wells. Water is delivered by 33 miles of pipe ranging from three to sixteen inches in diameter. The City also has one 500,000-gallon water tank.

City of Lathrop

The City of Lathrop is located west of SSJID, west of the City of Manteca and south of the City of Stockton. The population for the City was 20,353 in 2015. The City of Lathrop's water system serves approximately 5,748 meter service connections within a 22 square mile area. The City has a Capital Improvement Project Plan for Water Meter Improvements to replace all 3,000 meter registers to transmit data wirelessly by 2017. Approximately 1,375 meters were found obsolete and failing to function in 2013.

Groundwater is the primary supply for domestic water for the City. In 2012, the City's Louise Avenue Water Treatment Facility was constructed to treat groundwater pumped from five city wells. Surface water deliveries to the City fell from 1,050 AF in 2011 to 241 AF in 2015.

City of Manteca

The City of Manteca is located in western SSJID, immediately east of Lathrop and south of Stockton. The population for the City of Manteca was approximately 73,790 in 2015.

Manteca's water supply includes a combination of groundwater pumped by 15 city-owned wells and treated surface water purchased from SCWSP. The City maintains approximately 170 miles of pipelines. Current demand overdrafts in the existing groundwater supply for the City pose a threat to degradation of the groundwater resource. Therefore, Manteca uses surface water to supplement and meet future water needs. The City has utilized a steady supply of 5,443 AF in 2011 to 5,668 AF in 2015.

City of Tracy

The City of Tracy is located about 10 miles west of SSJID and is southwest of Lathrop. The city had a population of about 82,900 in 2015 and covers an area of about 22 square miles. The Tracy water system has 23,499 metered connections within a 44-square mile area.

Tracy's water supply includes treated surface water from SCWSP, the USBR's 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. Tracy has a water treatment plant and nine groundwater wells. SCWSP surface water has the best water quality of any of the City's supplies. Overall, Tracy has a diverse portfolio of water supplies that helps to increase reliability. Tracy completed a second connection to the SSJID water line in 2009 which will allow the City to receive additional water. Tracy receives the majority of water produced from SSJID retailing 10,000 AF in 2015, with a peak of 12,714 AF in 2012.

City of Ripon

The City of Ripon is located in south central SSJID, along the southern edge of San Joaquin County. Ripon's population has remained steady at approximately 14,900 in 2015. The City has developed a water meter program to install meters at all existing connections by January 1, 2025.

Ripon's water is supplied by six groundwater wells. System storage consists of two above-ground storage tanks with a total capacity of over four million gallons. Ripon also has a non-potable water system that provides water for irrigation and industrial users. The primary source of water is groundwater pumped from two City wells, along with private industrial suppliers. The City's current allotment of SSJID water is used as part of the city's groundwater recharge program. These water supplies are not treated by SSJID prior to delivery. Ripon would like to receive a part of its water allotment from the Nick C. DeGroot Water Treatment Plant and pump it directly into the City's potable water system. This change will be contingent on funding, signing a contract with SSJID, constructing new conveyance facilities, CEQA and permitting. In the event the SCWSP could not supply treated water to the city, Ripon would rely on raw, untreated water from SSJID and groundwater.

3.2 Service Area Boundary Maps

The Drinking Water Delivery System map below illustrates the SSJID district boundaries as well as the locations of the retailers that it provides water to.

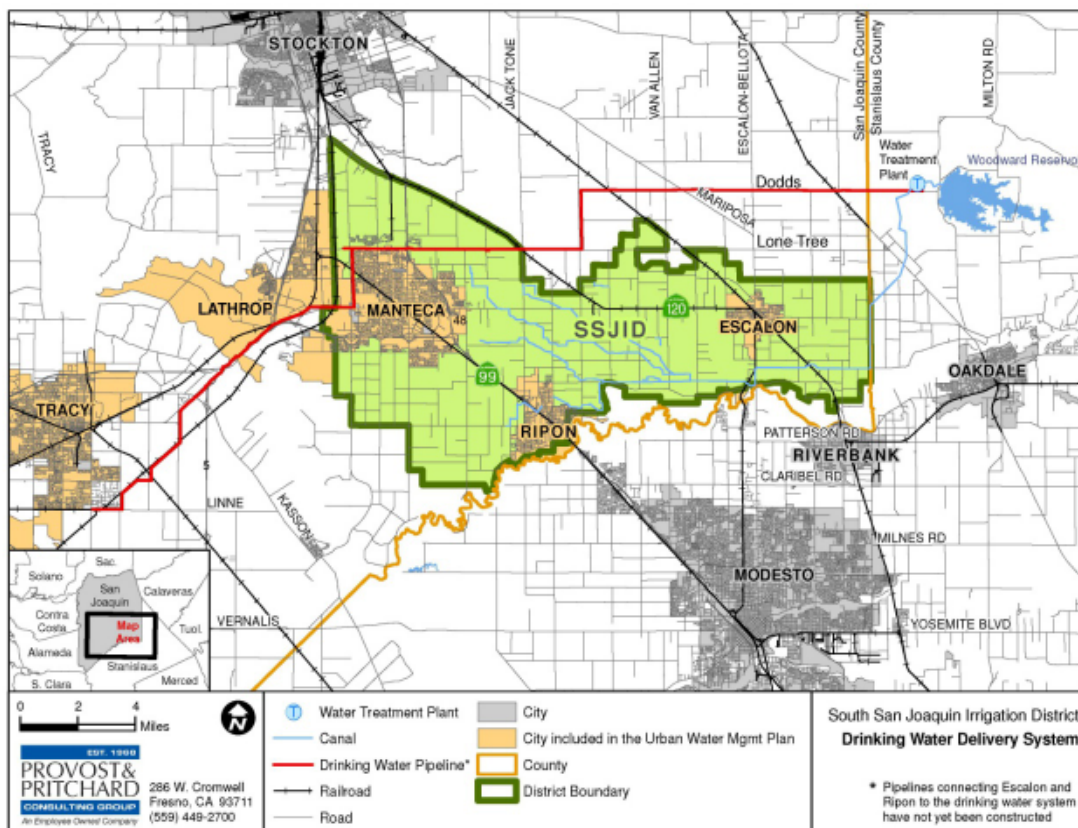


Figure 3-1: Service Area Boundary Map

3.3 Service Area Climate

Legal Requirements:

CWC Section 10631

Describe the service area of the supplier, including... climate...

Climate information for Manteca is available from the California Irrigation Management Information System (CIMIS) Weather Station No. 70. The climate information is based on data between 1987 and 2016. Climate information for the City of Manteca is representative of the climate throughout SSJID. The climate in SSJID can be characterized as generally warm to hot in the spring, summer, and fall with increasing temperatures reaching over 100° Fahrenheit ("F"). Winters are usually mild with annual temperature of 60°F and mean minimum and maximum temperatures of 56°F and 83°F respectively.

Water supply for the Stanislaus River system is supplied by rainfall and snowmelt runoff from the watershed above the Goodwin Dam. On average, annual precipitation in the watershed is 13 inches at lower elevations and upwards to 65 inches at the higher elevations. 80 percent of precipitation occurs during the months of November through March.

Average annual evapotranspiration (ET_o) is approximately 52 inches, ranging from a low of approximately one inch in December and January to a high of approximately eight inches in July.

Approximately three quarters of the annual ET_o occurs in the six-month period from April through September. Average monthly and annual climate data for the SSJID area is presented in the Climate Characteristics Table 3-2 below.

Table 3-2: Climate Characteristics

Month	Standard Monthly Average ET_o^1 (inches)	Monthly Average Rainfall (inches)	Monthly Average Temperature (°F)	
			Min.	Max.
January	1.11	2.9	41.1	57.8
February	1.97	0.89	41.1	67.2
March	4.32	0.21	43.4	75.1
April	5.69	1.14	44.8	74.3
May	6.70	0.01	48.7	76.6
June	7.73	0.06	56.5	89.6
July	7.96	0.00	60.1	90.4
August	7.09	0.01	57.9	89.9
September	4.82	0.02	54.5	87.8
October	3.74	0.18	52.5	82.6
November	1.89	1.95	37.3	62.8
December	1.24	2.14	36.0	56.3
Annual Total/Average	5.83	0.80	47.9	75.9
Source: ¹ California Irrigation Management Information System (CIMIS) data for Station 70-Manteca (February 2015- January 2016)				

3.4 Service Area Population and Demographics

Legal Requirements:

CWC Section 10631

Describe the service area of the supplier, including current and projected population . . . 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.

Table 3-3 includes population projections from 2015 to 2040 for the population area of SSJID. The population area includes all the cities contracted with the District; these projections also include the Cities of Escalon and Ripon although they do not receive drinking water. Population count was derived from a combination of the population database from the California Department of Finance as well as data provided directly from the cities.

Table 3-3: Wholesale: Population – Current and Projected

Wholesale: Population - Current and Projected						
Population Served	2015	2020	2025	2030	2035	2040(opt)
	201,774	243,203	282,037	325,089	371,338	423,594
NOTES: Population data from DOF and retailers.						

3.4.1 Other Demographic Factors

Legal Requirements:

CWC 10631 Describe the service area of the supplier, including . . . other demographic factors affecting the supplier's water management planning.

Water supplied from SSJID is also used for agricultural irrigation. A 2015 Agricultural Water Management Plan (AWMP), similar to this Plan was updated and submitted to DWR. Agricultural irrigation water is not a part of this plan.

4 System Water Use

4.1 Recycled versus Potable and Raw Water Demand

Recycled water is addressed in Section 6.5 and raw water is addressed below.

4.2 Water Use by Sector

Legal Requirements:

CWC 10631(e)

(1) 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, identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:

(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.

(2) The water use projections shall be in the same five-year increments described in subdivision (a).

SSJID is a wholesale agency that sells directly to retailers; the individual retailers are responsible for reporting the uses of their water supplies in their own UWMPs. In 2015, SSJID supplied a combined total of 15,915 AF of water to the cities. Refer to Table 4-1 for recorded 2015 sales and Table 4-2 for projected retail demands.

4.2.1 Demand Sectors Listed in Water Code

Definitions used by DWR for each of the water sectors listed in the CWC are as follows:

4.2.1.1 Sales to other Agencies

Water sales made to another agency. Projected sales may be based on projected demand provided by receiving agency. There is inherent uncertainty in future projections, therefore, any projected sales reported in the UWMP are for planning purposes only and are not considered a commitment on the part of the seller.

4.2.1.2 Conjunctive use

A management strategy where surface water is managed in conjunction with an underground aquifer.

4.2.1.3 Groundwater Recharge

The managed and intentional replenishment of natural groundwater supplies using man-made conveyances such as infiltration basins or injection wells. Water used for groundwater banking or storage may also be reported using this sector.

If all, or a portion of, the groundwater recharge water is subsequently pumped out of the basin in the same year, that water will be reported by the pumping agency as a supply from groundwater (Tables 6-1 and/or 6-8 and 6-9). This may be either a wholesale or retail demand.

4.2.1.4 Saline water intrusion barriers

Injection of water into a fresh water aquifer to prevent the intrusion of salt water.

4.2.1.5 Agricultural

Water used for commercial agricultural irrigation.

4.2.1.6 Distribution System Losses

Reporting of system losses is required by the CWC in the 2015 UWMPs.

4.2.2 Demand Sectors in Addition to Those Listed in Water Code

4.2.2.1 Exchanges

Water exchanges are typically water delivered by one water user to another water user,, with the receiving water user returning the water at a specified time or when the condition of the parties' agreement are met.

4.2.2.2 Surface Water/ Augmentation

The planned placement of recycled water into a surface water into a surface water reservoir that is used as a source of domestic drinking water supply. (Used in Chapter 6, Section 6.5 Recycled Water).

4.2.2.3 Transfers

The CWC defines a water transfer as a temporary or long-term change in the point of diversion, place of use, or purpose of use due to a transfer, sale, lease, or exchange of water or water rights.

4.2.2.4 Wetlands or Wildlife Habitat

Water used for a managed environmental use to improve an environmental condition.

4.2.2.5 Other

Any water demand that is not adequately described by the water sectors defined above.

Section Four: System Water Use 2015 Urban Water Management Plan

Table 4-1: Wholesale: Demands for Potable and Raw Water- Actual

Table 4-1 Wholesale: Demands for Potable and Raw Water - Actual			
Use Type <i>(Add additional rows as needed)</i>	2015 Actual		
	Additional Description <i>(as needed)</i>	Level of Treatment When Delivered	Volume
Sales to other agencies	City of Lathrop	Drinking Water	241
Sales to other agencies	City of Manteca	Drinking Water	5,668
Sales to other agencies	City of Tracy	Drinking Water	10,006
Losses	Master meters at cities are over-registering by approximately 2%	Drinking Water	94
TOTAL			16,009
NOTES: Units of volume in acre-feet Irrigation demands are not a part of this Plan. The 2015 SSJID AWMP covers all agricultural and irrigation water demands. These demands only account for SCWSP water delivered to the cities. Each city also has additional sources of water.			

Table 4-2: Wholesale: Demands for Potable and Raw Water – Projected

Table 4-2 Wholesale: Demands for Potable and Raw Water - Projected						
Use Type	Additional Description <i>(as needed)</i>	Projected Water Use <i>Report To the Extent that Records are Available</i>				
		2020	2025	2030	2035	2040 (opt)
Sales to other agencies	City of Lathrop ¹	6,887	6,887	10,671	10,671	10,671
Sales to other agencies	City of Manteca ¹	11,500	18,500	18,500	18,500	18,500
Sales to other agencies	City of Tracy ²	11,600	13,447	15,589	18,072	20,950
Sales to other agencies	City of Ripon ¹	3,935	5,000	6,000	6,000	6,000
Sales to other agencies	City of Escalon ²	250	500	1,000	2,000	4,000
TOTAL		34,172	44,334	51,760	55,243	60,121
NOTES: Units of volume in acre-feet 1- Projected volume based upon information provided by City. 2- Projected volume based upon linear interpolation of population growth rate.						

Table 4-3: Wholesale: Total Water Demands

Table 4-3 Wholesale: Total Water Demands						
	2015	2020	2025	2030	2035	2040 (opt)
Potable and Raw Water <i>From Tables 4-1 and 4-2</i>	17,089	34,172	44,334	51,760	55,243	60,121
Recycled Water Demand <i>From Table 6-4</i>	0	0	0	0	0	0
TOTAL WATER DEMAND	17,089	34,172	44,334	51,760	55,243	60,121
NOTES: Units of Measure in acre-feet						

4.3 Distribution System Water Losses

Legal Requirements:

CWC 10631 (e)(1)

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, identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:...

(J) Distribution system water loss

CWC 10631 (3)

(A) For the 2015 urban water management plan update, the distribution system water loss shall be quantified for the most recent 12-month period available. For all subsequent updates, the distribution system water loss shall be quantified for each of the five years preceding the plan update.

(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.

Projected losses in increments of five years are reported in Table 4-1 for the 2015 year. These values were acquired using the guidelines found in the Guidebook. They are only estimations. Section 9 reports on actual water losses for SSJID.

Table 4-4: Wholesale: 12 Month Water Loss Audit Reporting

Table 4-4 Wholesale: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss*
01/2014	94
* Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.	
NOTES: Master meters at Tracy, Manteca, Ripon and Lathrop are currently over-registering the flows metered at the WTP by approximately 2%. P&P is working with DWR staff to determine the best method to illustrate this condition in the worksheet and will further refine this volume once a final solution has been reached.	

5 SBX7-7 Baselines and Targets

5.1 Guidance for Wholesale Agencies

Legal Requirements:

For purposes of identifying baselines and targets, the following definition applies:

CWC 10608.12 (r)

“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.

Legal Requirements:

CWC 10608.36

Urban wholesale water suppliers shall include in the urban water management plans... 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, SSJID is not required to establish or meet baseline targets for daily per capita water use nor are they required to complete the SB X7-7 Verification form. Assessment of present and proposed future measures, programs, and policies which will help SSJID achieve the required reductions are described in Section 9.1.

6 System Supplies

6.1 Purchased or Imported Water

SSJID does not purchase or import water for use by its SCWSP customers and is therefore not covered in this UWMP.

6.2 Groundwater

Groundwater would only be used as an emergency source of SSJID water delivered to the WTP, and therefore is not considered in this UWMP. However, groundwater is an important resource used by the cities and farmers throughout the District. The cities use groundwater to meet much of their demands, and some District growers use groundwater as a regular source for irrigation water. Groundwater provides important reserves that can supplement SCWSP water during droughts. Furthermore, SSJID has leased private wells during droughts to augment water supplies to farmers, which could help to minimize cuts to City water supplies.

6.3 Surface Water

SSJID's water supply for its SCWSP customers 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 called '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 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. The 1988 Agreement recognized and protected the District's senior water rights on the Stanislaus River, as those rights might be affected by the USBR's operation of the New Melones Reservoir as part of the Central Valley Project. All of the District's rights are senior to the USBR's right to store Stanislaus River water in New Melones Reservoir.

The 1988 Agreement entitles the Districts to all New Melones inflow, plus an amount derived by the following formula: (600,000 AF less inflow) divided by 3, not to exceed 600,000 AF per year (referred to as "formula water"). Under the 1988 Agreement, all of the water available to the Districts under their water rights is supplied from formula water. The 1988 Agreement allows SSJID to store conserved water from year to year in a conservation account in New Melones. If the USBR releases water from New Melones Reservoir for flood control purposes, the conserved water is the first water released. The conserved water can be used to increase the District's water supply to 225,000 acre-feet in any year when formula water would provide less water. SSJID's surface water rights with the 1988 Agreement are expected to provide 225,000 to 300,000 AF/year. Since the 1988 Agreement has been in effect, the lowest supply of water was 225,000 acre-feet in both 2014 and 2015.

SSJID's and OID's pre-1914 rights permit them to divert a combined 1,816.6 cfs from the Stanislaus River during the period of March 1 through October 31. SSJID urban and irrigation water is diverted at Goodwin Dam, conveyed through the main canal and stored at Woodward Reservoir. Urban water is then diverted from Woodward Reservoir to the WTP for processing and distribution to SCWSP. As described above, the USBR is required to make water available to the Districts by the 1988 Agreement as the construction of New Melones Reservoir changed the hydrology of the lower river and interferes with the Districts' ability to divert their rightful combined flow.

Refer to Section 3.2 Service Area Boundary Maps for water conveyance illustration of pipeline.

6.4 Stormwater

SSJID does not utilize stormwater as a source for the SCWSP.

6.5 Wastewater and Recycled Water

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.

6.6 Recycled Water Coordination

Legal Requirements:

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.

Per the guidebook, "municipal recycled water is municipal wastewater that has been treated to a specified quality... for a beneficial use." At this time, SSJID does not treat or deliver recycled water to any of the SCWSP Cities.

The bullet list below summarizes the retailers collecting, treating or discharging municipal wastewater within the service area.

- City of Escalon
 - Collects and treats wastewater within their own service area.
- City of Lathrop
 - Collects treats and recycles wastewater within their own service area.
- City of Tracy
 - Collects and treats wastewater within their own service area.
- City of Ripon
 - Collects and treats wastewater within their own service area.

- City of Manteca
 - Collects and treats wastewater within their own service area.

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

6.6.1 Wastewater Collection, Treatment, and Disposal

Legal Requirements:

CWC 10633 (a)

(Describe) 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)

(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.

SSJID does not collect or treat wastewater nor does it recycle wastewater for drinking water.

6.6.1.1 Wastewater Collected Within Service Area

SSJID is a wholesale agency and is not required to comment on this section.

6.6.1.2 Wastewater Treatment and Discharge Within Service Area

SSJID neither distributes nor provides supplemental treatment to recycled water.

Section Six: System Supplies
2015 Urban Water Management Plan

Table 6-1: Wholesale: Wastewater Treatment and Discharge Within Service Area in 2015

Table 6-3 Wholesale: Wastewater Treatment and Discharge Within Service Area in 2015										
☒	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	2015 volumes			
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
Total							0	0	0	0
NOTES: SSJID does not distribute nor provide supplemental treatment to recycled water and therefore is not considered in this UWMP.										

6.6.2 Recycled Water Systems

Legal Requirements:

CWC 10633 (c)

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

SSJID does not recycle wastewater for either drinking water or irrigation.

The City of Manteca collects and treats and sells a small portion of their recycled water to SSJID for agricultural irrigation only.

6.6.3 Recycled Water Beneficial Uses

Legal Requirements:

CWC 10633 (d)

(Describe and quantify) 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)

(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 pursuant to this subdivision.

6.6.3.1 Current and Planned Uses of Recycled Water

Currently, the City of Manteca supplies treated wastewater to irrigated lands within the SSJID boundary. SSJID intends to work with the cities to provide recycled water for agricultural needs in the future. As a wholesaler, SSJID does not directly recycle water.

Table 6-2: Wholesale: Current and Projected Retailers Provided Recycled Water Within Service Area*

Table 6-4 Wholesale: Current and Projected Retailers Provided Recycled Water Within Service Area							
☒	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	2015	2020	2025	2030	2035	2040 (opt)
Total		0	0	0	0	0	0
NOTES: Wastewater is not processed at the WTP, recycled water occurs at the local City level.							

6.6.3.2 Planned Versus Actual Use of Recycled Water

Legal Requirements:

CWC 10633 (e)
(Provide) a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

Table 6-3: Wholesale: 2010 UWMP Recycled Use Projection Compared to 2015 Actual Use

Table 6-5 Wholesale: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual		
☒	Recycled water was not used or distributed by the supplier in 2010, nor projected for use or distribution in 2015. The wholesale supplier will not complete the table below.	
Name of Receiving Supplier or Direct Use by Wholesaler	2010 Projection for 2015	2015 actual use
Total	0	0
NOTES:		

6.7 Desalinated Water Opportunities

Legal
Requirements:

CWC 10631(h)

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, therefore, the production and use of desalinated sea water is not a practical option. SSJID has not seen 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.

6.8 Exchange or Transfers

Legal Requirements:

CWC 10631(d)

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

6.8.1 Exchanges

SSJID does not exchange SCWSP water with other agencies at this time.

6.8.2 Transfers

SSJID does not transfer SCWSP water with other agencies at this time.

6.8.3 Emergency Interties

Emergency interties are addressed in Chapter 7, Water Supply Reliability.

6.9 Future Water Projects

Legal
Requirements:

CWC 10631(g)

...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 average, single-dry, and multiple-dry 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

There are no major projects planned in the next five years that would provide major changes to the distribution system or the treatment plant. There are currently no plans to implement Phase II of the Nick C. DeGroot Wastewater Treatment Plant.

Table 6-4: Wholesale: Expected Future Water Supply Projects or Programs

Table 6-7 Wholesale: Expected Future Water Supply Projects or Programs						
☒	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
☐	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.					
	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other agencies?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type	Expected Increase in Water Supply to Agency
NOTES:						

6.10 Summary of Existing and Planned Source of Water

Legal Requirements:

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 10631(a).

(4) (Provide 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.

Demand for SCWSP water is expected to increase over time as the cities grow and replace more of their groundwater pumping with surface water deliveries. Table 6-9 shows projected water supplies available for SCWSP treated water under existing contracts. As the water demands of the cities increases, it is possible they could only be fully met after new agreements are signed with SSJID, or by purchasing unused SCWSP project water from other cities. For instance, Tracy is currently purchasing a portion of Escalon's contracted water supply, and may continue to do so in the future.

The City of Ripon is not currently under contract to receive treated water from the SCWSP, but can received untreated raw water. Ripon's ability to purchase treated water is subject to negotiating an agreement with SSJID, permitting, CEQA, funding, and constructing necessary facilities.

The actual source and volume of water for 2015 is provided in Table 6-8. Projected volumes are based upon historical deliveries for average years and are shown in Table 6-9.

Table 6-5: Wholesale: Water Supplies – Actual

Table 6-8 Wholesale: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2015		
		Actual Volume	Water Quality	Total Right or Safe Yield (optional)
Surface water	New Malones Reservoir flows diverted to SSJID	225,000	Raw Water	
Total		225,000		0
NOTES: Units of volume in acre-feet. Total surface water available for agriculture and urban use.				

Table 6-6: Wholesale: Water Supplies — Projected

Table 6-9 Wholesale: Water Supplies — Projected											
Water Supply	Additional Detail on Water Supply	Projected Water Supply <i>Report To the Extent Practicable</i>									
		2020		2025		2030		2035		2040 (opt)	
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)
Surface water	New Melones flows include supplies for both WTP and agricultural uses.	300,000		300,000		300,000		300,000			
Total		300,000	0	300,000	0	300,000	0	300,000	0	0	0
NOTES:											

7 Water Supply Reliability Assessment

7.1 Constraints on Water Sources

Legal

Requirements:

CWC 10631 (c)(2)

For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.

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.

The reliability of 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, and by language of the 1988 agreement, which modifies the nature of the variances between dry, average and wet water years, setting a limit on the District's supplies in wet years in exchange for substantially firming the District's supplies in dry years.

Long dry spells in the upper portions of the watershed and little runoff making its way into New Melones Reservoir have contributed to the decline in water supply in the past. In order for the District to meet both its agricultural and urban customer needs with a water supply of 225,000 AF, it began implementing modest conservation measures in 2014, with stricter measures to follow. See Chapter 9, Demand Management Measures.

7.2 Reliability by Type of Year

Legal

Requirements:

CWC 10631 (c) (1)

Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

(A) an average water year,

(B) a single dry water year,

(C) multiple dry water years.

Table 7-1 lists water year data for SSJID's historical average, single driest, and driest multi-year periods.

7.2.1 Type of Years

7.2.1.1 Average Year

The average year is referred to as a typical "normal" year.

7.2.1.2 Single-dry year

The lowest possible water supply available is referred to the single-dry year.

7.2.1.3 Multiple-dry year period

The lowest average water supply available with a minimum of three consecutive years is known as the multi-dry year period.

7.2.2 Agencies with Multiple Sources of Water

Table 7-1: Wholesale: Basis of Water Year Data

Table 7-1 Wholesale: Basis of Water Year Data			
Year Type	Base Year <i>If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 1999-2000, use 2000</i>	Available Supplies if Year Type Repeats	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location
		☒	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available	% of Average Supply ¹
Average Year	2010	300,000	100%
Single-Dry Year ²	1977	225,000	75%
Multiple-Dry Years 1st Year ³	1990	260,300	87%
Multiple-Dry Years 2nd Year ³	1991	267,500	89%
Multiple-Dry Years 3rd Year ³	1992	252,700	84%
1 - Percent of normal year reflects the percent of the District's maximum allocation of 300,000 AF that was available under the 1988 Agreement. 2 - Allocations for Single-Dry Year scenario is hypothetical and based on actual hydrology with the assumption that New Melones Reservoir and 1988 Agreement are in place. 3 - Allocations for Multiple-Dry Year scenarios are based on actual water available.			

7.3 Supply and Demand Assessment

Legal Requirements:

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 total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry 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.

Since the SSJID was established in 1909, supply has always exceeded the current urban surface water demand. The single driest year, 1977, had a supply of 225,000 AF, which is significantly more than the Phase II Allotment of 43,090 AF. The urban and agricultural water demands come from the same source and are treated equally during droughts, with each taking proportionate reductions during a shortage. Tables 7-2 and 7-3 note the agricultural use as the Difference.

As noted in the tables below, the demands will exceed the Phase II Allotment around 2025. Portions of these demands will be met by city groundwater supplies required to make up the difference. See individual retail supplier UWMPs for further details on each city's future supply contingencies.

Table 7-2: Wholesale: Normal Year Supply and Demand Comparison

Table 7-2 Wholesale: Normal Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 (Opt)
Supply totals (from Table 6-9)	300,000	300,000	300,000	300,000	0
Demand totals (from Table 4-3)	34,172	44,334	51,760	55,243	
Difference	265,828	255,666	248,240	244,757	
NOTES: Units of volume in acre-feet. These demands are for projected treated water only and do not include agricultural water. The difference is the volume available after projected urban demands. If both agricultural and treated water demands exceed the total supply, both would be reduced proportionately.					

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Table 7-3: Wholesale: Single Dry Year Supply and Demand Comparison

Table 7-3 Wholesale: Single Dry Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 (Opt)
Supply totals	225,000	225,000	225,000	225,000	225,000
Demand totals	34,172	44,334	51,760	55,243	60,121
Difference	190,828	180,666	173,240	169,757	164,879
NOTES: Units of volume in acre-feet. These demands are for projected treated water only and do not include agricultural water. The difference is the volume available after projected urban demands .If both agricultural and treated water demands exceed the total supply, both would be reduced proportionately.					

Table 7-4: Wholesale: Multiple Dry Years Supply and Demand Comparison

Table 7-4 Wholesale: Multiple Dry Years Supply and Demand Comparison						
		2020	2025	2030	2035	2040 (Opt)
First year	Supply totals	260,000	260,000	260,000	260,000	260,000
	Demand totals	34,172	44,334	51,760	55,243	60,121
	Difference	225,828	215,666	208,240	204,757	199,879
Second year	Supply totals	267,500	267,500	267,500	267,500	267,500
	Demand totals	34,172	44,334	51,760	55,243	60,121
	Difference	233,328	223,166	215,740	212,257	207,379
Third year	Supply totals	252,700	252,700	252,700	252,700	252,700
	Demand totals	34,172	44,334	51,760	55,243	60,121
	Difference	218,528	208,366	200,940	197,457	192,579
NOTES: Units of volume in acre-feet. These demands are for projected treated water only and do not include agricultural water. The difference is the volume available after projected urban demands .If both agricultural and treated water demands exceed the total supply, both would be reduced proportionately.						

We have provided the following additional tables to clarify some supply and demand assessment issues which are not easily explained in the standard UWMP tables. As the volume diverted at New Melones is a

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source for both agricultural and treated water we have provided the additional tables to illustrate that the SSJID has sufficient resources to reasonably deliver contract water to the WTP under a normal year, which occurs the in majority of the years reported between 1894 and 2015. The expected agricultural demands noted in the tables below have been taken from the 2010 UWMP and are only projections. The District expects the agricultural demands to gradually decrease as irrigation practices evolve in the future as can be seen from the projected agricultural demands decrease in the future. Some reductions to both agricultural and WTP supplies could occur on dry and multiple dry year scenarios.

Table 7-5: Normal Year: Phase 1 Allotment

Normal Year: Phase 1 Allotment				
Description	2020	2025	2030	2035
Supply Total	300,000	300,000	300,000	300,000
Contracted Urban Demand Phase 1 Allotment	31,552	31,552	31,552	31,552
Projected Agricultural Demand	274,100	271,800	269,500	267,200
Total Demand	305,652	303,352	301,052	298,752
Difference	-5,652	-3,352	-1,052	1,248
Urban Supply Reduction	583	349	110	0
Urban Supply	30,969	31,203	31,442	31,522
Note: Agricultural demands are only projections and subject to change.				

Table 7-6: Normal Year: Phase 1 Allotment

Multiple Dry Year: Phase 1 Allotment				
Description	2020	2025	2030	2035
Supply Total	260,200	260,200	260,200	260,200
Contracted Urban Demand Phase 1 Allotment	31,552	31,552	31,552	31,552
Projected Agricultural Demand	274,100	271,800	269,500	267,200
Total Demand	305,652	303,352	301,052	298,752
Difference	-45,452	-43,152	-40,852	-38,552
Urban Supply Reduction	4,692	4,488	4,282	4,072
Urban Supply	26,860	27,064	27,270	27,480
Note: Agricultural demands are only projections and subject to change.				

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Table 7-7: Normal Year: Phase 1 Allotment

Dry Year: Phase 1 Allotment				
Description	2020	2025	2030	2035
Supply Total	225,000	225,000	225,000	225,000
Contracted Urban Demand Phase 1 Allotment	31,552	31,552	31,552	31,552
Projected Agricultural Demand	274,100	271,800	269,500	267,200
Total Demand	305,652	303,352	301,052	298,752
Difference	-80,652	-78,352	-76,052	-73,752
Urban Supply Reduction	8,326	8,149	7,971	7,789
Urban Supply	23,226	23,403	23,581	23,763
Note: Agricultural demands are only projections and subject to change.				

7.4 Regional Supply Reliability

Legal Requirements

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.

This section discusses the reliability of treated water supplies and their vulnerability due to droughts, water quality impacts, and natural and man-made disasters.

The reliability of SCWSP water is determined by many factors including water quality, Stanislaus River hydrology, equipment performance, regulatory actions, and natural and manmade disasters. Following are discussions on these topics as well as The Safety and Emergency Response Plan for the SCWSP, which addresses many of these issues.

Safety and Emergency Response Plan

SSJID has a Safety and Emergency Response Plan for the SCWSP. A copy of the Safety and Emergency Response Plan is included in Appendix B. The plan was last updated in 2010 and remains in force. The primary objectives of the plan 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 plan includes emergency response procedures for the following situations:

- Ammonia tank leaks
- Damage-causing earthquakes
- External power failure
- In-plant power failure
- Fire
- Flooding
- Chemical spills
- Major equipment failures

- Intrusion by unauthorized visitors

The plan also includes an Emergency Response Notification Plan and sample consumer alerts for unsafe water and water outages/shortages.

Water Quality

Surface water used at SCWSP is supplied from the Stanislaus River, which generally has high quality and low total dissolved solids (TDS) loads. Reservoir storage on the Stanislaus River also helps reduce suspended solids. However, during flood events and times of elevated flows, TDS and suspended solid levels can increase. The Nick C. DeGroot WTP provides several levels of treatment for the raw water supply. The resulting treated water is considered to be of excellent quality.

In 2011, the Stanislaus/Calaveras River Group completed a sanitary survey update for the upper portion of the Stanislaus River Watershed. The purpose of the sanitary survey was to identify potential sources of contamination and identify remedial measures. Several potential sources of contamination were identified, including recreational activities at Woodward Reservoir, confined animal facilities, cattle grazing, old septic systems, and wastewater disposal. Source control measures for these problems have been on-going to help preserve good water quality. These programs have been successful, and, with continued implementation, the source control measures should maintain the existing quality of the Stanislaus River. If the quality begins to degrade, the watershed management program will be re-evaluated and/or SSJID will evaluate whether modifications to water treatment processes are necessary.

Climatic/Hydrologic Fluctuations

The reliability of SSJID's urban water supply was evaluated using historical hydrology on the Stanislaus River, water rights agreements with the USBR, and recent data on agricultural water demands and system losses in SSJID. The methodology used in the analysis is described below:

- 1) Determine representative historical years with Normal, Single-Dry and Multiple-Dry Year conditions using data on Stanislaus River hydrology (Appendix C)
- 2) Determine long-term water supply reliability based on Stanislaus River hydrology (Appendix C), as modified by the 1988 Agreement.

Step 1: Determine Representative Historical Years for Normal, Single-Dry and Multiple-Dry Years

Representative years for Normal, Single-dry and Multiple-Dry years were determined using data on Stanislaus River hydrology found in Appendix C. Appendix C shows inflow to New Melones Reservoir and the volume of water available to SSJID from 1894 to 2010. The results in Appendix C are based on a simulation from 1894 to 1987 assuming that the 1988 Agreement was in place, but includes real hydrologic data from 1988 to 2010. The analysis in Appendix C also assumes that SSJID has sufficient 'conserved water' stored in New Melones available to provide a minimum of 225,000 AF/year for delivery in any given year. The representative years and their available water supply are shown in Table 7.5.

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Table 7-8: SSJID Surface Water Supplies in Normal, Single-Dry and Multiple-Dry Years

Hydrologic Year Type	Representative Year(s)	Water Supply (AF/yr)
Single-Dry	1977	225,000
Multiple-Dry	1990-1992	260,200 (3-yr avg.)
Normal	2010	300,000

The results in Table 7.5 for 1977 assume the 1988 Agreement is in effect. The hydrology for the Stanislaus River in 1977 was actually 129,300 acre-feet, the lowest water supply of any of the 115 years of historical data. (See Appendix C). The multiple-dry years, 1990-1992, represent a three year period of drought, but none of the years were, individually, as dry as 1977. The normal year, 2010, had a full water allocation under the 1988 Agreement (300,000 AF).

Step 2: Determine Long-Term Water Supply Reliability

The reliability of Stanislaus River diversions was determined by sorting flows into New Melones Reservoir from 1894-2010 (see Appendix C). Figure 7-1 graphically illustrates the reliability of Stanislaus River supplies.

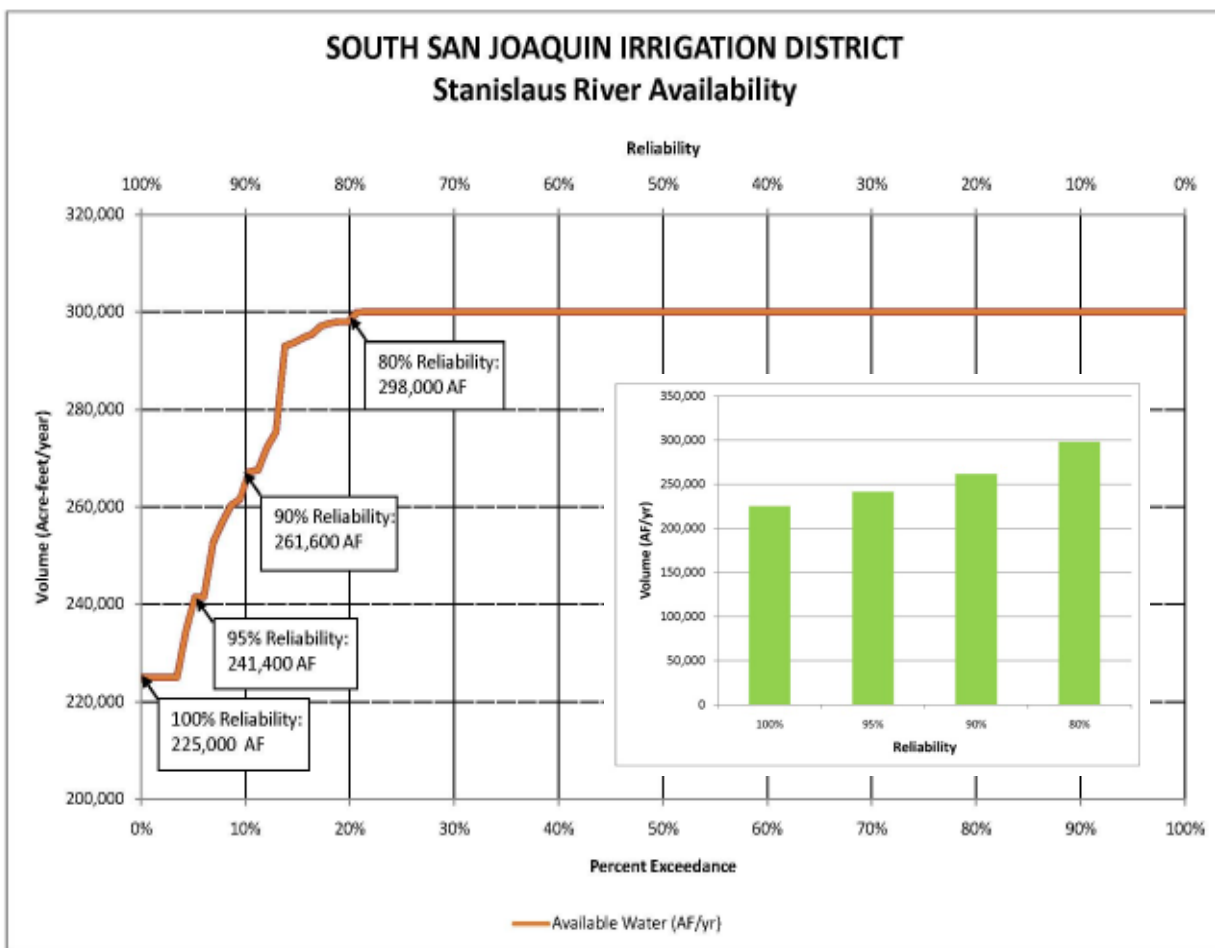


Figure 7-1: Water Supply Reliability

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Reliabilities were also assigned to each hydrologic year type. The Single-Dry Year water supply of 225,000 AF has a 100% reliability. In other words, this water supply is the smallest amount that can be expected, and can be relied on 100% of the time, based on the data in Appendix C. The Multiple-Dry Year water supply has a 92% reliability, and the Normal Year water supply has a 79% reliability.

Natural and Man-made Disasters

A variety of natural and man-made disasters could impact the SCWSP's ability to store, treat or deliver water to the Cities. These could include flooding, fire, earthquakes, power outages, vandalism and/or acts of terrorism. These are covered in SCWSP's Safety and Emergency Response Plan.

Future Regulatory Reductions

Future water rights and water reliability could be adversely impacted by the actions of regulatory bodies. The State Water Resources Control Board has proposed to implement future water quality control plans by reducing the water that can be diverted by water rights holders. Furthermore, action by the Regional Water Quality Control Board to remedy impaired water bodies by imposing Total Maximum Daily Loads (TMDLs) could also affect SSJID.

Lastly, water reliability is complicated by the absence of a long-term operating plan that would provide certainty that the USBR will continue to meet the terms of the 1988 Agreement in its operation of New Melones reservoir. The absence of a plan is best illustrated by consideration of the potential effects of the Endangered Species Act. The National Marine Fisheries Service (NMFS) issued a Biological Opinion in June 2009, which, among other provisions, affects the operation of New Melones reservoir. The Biological Opinion provides flow-related reasonable and prudent alternatives (RPA's) for the Stanislaus River that would be met by releases from New Melones Reservoir. Among the flow-related RPA's are actions that would require the USBR to release water from New Melones to achieve specified water temperatures, to meet a year-round minimum flow schedule, dependent on hydrologic year type, and to inundate the floodplain on a one-to-three year schedule.

NMFS staff ran a computer model to determine the feasibility of the flow-related RPA's in which NMFS staff reduced the deliveries to OID and SSJID. NMFS staff determined that the USBR would reduce deliveries of water to OID and SSJID by an average of 13,000 AF per year, with the average reduction in critically dry years averaging approximately 50,000 AF. However, the Districts' modeling found that the impacts could be much larger in dry years.

The Biological Opinion literally applies only to the USBR, and not to OID and SSJID. The USBR has no authority to deprive the Districts of water to which they are entitled and the USBR has assured the Districts that it will honor the 1988 Agreement. However, without a long-term operating plan, the Districts have no long-term certainty. The Biological Opinion has been challenged by OID and SSJID in U.S. District Court (Fresno division; Case No. 1:09-cv-1053 OWW-DLB).

8 Water Shortage Contingency Planning

Legal Requirements

CWC 10620 (a)

The plan shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier.

SSJID has developed several contingency plans to provide treated water to the Cities through the SCWSP in the case of a water shortage, including:

1. **Voluntary Reductions.** If water shortages are likely or eminent, SSJID would first ask the Cities and irrigation customers to make voluntary reductions in water use. This could free up some water for cities that have a more critical need.
2. **Inter-City Transfers.** According to their Water Supply Development Agreement with SSJID, each city can transfer a portion or all of their water allotment to one of the other cities without SSJID approval. Inter-city transfers have already taken place between Escalon and Tracy, (although they are not driven by water shortages but rather Escalon's lack of infrastructure to accept the treated water). Such transfers can help to redistribute water to Cities with the greatest need.
3. **Private Well Leasing.** SSJID has leased private wells during droughts to supplement surface water supplies. While intended to meet agricultural water demands, this practice could also help to minimize reductions to urban water users.
4. **Agricultural Water Conservation.** During a drought, SSJID encourages farmers to expand their water conservation efforts by extending the length of irrigation runs, imposing time restrictions on irrigation, lowering the level of its off-stream storage reservoir and pumping more ground water. In addition, SSJID has recently 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 by agreement with the District after previously having not been irrigated or irrigated solely with groundwater.
5. **Additional Groundwater Pumping.** 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.

All of these 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.

If treated water demands cannot be met without reducing agricultural demand, SSJID would reduce irrigation deliveries by implementing these contingency plans, and ration water to the Cities using the same reduction percentage as would be applied to its agricultural customers. This policy is included in the Water Supply Development Agreements between SSJID and each city.

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

8.1 Stages of Action

Legal Requirements:

CWC 10632 (a)(1)

Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage.

As noted in the previous section, SSJID does not have a formal hierarchy for stages of action. Table 8-1 notes a possible order of action.

Table 8-1: Wholesale: Stages of Water Shortage Contingency Plan

Table 8-1 Wholesale Stages of Water Shortage Contingency Plan		
Stage	Complete Both	
	Supply Reduction ¹	Water Supply Condition (Narrative description)
1 (Voluntary)	15%	Available flow is 10% to 15% less than estimated demand.
2 (Voluntary)	30%	Available flow is 15% to 30% less than estimated demand.
3 (Voluntary)	50%	Available flow is 30% to 50% less than estimated demand.
¹ One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.		
NOTES:		

8.2 Prohibitions on End Users

Legal Requirements:

CWC 10632 (a)(4)

Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.

CWC 10632 (a)(5)

Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.

SSJID is a wholesale agency. Prohibitions on end users are required for retail agencies only.

8.3 Penalties, Charges, Other Enforcement of Prohibitions

Legal Requirements:

CWC 10632 (a)(2)

Penalties or charges for excessive use, where applicable.

SSJID is a wholesale agency. Penalties, charges, other enforcement of prohibitions are required for retail agencies only.

8.4 Consumption Reduction Methods

Legal Requirements:

CWC 10632 (a)(5)

Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.

SSJID has developed several contingency plans to provide treated water for urban use to the Cities and its agricultural users through the SCWSP in the case of a water shortage, include voluntary reductions, inter-city transfers, private well leasing, agricultural water conservation and additional groundwater pumping. 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 to the Cities. If water shortages are likely or eminent, SSJID would first ask the Cities and irrigation customers to make voluntary reductions in water use. This could free up some water for cities that have a more critical need. Furthermore, according to the Water Supply Development Agreements, each city can transfer a portion or all of their water allotment to one of the other cities without SSJID approval. Inter-city transfers have already taken place between Escalon and Tracy, although those transfers have not been driven by water shortages but rather Escalon's lack of infrastructure to accept the treated water. Such transfers can help to redistribute water to Cities with the greatest need.

SSJID has leased private wells during droughts to supplement surface water supplies. While intended to meet agricultural water demands, this practice could also help to minimize reductions to urban water users. During droughts, SSJID encourages farmers to expand their water conservation efforts by

extending the length of irrigation runs, imposing time restrictions on irrigation, lowering the level of its off-stream storage reservoir and pumping more ground water. In addition, SSJID established a second tier of agricultural land which is the first to become subject to water restrictions 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 by agreement with the District after previously having not been irrigated or irrigated solely with groundwater. Some farmers own private wells, and it is likely that they would increase groundwater pumping during droughts. This could help avert crop losses and reduces immediate demands for surface water.

If treated water demands cannot be met without reducing agricultural demand, SSJID would reduce irrigation deliveries by implementing these contingency plans, and ration water to the Cities using the same reduction percentage as would be applied to its agricultural customers. This policy is included in the Water Supply Development Agreements between SSJID and each city.

In 2015, the Stanislaus River watershed entered its fourth consecutive year of drought conditions. In March of 2015, the Board of Directors (Board) declared a water emergency, and began to re-evaluate and adopted a drought conservation program. In order to meet its 225,000 AF water supply, the SSJID Board adopted the 36-inch/acre water application limit on all parcels, with an additional 10-day rotation schedule. The District's "Policy to Discourage Unlawful Use of District Water" was approved in 2014. It provides for a written warning for the first violation, losses of one irrigation for the second violation and loss of irrigation for the remainder of the season thereafter. In 2015, the policy was changed to allow the District to remove or disable third violation in all types of years.

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

8.4.1 Categories of Consumption Reduction Methods

Irrigation customers will be cut off after they use their 36 inch/acre allotment, per the new policy. It is the responsibility of the users to know how much of the allotment has been used at any time with District resources for assistance. SSJID uses online billing, and this service provides consumption history, with information being three days old. Bills will reflect not only AF usage, but the inches applied.

8.5 Determining Water Shortage Reductions

Legal Requirements:

CWC 10632 (a)(9)

A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

A proposed method for determining actual restrictions is as follows.

Under normal water supply conditions, potable water production figures are recorded daily. During a Stage 1 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 2 or Stage 3 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.

Similar restrictions will be applied to diversions by each city. For example, if production is curtailed 20 percent by SSJID, then each city would be required to reduce its diversion of SCWSP water by that same 20 percent. Weekly, daily and/or hourly reporting of diversions, as discussed above, by the cities to the District would be required to maintain accountability.

8.6 Revenue and Expenditure Impacts

Legal Requirements:

CWC 10632 (a)(7)

An analysis of the impacts of each of the actions and conditions described in paragraphs (1) to (6), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.

SSJID bills the Cities 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 Cities, so variable costs are billed to the Cities on a volumetric basis. Fixed costs do not vary with volume and are fully billed to the Cities regardless of the volume of water treated and delivered. Total fixed costs are allocated among the Cities 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 Cities 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 affected by severe drought conditions.

8.6.1 Drought Rate Structures and Surcharges

SSJID is a wholesale agency. Drought rate structures and surcharges are required for retail agencies only.

8.6.2 Use of Financial Reserves

Section 8.6 explains why SSJID's net cash flow is not affected by variances in flows received by the cities. Because this is the case, changes in flows due to water shortage would not require use of SSJID's financial reserves.

8.6.3 Other Measures

Conservation pricing provides economic incentives to customers to use water efficiently and was implemented in 2005. Conservation pricing can include volumetric billing, seasonal pricing, tiered pricing, and special pricing during droughts. Conservation pricing is more effective at the local level when performed by the retail water agencies. In addition, during droughts, if revenues are reduced due to lower water sales, SSJID may consider raising unit water rates to remain financially viable and encourage conservation.

There is no effective way for SSJID to monitor the effectiveness of the conservation pricing because SSJID does not directly monitor the water use. The effectiveness of any special drought rates would have to be monitored by the Cities. The Cities would need to pass on the higher costs to their customers for the drought rates to be effective. The impact of special drought rates would depend on the amount of the increase, and if the increase is passed on to customers.

8.7 Resolution or Ordinance

Legal Requirements:

CWC 10632 (a)(8)

A draft water shortage contingency resolution or ordinance.

SSJID is a public wholesale water supplier under contract to the cities of Manteca, Tracy, Lathrop, Escalon and Ripon. All of the cities except Ripon are under contract with the District to receive water from the District's Nick C. DeGroot Water Treatment Plant. The District's contract with each of the four cities contains a provision for water supply reductions in dry years. Escalon does not currently receive drinking water from the District. Ripon's water supply from the District is for raw water and is not treated for drinking. The District's supply of water to each city supplements each city's other water supplies and it is each city's responsibility to allocate its available water supplies among its retail customers.

8.8 Catastrophic Supply Interruption

Legal Requirements:

CWC 10632 (a)(3)

Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.

SSJID has a Safety and Emergency Response Plan (Appendix B) for the SCWSP and addresses many emergency scenarios including catastrophic supply interruptions. The plan was last updated in 2010. The primary objectives of the plan 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 plan includes emergency response procedures for the following situations:

- Ammonia tank leaks
- Damage-causing earthquakes
- External power failure
- In-plant power failure
- Fire
- Flooding
- Chemical spills
- Major equipment failures
- Intrusion by unauthorized visitors

The plan also includes an Emergency Response Notification Plan and sample consumer alerts for unsafe water and water outages/shortages.

8.9 Minimum Supply Next Three Years

Legal Requirements:

CWC 10632 (a)(2)

An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.

Table 8-4 below, illustrates the three years with the least amount of flow available to SSJID at the New Melones Dam. Numbers shown are combined agricultural and municipal supplies.

Table 8-2: Wholesale: Minimum Supply Next Three Years

Table 8-4 Wholesale: Minimum Supply Next Three Years			
	2016	2017	2018
Available Water Supply	260,237	267,532	252,670
NOTES:Based upon available supply for years 1989,90 & 91.			

9 Demand Management Measures

9.1 Demand Management Measures for Wholesale Agencies

Legal Requirements:

CWC 10631 (f)

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

(1) (A) ...The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.

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

(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 a water supplier implements to conserve water and to meet its reduction targets. SSJID is a wholesale agency and is only required to address their own DMMs.

The following sub-sections address DMMs required for a wholesale water supplier. This section does not discuss DMMs implemented by the cities. Please refer to the Cities' individual UWMPs for detailed information on their water conservation programs.

9.1.1 Metering

SSJID meters the total water deliveries to the Cities of Tracy, Manteca and Lathrop. This metering is performed for billing purposes and to track allotments. All three accounts have their water deliveries metered with high-accuracy electromagnetic meters. The Cities are billed for water on a volumetric basis derived from meter readings. Future connections to the Cities of Ripon and Escalon will also be metered. Meter readings are recorded by SSJID staff and the meters are calibrated twice each year.

Meters readings are evaluated monthly by SSJID staff. Water deliveries into the pipeline system are compared 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.

9.1.2 Public education and outreach

SSJID implements a Wholesale Agency Program directed at schools in the District. The District provides education on water-sources; multiple uses of water for power generation, recreation, drinking and irrigation; water safety, in particular, 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 Cities to prepare educational brochures for the Cities' water customers on the subject of water conservation.

SSJID updates their website frequently and has posted Emergency Drought Bulletins since March 2015. The District website has tools to calculate water usage as well as articles responding to water shortages within the region.

9.1.3 Water conservation program coordination and staffing support

SSJID has an overall district water conservation coordinator and several full-time staff who each devote part of their time to these efforts. Conservation staffing support began in 2005; the current Conservation Coordinator is Julie Vrieling. A Water Conservation Coordinator (WCC) is defined as an individual responsible for program management, tracking, planning, and reporting on DMM implementation. Specific responsibilities of the SCWSP Water Conservation Coordinator include reading flowmeters, evaluating system losses, communicating with the retail agencies regarding future programs, assisting with school education programs, and providing tours of SCWSP facilities. Most of the conservation efforts focus on agricultural water. Other District personnel involved in conservation efforts spend the remainder of their time on water treatment plant operations. Evaluating the effectiveness of the WCC's efforts is difficult and cannot be accurately equated to specific water savings. SSJID considers the WCC's efforts to be valuable and worthwhile.

9.1.4 Other demand management measures

Other demand management measures, if any, are all captured in other sections of this plan.

9.1.5 Asset management

The distribution System Asset Management had repaired a leak in the past 5 years from the reservoir to the water treatment plant. Leaks are monitored by monitoring inflows versus outflows. The distribution system is fairly new and has little leakage issues. The water delivered to the Cities is actually larger than the water leaving the treatment plant. Thus, the data does not show distribution system losses, rather it increases by approximately 2 percent. AWWA Water Audit software was used to calculate system losses. A copy of this spreadsheet is presented in Appendix D.

9.1.6 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.

The Cities are geographically spread out, and implementing some water management programs from a central location may not be effective. Each city operates their water system individually, and has established their own water management and water conservation programs over the past several decades;

and SSJID's obligation to supply water to the Cities is fixed by contract. Implementing a larger Wholesale Agency Program would require financial assistance from each city and an interest in a more centralized water management program. Currently, the Cities 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.

SSJID has most recently constructed solar panels at their treatment facility. Due to their solar panels, the power costs for water treatment are 15 percent lower than normal; those costs savings are then passed down to the Cities.

9.2 California Urban Water Conservation Council

Legal Requirement

CWC 10631 (i)

For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of subdivision (f) by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum.

SSJID is not a member of the Urban Water Conservation Council.

10 Plan Adoption, Submittal, and Implementation

10.1 Notice to Cities and Counties

Legal Requirement

CWC 10621 (b)

Every urban water supplier required to prepare a plan shall... at least 60 days prior to the public hearing on the plan ... notify any city or county within which the supplier provides waters supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.

CWC 10642

...The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area...

10.1.1.1 60 Day Notification

SSJID has posted notice in the Manteca Bulletin on April 29, May 13, May 27, and June 10, 2016. See Appendix A.

10.1.1.2 Notice of Public Hearing

The water supplier shall provide notice of the time and place of the public hearing to any city or county within which the supplier provides water. This applies to both public and private water suppliers.

SSJID has provided written notice to the Cities and County. See Appendix A.

Section Ten: Plan Adoption, Submittal, and Implementation

2015 Urban Water Management Plan

Table 10-1: Wholesale: Notification to Cities and Counties

Table 10-1 Wholesale: Notification to Cities and Counties (select one)		
☐	Supplier has notified more than 10 cities or counties in accordance with CWC 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 location of this list in the UWMP.	
☒	Supplier has notified 10 or fewer cities or counties. Complete the table below.	
City Name	60 Day Notice	Notice of Public Hearing
City of Escalon	☒	☒
City of Lathrop	☒	☒
City of Manteca	☒	☒
City of Ripon	☒	☒
City of Tracy	☒	☒
County Name	60 Day Notice	Notice of Public Hearing
San Joaquin County	☒	☒
NOTES:		

10.2 Notice to the Public

Legal Requirement

CWC 10642

...Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection...Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code...

Government Code 6066

Publication of notice pursuant to this section shall be once a week for two successive weeks. Two publications in a newspaper published once a week or oftener, with at least five days intervening between the respective publication dates not counting such publication dates, are sufficient. The period of notice commences upon the first day of publication and terminates at the end of the fourteenth day, including therein the first day.

10.2.1 Public Hearing and Adoption

Legal Requirement

CWC 10642

...Prior to adopting a plan, the urban water supplier shall hold a public hearing thereon.

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.

10.3 Adoption

Legal Requirement

CWC 10642

...After the hearing, the plan shall be adopted as prepared or as modified after the hearing.

Water agencies shall include the adoption resolution in the UWMP. This may be included as an attachment to the UWMP or as a web address indicating where the adoption resolution can be found online. A copy of the meeting minutes approving the UWMP is included in Appendix E.

10.4 Plan Submittal

Legal Requirement

CWC 10621 (d)

An urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.

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.

CWC 10635 (b)

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.

Once the UWMP has been adopted, a copy of the UWMP and amendments will be submitted to DWR, the State Library and necessary counties/cities who receive water from SSJID.

10.4.1 Submitting a UWMP to DWR

This plan will be submitted to DWR within 30 days of adoption. Submittal will be made electronically through WUE data, an online submittal tool that will be available in adequate time for UWMP submittal.

10.4.2 Submitting a UWMP to the California State Library

No later than 30 days after adoption, SSJID will submit a CD or hardcopy of the adopted

2015 UWMP to the California State Library.

10.4.3 Submitting a UWMP to Cities and Counties

This UWMP was subsequently adopted by the SSJID Board of Directors on June 28, 2016. A copy of the meeting minutes approving the UWMP is included as Appendix E.

Within 30 days of adoption, a copy of the final UWMP will be sent to cities that receive or are planning to receive water from the SCWSP. These cities include Escalon, Lathrop, Tracy, Manteca and Ripon.

10.5 Public Availability

Legal Requirement

CWC 10645

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.

The adopted plan will be made available for public review on the SSJID website and during normal business hours at the SSJID offices within 30 days after adoption.

11 Completed 2015 UWMP Checklist

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location (Optional Column for Agency Use)
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	Page 4
10620(d)(2)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	Section 2.5.2	Page 8
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.	Plan Preparation	Section 2.5.2	Page 8
10631(a)	Describe the water supplier service area.	System Description	Section 3.1	Pages 10-13
10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.3	Page 14
10631(a)	Provide population projections for 2020, 2025, 2030, and 2035.	System Description	Section 3.4	Page 15
10631(a)	Describe other demographic factors affecting the supplier's water management planning.	System Description	Section 3.4	Page 15
10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Sections 3.4 and 5.4	Page 15 NA
10631(e)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Section 4.2	Pages 17-20
10631(e)(3)(A)	Report the distribution system water loss for the most recent 12-month period available.	System Water Use	Section 4.3	Page 20
10631.1(a)	Include projected water use needed for lower	System Water	Section 4.5	NA

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2015 Urban Water Management Plan

	income housing projected in the service area of the supplier.	Use		
10608.20(b)	Retail suppliers shall adopt a 2020 water use target using one of four methods.	Baselines and Targets	Section 5.7 and App C	NA
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	Chapter 5 and App C	NA
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	Section 5.7.2	NA
10608.24(a)	Retail suppliers shall meet their interim target by December 31, 2015.	Baselines and Targets	Section 5.8 and App C	NA
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	Section 5.8.2	NA
10608.36	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	Section 5.1	NA
10608.40	Retail suppliers shall report on their progress in meeting their water use targets. The data shall be reported using a standardized form.	Baselines and Targets	Section 5.8 and App C	NA
10631(b)	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, 2030, and 2035.	System Supplies	Chapter 6	Page 23
10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.2	NA
10631(b)(1)	Indicate whether a groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	Section 6.2.2	NA
10631(b)(2)	Describe the groundwater basin.	System Supplies	Section 6.2.1	NA
10631(b)(2)	Indicate if the basin has been adjudicated and include a copy of the court order or decree	System Supplies	Section 6.2.2	NA

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	and a description of the amount of water the supplier has the legal right to pump.			
10631(b)(2)	For unadjudicated basins, indicate whether or not the department has identified the basin as overdrafted, or projected to become overdrafted. Describe efforts by the supplier to eliminate the long-term overdraft condition.	System Supplies	Section 6.2.3	NA
10631(b)(3)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	System Supplies	Section 6.2.4	NA
10631(b)(4)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	Sections 6.2 and 6.9	NA Page 29
10631(d)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System Supplies	Section 6.7	Page 29
10631(g)	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 multiple-dry years.	System Supplies	Section 6.8	Page 29
10631(h)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.6	Page 24-28
10631(j)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) – if any - with water use projections from that source.	System Supplies	Section 2.5.1	NA
10631(j)	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 2.5.1	Pages 7-8
10633	For wastewater and recycled water, coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.1	NA
10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area. Include quantification of the amount of	System Supplies (Recycled Water)	Section 6.5.2	NA

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2015 Urban Water Management Plan

	wastewater collected and treated and the methods of wastewater disposal.			
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 6.5.2.2	NA
10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.3 and 6.5.4	NA
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 6.5.4	NA
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 6.5.4	NA
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 6.5.5	NA
10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.5	NA
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 7.4	Pages 38-41
10631(c)(1)	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage.	Water Supply Reliability Assessment	Section 7.2	Pages 33-34
10631(c)(1)	Provide data for an average water year, a single dry water year, and multiple dry water years	Water Supply Reliability Assessment	Section 7.2	Pages 33-34
10631(c)(2)	For any water source that may not be available at a consistent level of use, describe plans to supplement or replace that source.	Water Supply Reliability Assessment	Section 7.1	Page 33
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	Page 33

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2015 Urban Water Management Plan

10635(a)	Assess the water supply reliability during normal, dry, and multiple dry 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 7.3	Pages 35-38
10632(a) and 10632(a)(1)	Provide an urban water shortage contingency analysis that specifies stages of action and an outline of specific water supply conditions at each stage.	Water Shortage Contingency Planning	Section 8.1	Page 43
10632(a)(2)	Provide an estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency.	Water Shortage Contingency Planning	Section 8.9	Pages 47-48
10632(a)(3)	Identify actions to be undertaken by the urban water supplier in case of a catastrophic interruption of water supplies.	Water Shortage Contingency Planning	Section 8.8	Page 47
10632(a)(4)	Identify mandatory prohibitions against specific water use practices during water shortages.	Water Shortage Contingency Planning	Section 8.2	Page 44
10632(a)(5)	Specify consumption reduction methods in the most restrictive stages.	Water Shortage Contingency Planning	Section 8.4	Pages 44-45
10632(a)(6)	Indicated penalties or charges for excessive use, where applicable.	Water Shortage Contingency Planning	Section 8.3	Page 44
10632(a)(7)	Provide an analysis of the impacts of each of the actions and conditions in the water shortage contingency analysis on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts.	Water Shortage Contingency Planning	Section 8.6	Page 46-47
10632(a)(8)	Provide a draft water shortage contingency resolution or ordinance.	Water Shortage Contingency Planning	Section 8.7	Page 47
10632(a)(9)	Indicate a mechanism for determining actual reductions in water use pursuant to the water shortage contingency analysis.	Water Shortage Contingency Planning	Section 8.5	Pages 45-46
10631(f)(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	Sections 9.2 and 9.3	Page 51
10631(f)(2)	Wholesale suppliers shall describe specific	Demand	Sections 9.1	Pages 49-51

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2015 Urban Water Management Plan

	demand management measures listed in code, their distribution system asset management program, and supplier assistance program.	Management Measures	and 9.3	NA
10631(i)	CUWCC members may submit their 2013-2014 CUWCC BMP annual reports in lieu of, or in addition to, describing the DMM implementation in their UWMPs. This option is only allowable if the supplier has been found to be in full compliance with the CUWCC MOU.	Demand Management Measures	Section 9.5	NA, SSJID is not a CUWCC Member
10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets.	Plan Adoption, Submittal, and Implementation	Section 10.3	Pages 54
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.	Plan Adoption, Submittal, and Implementation	Section 10.2.1	Page 53-54
10621(d)	Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.	Plan Adoption, Submittal, and Implementation	Sections 10.3.1 and 10.4	Pages 54
10635(b)	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 60 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Section 10.4.4	Page 54-55
10642	Provide supporting documentation that the urban water supplier made the plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan.	Plan Adoption, Submittal, and Implementation	Sections 10.2.2, 10.3, and 10.5	Pages 53-55
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	Sections 10.2.1	Page 53-54
10642	Provide supporting documentation that the plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Section 10.3.1	Page 54
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 10.4.3	Page 55
10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this	Plan Adoption, Submittal, and	Section 10.4.4	Page 55

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2015 Urban Water Management Plan

	UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Implementation		
10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Sections 10.4.1 and 10.4.2	Page 54-55
10645	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	Page 55

12 Bibliography/References

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16. Stanislaus/Calaveras River Group and Stockton East Water District, *Stanislaus River Watershed Sanitary Survey*, May 2011.

APPENDIX A
Public Outreach

April 29, 2016

Tammy Alcantor
c/o City of Escalon
1854 Main St.
Escalon, CA 95320

**RE: Notice of Intent to Update the 2010 South San Joaquin Irrigation District
Urban Water Management Plan**

Dear Ms. Alcantor:

On behalf of the South San Joaquin Irrigation District (SSJID), we would like to formally notify you that SSJID plans to update their 2010 Urban Water Management Plan (UWMP) to comply with the 2015 guidelines published by the Department of Water Resources.

SSJID as a wholesaler has been coordinating with you as an agency that purchases their water in order to gather pertinent information over the past few months. Thank you for your cooperation.

We anticipate that the 2015 UWMP will be available for public review in May 2015 and will notify you accordingly when a draft version is available for comments. In the meantime, if you have any questions, comments, or would like to discuss the content of the UWMP then please feel free to call me at (209) 809-2300.

Best Regards,



Chuck Armstrong
Principal Engineer
Provost & Pritchard Consulting Group

CA/db

cc: South San Joaquin Irrigation District

April 29, 2016

Greg Gibson
City of Lathrop
390 Towne Centre Dr.
Lathrop, CA 95330

**RE: Notice of Intent to Update the 2010 South San Joaquin Irrigation District
Urban Water Management Plan**

Dear Mr. Gibson:

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Principal Engineer
Provost & Pritchard Consulting Group

CA/db

cc: South San Joaquin Irrigation District

April 29, 2016

Mark Houghton
City of Manteca
1001 W. Center Street
Manteca, CA 95337

**RE: Notice of Intent to Update the 2010 South San Joaquin Irrigation District
Urban Water Management Plan**

Dear Mr. Houghton:

On behalf of the South San Joaquin Irrigation District (SSJID), we would like to formally notify you that SSJID plans to update their 2010 Urban Water Management Plan (UWMP) to comply with the 2015 guidelines published by the Department of Water Resources.

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Principal Engineer
Provost & Pritchard Consulting Group

CA/db

cc: South San Joaquin Irrigation District

April 29, 2016

Kevin Werner
c/o City of Ripon
259 N. Wilma Ave.
Ripon, CA 95366

**RE: Notice of Intent to Update the 2010 South San Joaquin Irrigation District
Urban Water Management Plan**

Dear Mr. Werner:

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Principal Engineer
Provost & Pritchard Consulting Group

CA/db

cc: South San Joaquin Irrigation District

April 29, 2016

Dave Carter
c/o City of Tracy
520 Tracy Blvd.
Tracy, CA 95376

**RE: Notice of Intent to Update the 2010 South San Joaquin Irrigation District
Urban Water Management Plan**

Dear Mr. Carter:

On behalf of the South San Joaquin Irrigation District (SSJID), we would like to formally notify you that SSJID plans to update their 2010 Urban Water Management Plan (UWMP) to comply with the 2015 guidelines published by the Department of Water Resources.

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Best Regards,



Chuck Armstrong
Principal Engineer
Provost & Pritchard Consulting Group

CA/db

cc: South San Joaquin Irrigation District

May 27, 2016

Tammy Alcantor
c/o City of Escalon
1854 Main St.
Escalon, CA 95320

**RE: Notice of Intent to Update the 2010 South San Joaquin Irrigation District
Urban Water Management Plan**

Dear Ms. Alcantor:

On behalf of the South San Joaquin Irrigation District (SSJID), we would like to formally notify you that SSJID plans to update their 2010 Urban Water Management Plan (UWMP) to comply with the 2015 guidelines published by the Department of Water Resources.

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Copies of the plan will be posted on the District's web page within the next two weeks.

Best Regards,



Chuck Armstrong
Principal Engineer
Provost & Pritchard Consulting Group

CA/db

cc: South San Joaquin Irrigation District

May 27, 2016

Greg Gibson
c/o City of Lathrop
390 Towne Centre Dr.
Lathrop, CA 95330

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Chuck Armstrong
Principal Engineer
Provost & Pritchard Consulting Group

CA/db

cc: South San Joaquin Irrigation District

May 27, 2016

Mark Houghton
c/o City of Manteca
1001 W. Center Street
Manteca, CA 95337

**RE: Notice of Intent to Update the 2010 South San Joaquin Irrigation District
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Dear Mr. Houghton:

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Chuck Armstrong
Principal Engineer
Provost & Pritchard Consulting Group

CA/db

cc: South San Joaquin Irrigation District

May 27, 2016

Kevin Werner
c/o City of Ripon
259 N. Wilma Ave.
Ripon, CA 95366

**RE: Notice of Intent to Update the 2010 South San Joaquin Irrigation District
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Chuck Armstrong
Principal Engineer
Provost & Pritchard Consulting Group

CA/db

cc: South San Joaquin Irrigation District

May 27, 2016

Kris Balaji, Director of Public Works
c/o San Joaquin County
1810 East Hazelton Avenue
Stockton, CA 95205

**RE: Notice of Intent to Update the 2010 South San Joaquin Irrigation District
Urban Water Management Plan**

Dear Mr. Balaji:

On behalf of the South San Joaquin Irrigation District (SSJID), we would like to formally notify you that SSJID plans to update their 2010 Urban Water Management Plan (UWMP) to comply with the 2015 guidelines published by the Department of Water Resources.

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Chuck Armstrong
Principal Engineer
Provost & Pritchard Consulting Group

CA/db

cc: South San Joaquin Irrigation District

May 27, 2016

Dave Carter
c/o City of Tracy
520 Tracy Blvd.
Tracy, CA 95376

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Urban Water Management Plan**

Dear Mr. Carter:

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Principal Engineer
Provost & Pritchard Consulting Group

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cc: South San Joaquin Irrigation District

**SOUTH SAN JOAQUIN
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NOTICE OF PUBLIC
HEARING ON
DRAFT URBAN WATER
MANAGEMENT PLAN
2015 UPDATE**

NOTICE IS HEREBY GIVEN

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Peter M. Rietkerk
General Manager
Publication Date:
June 10, 2016

MB#04-103



MANTECA BULLETIN

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SOUTH SAN JOAQUIN IRRIGATION

Classified Insertion Order

MB#04-101/SSJID Notice of Public Hearing on Draft Urban Water mgmt plan 2015 update

Contact:	Sales Rep:	MB - Liz Mora	Order Date:	4/28/2016
Address:	Phone:	209-249-4600	Order Number:	62057
SOUTH SAN JOAQUIN IRRIGATION P.O. BOX 747 RIPON, CA 95366	Fax:	209-249-4640	Tear Sheets:	1
			Advertiser No:	182

Start Date	End Date	No. of Runs	No. of Publications	Description	Classification	Ad Size	Price
5/13/2016	5/13/2016	3	3	MB#04-101/SSJID Notice of Public Hearing on Draft Urban Water mgmt plan 2015 update	Miscellaneous Legals	6.8396 Inches	\$57.68

Publications: MB - Manteca Bulletin, MB - Manteca Bulletin Online, MNC - Marketplace 209

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Run Count:	3	Publication Count:	3	SubTotal:	\$57.68
				Total Price:	\$57.68

Authorization To Run Advertisement

Printed Name

Signature

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Peter M. Rietkerk
General Manager
Publication Date:
April 29, 2016
MB#04-100

Marketplace 209

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Ad title: PUBLIC NOTICE

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SOUTH SAN JOAQUIN IRRIGATION

Classified Insertion Order

MB#04-102/SSJID Notice of Public Hearing on Daft Urban Water Mgmt Plan 2015 update

Contact:	Sales Rep:	MB - Liz Mora	Order Date:	4/28/2016
Address:	Phone:	209-249-4600	Order Number:	62059
SOUTH SAN JOAQUIN IRRIGATION P.O. BOX 747 RIPON, CA 95366	Fax:	209-249-4640	Tear Sheets:	1
			Advertiser No:	182

Start Date	End Date	No. of Runs	No. of Publications	Description	Classification	Ad Size	Price
5/27/2016	5/27/2016	3	3	MB#04-102/SSJID Notice of Public Hearing on Daft Urban Water Mgmt Plan 2015 update	Miscellaneous Legals	6.8396 Inches	\$57.68

Publications: MB - Manteca Bulletin, MB - Manteca Bulletin Online, MNC - Marketplace 209

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Run Count:	3	Publication Count:	3	SubTotal:	\$57.68
				Total Price:	\$57.68

Authorization To Run Advertisement

Printed Name

Signature

**SOUTH SAN JOAQUIN
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DRAFT URBAN WATER
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Peter M. Rietkerk
General Manager
Publication Date:
May 13, 2016
MB#04-101



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SOUTH SAN JOAQUIN IRRIGATION

Classified Insertion Order

MB#04-103/SSJID Notice of Public Hearing on draft Urban water Mgmt plan 2015 update

Contact:	Sales Rep:	MB - Liz Mora	Order Date:	4/28/2016
Address:	Phone:	209-249-4600	Order Number:	62060
SOUTH SAN JOAQUIN IRRIGATION P.O. BOX 747 RIPON, CA 95366	Fax:	209-249-4640	Tear Sheets:	1
			Advertiser No:	182

Start Date	End Date	No. of Runs	No. of Publications	Description	Classification	Ad Size	Price
6/10/2016	6/10/2016	3	3	MB#04-103/SSJID Notice of Public Hearing on draft Urban water Mgmt plan 2015 update	Miscellaneous Legals	6.7375 Inches	\$57.68

Publications: MB - Manteca Bulletin, MB - Manteca Bulletin Online, MNC - Marketplace 209

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Peter M. Rietkerk
General Manager
Publication Date:
May 27, 2016
MB#04-102

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for Sunday's event! (Timeline Photos)

APR 28



PUBLIC NOTICE
SOUTH SAN JOAQUIN IRRIGATION
P.O. BOX 747
RIPON, CA 95366

MB#04-101

State of California
County of San Joaquin

2015.5 C.C.P.

of the said County, being duly sworn, deposes and says:

I am a citizen of the United States and a resident of the County aforesaid, I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of the printer of the Manteca Bulletin, a newspaper of general circulation, printed and published Daily in the City of Manteca, California, County of San Joaquin, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court, Department 4, of the County of San Joaquin, State of California, under the date of May 12th 1952, Case Number 52904; that the notice, of which the annexed is printed copy (set in type not smaller than non-pareil), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

MAY 13,

All in the Year **2016**

I certify (or Declare), under penalty of perjury that the foregoing is true and correct.

Dated at Manteca, California, this day of:

May 13, 2016

Date

Liz Mora

Signature

MANTECA BULLETIN

DENNIS WYATT - Editor
P.O. Box 1958
531 East Yosemite Ave.
Manteca, California 95336-0912
Phone (209) 249-3500
Fax (209) 249-3551

AFFIDAVIT OF PUBLICATION

**SOUTH SAN JOAQUIN
IRRIGATION DISTRICT
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General Manager
Publication Date:
May 13, 2016
MB#04-101

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PUBLIC NOTICE

Details:

Description:

SOUTH SAN JOAQUIN IRRIGATION DISTRICT NOTICE OF PUBLIC HEARING ON DRAFT URBAN WATER MANAGEMENT PLAN 2015 UPDATE NOTICE IS HEREBY GIVEN that at 9:00am on June 28, 2016, at 11011 E. Highway 120, Manteca, CA, a public hearing will be held for public comment on the Draft South San Joaquin Irrigation District Urban Water Management Plan 2015 Update. South San Joaquin Irrigation District is updating its 2010 Urban Water Management Plan (UWMP) in compliance with California Department of Water Resources standards for wholesale water agencies which requires UWMPs be updated every five years. The primary purpose of the plan is to serve as a long-range planning document and estimate urban water demands and supplies over a 20-year planning horizon. The plan exclusively covers urban water delivered, or planned to be delivered, to the Cities of Manteca, Tracy, Lathrop, Escalon and Ripon. The plan will also allow SSJID to be eligible for certain State grants, loans, and special drought assistance. Landowners within the District boundaries and nearby Cities and other interested parties are invited to attend. Opportunity for public questions and input will be provided. Copies of the Draft plan can be provided on request beginning May 27, 2016. Peter M. Rietkerk General Manager Publication Date: May 27, 2016 MB#04-102

Ad title: PUBLIC NOTICE

APPENDIX B

Safety and Emergency Response Plan

SSJID WATER TREATMENT PLANT Emergency/Disaster Response Plan

California public water systems that serve less than 1,000 service connections (or population less than 3,300).

APPENDIX

Emergency/Disaster Response Plan

Boil Water Order (Emergency Situation)

Unsafe Water Alert – Do Not Drink

Unsafe Water Alert – Do Not Use

General Emergency Preparedness

Emergency Response to Specific Situations

Emergency Notification Plan (ENP)

Note: Copies of the above documents, including Spanish language version and one-liner translations for non-English speakers, can be obtained at: <http://www.waterboards.ca.gov>

EMERGENCY/DISASTER RESPONSE PLAN

Water System Name: South San Joaquin Irrigation District – Nick C. DeGroot WTP

Water System ID No: 5010040

Number of Service Connections: 5

Population Served: 176,265 (per census bureau 2013 estimate)

To continue minimum service levels and mitigate the public health risks from drinking water contamination that may occur during a disaster or other emergency events and in order to provide reliable water service and minimize public health risks from unsafe drinking water during those events, the South San Joaquin Irrigation District, Nick C. DeGroot Water Treatment Plant proposes the following plan that defines how it will respond to emergencies and/or disasters that are likely to affect its operation.

Disasters/emergencies that are likely to occur in the water system's service area that are addressed are: earthquake, major fire emergencies, water outages due to loss of power, localized flooding, water contamination, and acts of sabotage.

- 1) **DESIGNATED RESPONSIBLE PERSONNEL:** For designated responsible personnel and chain of command, see the attached "Emergency Notification Plan".
- 2) **INVENTORY OF RESOURCES:** An inventory of system resources that are used for normal operations and available for emergencies; includes maps and schematic diagrams of the water system, lists of emergency equipment, equipment suppliers, and emergency contract agreements that are kept at the water system office.
- 3) **EMERGENCY OPERATIONS CENTER:** The water system office has been designated as the communication network emergency operations center. Emergency contact information for equipment suppliers is attached. The telephone and FAX will be the primary mode of communication in an emergency.

Agency	Address, City	Phone #	FAX #
Water System (Primary Site)	5855 Dodds Road Oakdale, CA 95366	209-844-1500	209-844-1514
Water System (Alternate Site)	11011 E. Hwy 120 Manteca, CA 95336	209-249-4600	209-249-4640
Fire Department	Stanislaus Consolidated	911	
Law Enforcement	Stan County Sheriff	911	

In addition, should digital telephone communication be lost, the water system has a landline emergency analog phone located in the control room – phone number is **209-848-1901** to provide emergency communications with emergency response agencies.

- 4) **OTHER AGENCY COORDINATION:** Coordination procedures with governmental agencies for health and safety protection; technical, legal, and financial assistance, and public notification procedures are continually being developed and updated through regulation and experience and will be added as necessary to this plan. (See Emergency Notification Plan.)
- 5) **RESPONSE PROCEDURES:** Personnel will, as quickly as possible, determine the status of other employees, assess damage to water system facilities, provide logistics for emergency repairs, monitor progress of repairs and restoration efforts, communicate with health officials and water users according to the "Emergency Notification Plan" on file with the State Water Resources Control Board (SWRCB) or Local Primacy Agency (LPA)), and document damage and repairs. A copy of the approved "Emergency Notification Plan"(ENP).
- 6) **PUBLIC NOTIFICATION PROCEDURES:** See attached

A BWO, UWA or Do Not Drink Notice can be issued by one, or a combination of the following agencies:

- SWRCB – Division of Drinking Water (DDW)-(Designated personnel-District Engineer, Regional Engineer or Branch Chief).
- Local County Health Department or local Environmental Health Agency (Designated personnel-County Health Officer or Director of Environmental Health Department for small water systems under county jurisdiction).
- Affected Water System (Designated personnel-responsible person in charge of the affected water system, i.e., Manager, Owner, Operator etc. The water systems ERP should identify the designated personnel in their ERP).

All public notifications (BWO, UWA or Do Not Drink Notices) should be coordinated with the SWRCB District Engineer, County Environmental Health Department and the County Health Officer prior to issuing a public notice. However, any one of the three agencies can act in an emergency to immediately issue a BWO or UWA, if delays would jeopardize public health and safety. The SWRCB District Engineer or the water system must notify the County Health Department and the County Health Officer prior to or immediately after issuing a public notice. Notice must be given directly to a person, and a message left on voicemail or answering machine is not sufficient to meet this requirement. Details of the person responsible for completing this notification and the method that will be utilized is contained in the ERP, and is attached to this plan.

The following standard public notices are provided in the Appendix of this report:

Consumer Alert During Water Outages or Periods of Low Pressure – If a water system is experiencing power outages, water outages or low pressure problems, a consumer alert may be issued to the public. The notice provides

consumers information on conserving water and how to treat the water with household bleach if the water quality is questionable.

Boil Water Order (BWO) – A BWO should be issued when minimum bacteriological water quality standards cannot be reasonably assured. To assure public health protection a BWO should be issued as soon as it is concluded by the designated personnel that the water supply is or may be biologically unsafe. Examples of these situations include:

1. Biological contamination of water supply system, including but not limited to:
 - Positive total or fecal coliform bacteriological samples;
 - Prolonged water outages in areas of ruptured sewer and/or water mains;
 - Failed septic tank systems in close proximity to ruptured water mains;
 - Ruptured water treatment, storage, and/or distribution facilities in areas of known sewage spills
 - Known biological contamination;
 - Cross-connection contamination problems;
 - Illness attributed to water supply.
2. Unusual system characteristics, including but not limited to:
 - Prolonged loss of pressure;
 - Sudden loss of chlorine residual;
 - Severe discoloration and odor;
 - Inability to implement emergency chlorination.
3. Implemented due to treatment inadequacies.

A BWO is not appropriate in response to most types of chemical contamination. A BWO may also be inappropriate in cases where boiling the water may tend to concentrate regulated contaminants that are known to be in the water and that are just below an MCL (e.g. Nitrates or Nitrites that are over 50% of the MCL).

Unsafe Water Alert (UWA)/“Do Not Drink” – In the event a water quality emergency due to known or suspected chemical (non-bacteriological) contamination to a water system a UWA or “Do Not Drink” should be issued. Water should not be used for drinking and cooking, but may be used for sanitation purposes (e.g. toilet flushing, clothes washing, etc.). Examples of these situations include:

1. Known or suspected widespread chemical or hazardous contamination in water supply distribution, including but not limited to:

- Ruptured water distribution system (storage tanks, mains) in area of known chemical spill coupled with loss of pressure;
 - Severe odor and discoloration;
 - Loss of chlorine residual;
 - Inability of existing water treatment process to neutralize chemical contaminants prior to entering the distribution system.
2. Threatened or suspected acts of sabotage confirmed by analytical results, including but not limited to:
 - Suspected contamination triggered by acts of sabotage or vandalism.
 3. Emergency use of an unapproved source to provide a supplemental water supply.

Unsafe Water Alert (UWA)/“Do Not Use” – In the event a known or suspected contamination event to a water system, where the contaminate may be chemical, biological or radiological a UWA or “Do Not Use” should be issued. Water should not be used for drinking, cooking, or sanitation purposes. Examples of these situations include:

1. Known or suspected widespread chemical or hazardous contamination in water supply distribution, including but not limited to
 - Terrorist contamination event.

Cancellation of Public Notification

Once a BWO/UWA is issued, the only agency that can rescind the public notice is the drinking water primacy agency. SWRCB DDW or the LPA will not lift the BWO for a microbial contaminant until two rounds of samples, collected one day apart, for coliform bacteria samples have been analyzed and the results are negative. The two sets of sample results should be faxed to the SWRCB DDW District Office or LPA office for final approval before rescinding the BWO. Special chemical sampling may be required to get approval to rescind an UWA, please contact the SWRCB DDW District Office or LPA to determine what sampling will be required.

7) RESUME NORMAL OPERATIONS: The steps that will be taken to resume normal operations and to prepare and submit reports to appropriate agencies will include identifying the nature of the emergency (e.g., earthquake-causing water outage/leaks, fire or power outage causing water shortage/outage, sabotage resulting in facility destruction or water contamination).

a. Leaks (Result of earthquake, etc.)

- i. Immediately increase system disinfectant residual as a precaution, until normal service is resumed. Determine the locations of leaks and make temporary repairs using clamps and other pipe repair devices that will allow for repairs to be made while system pressure is maintained. If this is not possible, isolate leaks by turning off power or flow, to repair or replace the pipe. Repair or isolate major breaks to allow service to the maximum system population possible.

- ii. Disinfect all repairs as per attached AWWA Standards¹;
- iii. Reestablish normal service.

b. Low pressure or service interruption (Result of earthquake, fire, storm, water source outage, power outage, etc.) – See also section on Leaks, above.

- i. Increase production, if possible, to provide maximum system output.
- ii. Increase disinfectant residual as a precaution against potential contamination.

If any customers have experienced low pressure or a water outage as a result of an earthquake, fire, storm, water source outage, power outage or any other event or failure, immediately contact your SWRCB or the LPA to determine if a Boil Water Order (BWO) must be issued to users. ***Note: Whether issued by the water system or a regulatory agency, the BWO can only be rescinded or lifted by SWRCB or the LPA. Normally the regulatory agency will consider rescinding a BWO after total coliform sampling on two consecutive days show an absence of total and fecal coliform organisms.***

c. Power outage

- i. Place emergency generator on line to provide minimum water pressure to system.
- ii. Increase disinfectant residual as precaution to potential contamination.
- iii. See also water outages, above.

d. Contamination

- i. Immediately, contact SWRCB or LPA in accordance with the Emergency Notification Plan. Follow the directions of SWRCB or the LPA regarding steps to be taken, emergency notification of users, and public notification.
- ii. Identify location and source of contamination.
- iii. If contamination is from system source, isolate or treat source.
- iv. If contamination is an act of sabotage, take appropriate action based on nature of contamination. Immediately contact local law enforcement and your regulatory agency (SWRCB or LPA). Actions should be taken in consultation with the regulatory agency and could include shutting off water until all contaminants are identified.

e. Physical destruction of facility or evidence of tampering (sabotage)

- i. Immediately contact local law enforcement and regulatory agency for consultation.
- ii. Consider the steps necessary to isolate the facilities or portions of the system that may be affected (close valves, turn off pumps, etc.).

¹ Copies of the AWWA C651 Standard for Disinfecting Water Mains or the C652 Standard for Disinfection of Water-storage Facilities, can be purchased by contacting the American Water Works Association, or online at <http://www.awwa.org/>

All emergencies will be documented along with action taken, and kept in the files of the water system office. Acts of sabotage will be reported to the local law enforcement agency.

PLAN I (Medium Community)

During regular working hours **Troylene Vallow, Communications Coordinator** will contact the news media at television station **KCRA (916) 444-7316** to broadcast the necessary warning. The local radio stations will also be contacted. The television and radio personnel are available at all hours. As a follow-up measure, we will also contact the Manteca Bulletin, the Tracy Press and the Record, local newspapers that serve Manteca, Tracy and Lathrop.

The warnings will be issued in both English and Spanish to cover all members of the community. Outlying areas of the water service area (such as) will also be notified by sound truck and/or handbill distributed to their respective areas. Both of these areas are very small and this can be done quite quickly.

A special telephone answering service can also be quickly set up at the utility headquarters (using the regular company numbers) to answer questions that will come in from consumers. Questions are anticipated, especially from the Manteca, Tracy and Lathrop area, because these areas are served by three different water companies. A map will be available to the telephone answering personnel to determine the water company serving the caller.

It is anticipated that the time for notification to the television and radio audiences will be very short. The areas served by handbill and sound truck will also be notified within an hour. For notification to be issued in other than normal hours the same media will be contacted and an announcement will be scheduled for as long as is necessary. A sound truck(s) will be used in the early morning hours to quickly alert the people not listening to their radio or television.

PLAN II (Large Community)

The same plan as implemented in Plan I should be used here with the exceptions noted. All the news media will be contacted in the entire metropolitan area. This includes all television and radio stations and all local and general area newspapers. Maps have been prepared to be distributed to the media to locate the boundaries of the water company. This system is large enough that it may only be necessary to notify some of the water users. This information will be transmitted to the media and an answering service at the water company will respond to consumers' calls. Unless the problems are limited to isolated areas it is unreasonable to assume that contact can be made through sound truck or handbill.

Date:

BOIL WATER NOTICE

BOIL YOUR WATER BEFORE USING

Failure to follow this advisory could result in stomach or intestinal illness.

Due to the recent event [e.g., water outage, power outage, flood, fire, earthquake or other emergency situation], the State Water Resources Control Board in conjunction with the [County Name] County Health Department, and South San Joaquin Irrigation District Water System are advising residents of [City, Town, System] to use boiled tap water or bottled water for drinking and cooking purposes as a safety precaution.

DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST. Bring all water to a boil, ***let it boil for one (1) minute***, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking and food preparation ***until further notice***. Boiling kills bacteria and other organisms in the water. [or This is the preferred method to assure that the water is safe to drink.]

Optional alternative to include for prolonged situations where it fits.

- An alternative method of disinfection for residents that are not able to boil their water is to use fresh, unscented, liquid household bleach. To do so, add 8 drops (or 1/8 teaspoon) of bleach per gallon of clear water or 16 drops (or 1/4 teaspoon) per gallon of cloudy water, mix thoroughly, and allow it to stand for 30 minutes before using. A chlorine-like taste and odor will result from this disinfection procedure and is an indication that adequate disinfection has taken place.
- Water disinfection tablets may also be used by following the manufacturer's instructions.
- **Optional:** Potable water is available at the following locations: [List locations]
Please bring a clean water container (5 gallons maximum capacity).

We will inform you when tests show that water is safe to drink and you no longer need to boil your water. We anticipate resolving the problem within [estimated time frame].

For more information call:

Water Utility contact: Ed Erisman, Plant Manager of Nick C. DeGroot WTP (209) 844-1506
State Water Resources Control Board – Stockton Division of Drinking Water (209) 948-3881.
Local County Health Department: (209) 468-3421.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Date:

UNSAFE WATER ALERT

South San Joaquin Irrigation District water is possibly contaminated with [an unknown substance]

DO NOT DRINK YOUR WATER

Failure to follow this advisory could result in illness.

An unknown substance has been added to the drinking water supplied by the [Water System Name] due to a recent [intrusion; break-in] at [one of the wells; our treatment plant; storage tank; specific facility]. The State Water Resources Control Board, [County Name] County Health Department, and South San Joaquin Irrigation District Water System are advising residents of [City, Town, System] to NOT USE THE TAP WATER FOR DRINKING AND COOKING UNTIL FURTHER NOTICE.

What should I do?

- ***DO NOT DRINK YOUR TAP WATER---USE ONLY BOTTLED WATER.*** Bottled water should be used for all drinking (including baby formula and juice), brushing teeth, washing dishes, making ice and food preparation ***until further notice.***
- ***DO NOT TRY AND TREAT THE WATER YOURSELF.*** Boiling, freezing, filtering, adding chlorine or other disinfectants, or letting water stand will not make the water safe.

OPTIONS

- **Optional:** Potable water is available at the following locations: [List locations]
Please bring a clean water container (5 gallons maximum capacity).

We will inform you when tests show that the water is safe again. We expect to resolve the problem within [estimated time frame].

For more information call:

Water Utility contact: Ed Erisman, Plant Manager of Nick C. DeGroot WTP (209) 844-1506
State Water Resources Control Board – Stockton Division of Drinking Water (209) 948-3881.
Local County Health Department: (209) 468-3421.

This notice is being sent to you by South San Joaquin Irrigation District. California Public Water System ID # 5010040. Date Distributed: [date].

Please share this information with all other people who receive this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand.

Date:

UNSAFE WATER ALERT

South San Joaquin Irrigation District water is possibly contaminated with [an unknown substance]

DO NOT USE YOUR WATER

Failure to follow this advisory could result in illness.

An unknown substance has been added to the drinking water supplied by the [Water System Name] due to a recent [intrusion; break-in] at [one of the wells; our treatment plant; storage tank; specific facility]. The State Water Resources Control Board, [County Name] County Health Department, and South San Joaquin Irrigation District Water System are advising residents of [City, Town, System] to NOT USE THE TAP WATER FOR DRINKING, COOKING, HAND WASHING, OR BATHING UNTIL FURTHER NOTICE.

What should I do?

- ***DO NOT USE YOUR TAP WATER---USE ONLY BOTTLED WATER.*** *Bottled water should be used for all drinking (including baby formula and juice), brushing teeth, washing dishes, making ice, food preparation and bathing **until further notice**.*
- ***DO NOT TRY AND TREAT THE WATER YOURSELF.*** *Boiling, freezing, filtering, adding chlorine or other disinfectants, or letting water stand will not make the water safe.*

OPTIONS

- **Optional:** Potable water is available at the following locations: [List locations]
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For more information call:

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Local County Health Department: (209) 468-3421.

This notice is being sent to you by South San Joaquin Irrigation District. California Public Water System ID # 5010040. Date Distributed: [date].

Please share this information with all other people who receive this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand.



**WATER TREATMENT PLANT
EMERGENCY RESPONSE NOTIFICATION PLAN**

Reporting and Notification:

In the event of a spill, release or threatened release, immediate attempts (by facility personnel, in accordance with MSDS recommendations) shall be made to safely control or stop the spill or release. Following and/or during attempts to control or stop the release, attempts shall also be made to confine the release to a specific area. After these efforts have been completed satisfactorily, estimates of the quantity and effects of the release must be made.

The following information must be given to the responding agency when notifying of a spill:

- ✓ Exact location (where @ 5855 Dodds Rd, Oakdale – or location outside of our facility)
- ✓ Name of person reporting
- ✓ Estimate of quantity of hazardous material involved
- ✓ The potential hazards of the hazardous material involved

The following agencies must be notified for all spills:

Stanislaus Consolidated Fire Protection District*	...	9-1-1
Stanislaus County Office of Emergency Services (OES) *	...	522-3911
San Joaquin County OES*	...	468-3962 – Days 468-4400 – After
Hours		
OES State Warning Center*	...	1-800-852-7550
Stanislaus County Has-Mat Team	...	9-1-1
Stanislaus County Environmental Resources	...	525-6700
National Response Center	...	1-800-424-8202
Chemtrec Emergency Response Info Service	...	1-800-424-9300

*** Releases or threatened releases of hazardous materials must be reported to these agencies.**

The Stanislaus County Hazardous Material Team, which will be coordinate through Oakdale Fire Department direction, will respond and direct the control, containment and clean-up of the release.

Additional Agencies

AMBULANCE: 9-1-1

HOSPITAL:

- Oak Valley
847-3011

STANISLAUS COUNTY:

- Modesto Regional Fire Authority
Emergency Operations Division - Emergency Services Coordinator
572-9596
- Modesto Regional Fire Authority
Modesto Fire Marshall:
571-5878 or 491-5969

STANISLAUS COUNTY:

- Sheriff Department
Emergencies: 9-1-1
Non-Emergency: 552-2468

IRRIGATION DISTRICTS EMERGENCIES:

- MID
526-8222
Tri-Dam
965-3214
OID
988-3750

SAN JOAQUIN COUNTY:

- San Joaquin Community Emergency Response Team (CERT*)
468-3962
- Stockton CERT (Supports City of Stockton only)
937-8097

PG&E: 800-743-5000

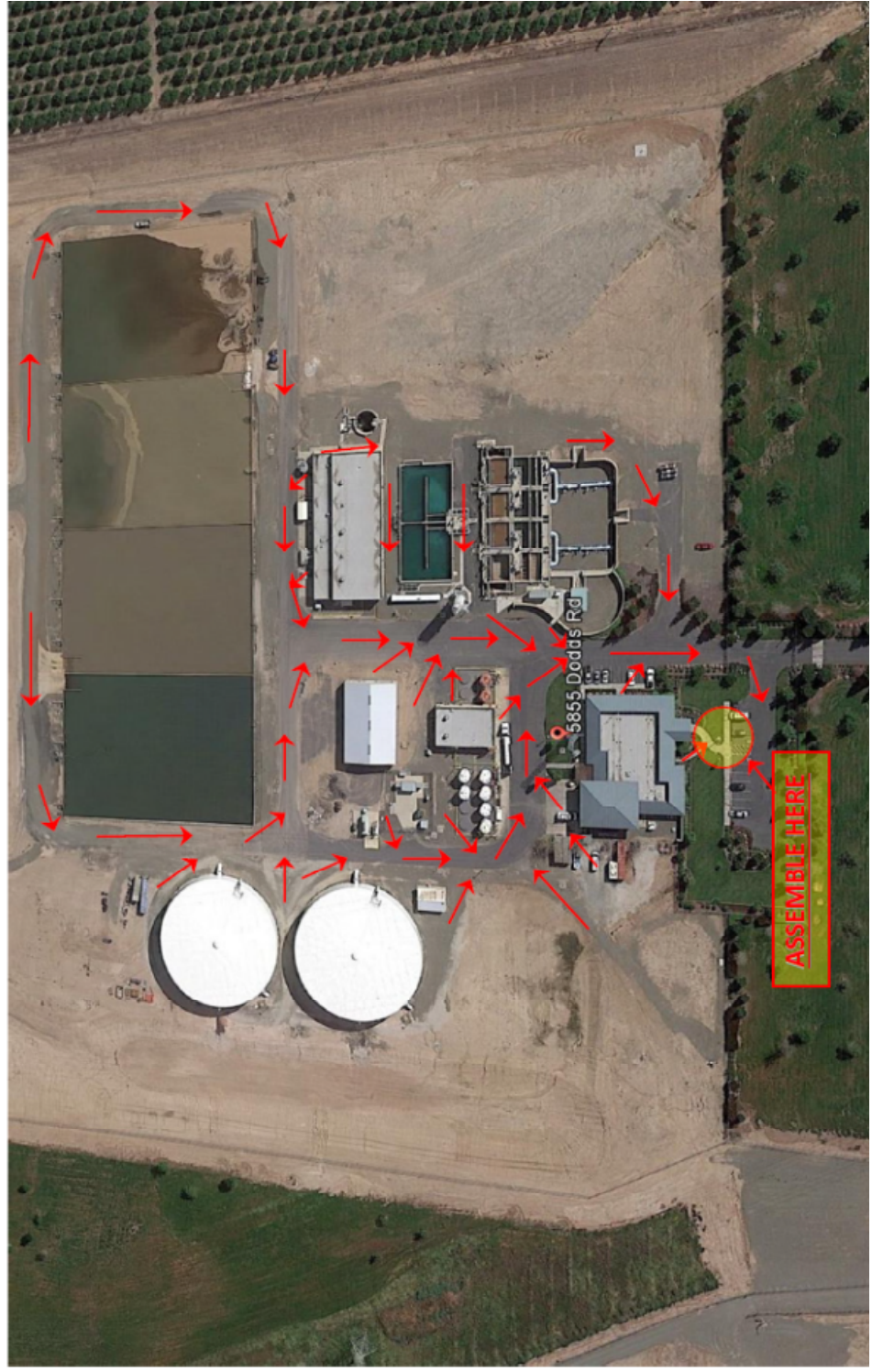
HOMELAND SECURITY:

- National Response Center
800-424-8802

SSJID STAFF TO BE NOTIFIED:

Ed Erisman	Plant Manager	595-1841
Justin Ashworth	Operations Supervisor	652-2823
Charles Galea	Lead Operator	652-7446
Lee Rice	Instrument Control	652-5299
Chris Whittenburg	Instrument Control	652-9573
Peter Rietkerk	General Manager	679-8005

WTP EVACUATION PLAN



SAFETY AND EMERGENCY RESPONSE

Please refer to SSJID's Emergency Response Plan located in the Nick C. DeGroot Water Treatment Plant control room:

- Emergency Response for Treatment System
- General Emergency Preparedness
- Plant Management Responsibilities
- Emergency Response Procedures
- Ammonia System at Tracy
- Earthquakes
- Power Failures
- In-plant Power Outages
- Fire
- Flooding
- Chemical Spills
- Major Equipment Failures
- General Response to Terrorist Threats
- Vulnerability Assessment and Security Color Codes Guidelines
- *WQ Emergency Notification Plan*

Customer Alerts:

- Low Pressure, Boil Water Order, Cancellation of Boil Water Order, Do Not Use Your Water (Unsafe Water Alert) and Do Not Drink Your Water Alert

Misc. Plans: (not included in this binder)

- Injury, Illness, Prevention Plan
- Hazardous Material Business Plans (HMBP)
- Risk Management Plan (RMP) for Tracy's Ammonia System

TREATMENT SYSTEM EMERGENCIES

General Emergency Preparedness

Primary Objectives:

- Protect the public health and welfare
- Avoid and minimize hazards that may occur during natural and man-made disasters

Continual Water Treatment and Delivery:

- Provide the necessary treatment to produce safe, high-quality drinking water
- Deliver the required quantities of treated water

Provide Advisory Communication and Information Distribution:

- With the emergency response contacts
- Compliant with drinking water standards and monitoring requirements
- Variances and exemptions
- Capability of water treatment facilities to produce and deliver treated water at intended design quantity and quality
- Potential problems and conditions which may affect Plant operation and performance
- With the California Water Boards (Tahir Mansoor)
- In accordance to the California Domestic Water Quality and Monitoring Regulations
- With other regulatory agencies
- As designated by county and local ordinances

Advisory Communication Reporting Structure:

- Plant Manager, Ed Erisman, shall report to the SSJID's General Manager
- General Manager, Peter Rietkerk, or designated person is responsible for advisory communication and information distribution to the responsible City official and to the appropriate regulatory agencies

Distribution of Information to Responsible City Officials:

- Copies of Water Quality Monitoring Reports
- Monthly operating reports
- Communications with regulatory agencies
- Variances and exemptions
- Violations of Drinking Water Standards and Monitoring Requirements
- Corrective Action Reports
- Schedules of planned activities which may reduce the Plant's capability to produce and deliver treated water
- Accidents and injuries on Plant pump station sites, or in a Plant vehicle, or incurred as a result of employment at the Water Treatment Plant
- Verbal communication with responsible City officials from Manteca, Tracy, Lathrop and Escalon

- Operational status reports during natural and man-made disasters
- Major equipment or pipeline failures that will result in reduced treated water quality and/or quantity
- Failure to comply with the Primary Drinking Water Standards and Monitoring Requirements

Plant Management Responsibilities:

- Continually update and post emergency assignments for SSJID staff
- Emergency Response Coordinator
- Stand-by (on-call) operating personnel
- Stand-by (on-call) maintenance personnel
- Chemical spill (minor) - clean-up team staff; (major) - Fire Department
- Annual training

Prepare, continually update, and post the emergency phone numbers:

- Law enforcement
- Fire Department
- Ambulance
- Hospital
- Pacific Gas and Electric Company (PG&E)
- Modesto Irrigation District (MID), Tri-Dam, OID
- Customer Cities: Manteca, Tracy, Lathrop, and Escalon
- Call order of emergency response and standby personnel

Keep an inventory listing of the available emergency equipment, tools, and supplies:

- Locations and agencies to survey
- Plant site
- SSJID Corporation Yard
- Tracy/Manteca/Lathrop and Escalon Corporation Yards
- San Joaquin/Stanislaus Counties
- Fire Departments
- Rental Agencies
- Examples of inventory items
- Large portable generators
- Portable engine-driven pumping units
- Portable lighting units
- Portable ventilation blowers
- Excavation and trenching equipment
- Pipe repair equipment and fittings
- Water treatment chemicals and transport capabilities
- Self-contained air packs
- Laboratory sampling equipment

Make cooperative assistance agreements with other departments and agencies
(Other water treatment plants and maintenance departments in the cities of Tracy, Manteca, Escalon, Lathrop and Modesto Irrigation District)

Routinely familiarize local law enforcement agencies and Fire Departments with the WTP facilities:

- Physical layout (Plant site and pump stations)
- Access roads
- Location of hazardous chemicals
- Location of safety equipment and supplies
- Control Center
- Chemicals in storage and the associated hazards.
- Their role in the emergency response plan.

Continually update and post emergency response procedures:

- Ammonia tank leak at the Tracy Pump Station
- Damage-causing earthquakes
- PG&E and / or MID power failures and restoration to normal operation
- In-plant power failures
- Fire
- Flooding
- Chemical spills
- Major equipment failures
- Intrusion by unauthorized visitors

Emergency Response Procedures Ammonia leak at Tracy Booster Station

When a major leak has occurred, or if a small leak is discovered that may become a major leak:

1. District staff member at Booster Station will immediately notify Water Treatment Plant (WTP) staff
2. After discussing the extent and degree of the severity of the situation, plant staff will notify police and fire departments by dialing 9-1-1 (San Joaquin's emergency response team will be requested to respond)
3. Booster station site staff member will instruct all personnel at the site to evacuate from the immediate area (Site evacuation areas will be noted on the business plan map and will be dependent upon the severity and wind direction at the time of the release)
4. District employee will wait for emergency assistance from plant staff and responding agencies at the booster station's entrance gate evacuation area (dependent upon severity of leak and wind direction).
5. Be prepared. If the exposure is likely to exceed the MEL of 25 ppm, proper PPE should be used, including ammonia cartridge masks.

If a neighbor or passer by notices an ammonia leaking cloud, they may call 9-1-1, and fire or police would respond. In this scenario, District staff will also be notified through a cooperative communication agreement with local agencies.

After making phone calls to Police and Fire agencies, all available WTP personnel will assemble to discuss the Tracy's pump station's situation. The team members present will establish a response plan to assist the booster station personnel. These include:

1. Assistance to booster station site for evacuation.
2. Security measures.
3. Information on mitigation for the site.
4. Defining the plant Incident Commander and appropriate communication channel protocol needed with responding agencies and the District's main office.

The San Joaquin County Emergency Response Team will respond to the booster station for leak mitigation and repairs. District operators who are knowledgeable of the site will assist in instructing the team to the location of important possible mitigation steps including isolation valve locations. The following two pages are maps noting important ammonia valve locations. District personnel will have maps listing the location of important valve locations. **Hill Brothers**, the vendor that supplies the ammonia, may be contacted to assist with evacuating the ammonia storage tank if necessary. Their phone number is **(408) 435-1313**.

The Response team actions response will be similar to the following:

If the leak is in the piping or associated apparatus:

1. Close the nearest line valve on the supply side of the leak
2. Close any line valves that will allow the NH_3 to flow from other pipes back to the leak
3. Check that the line valves between the leak and the process are open, exhaust the NH_3 from the pipeline keeping the H_2O pumping process operating
4. After which NH_3 exhausted from line, isolate the leak by closing the appropriate line valves

If the leak is occurring through a broken off tank valve:

1. Isolate area
2. Determine the limit of the danger zone and evacuate if needed
3. If a leak cannot be controlled by the aforementioned procedures, the incident commander (Fire or Police) will contact additional support for emergency assistance

NOTE: Notification requirements OES HazMat Spill/Release Notification Guidance

The reportable quantity that triggers (released or threatened to be released offsite) the report is 100 lb. Sixty-nine gallons of 19% ammonia produce this reportable quantity.

The Plant Manager or Operations Supervisor, or their designee, will function as the District's contact person and will make periodic status reports to the District's General Manager or designated person.

State Water Resources Control Board
Division of Drinking Water

WATER QUALITY EMERGENCY NOTIFICATION PLAN

Name of Utility: SOUTH SAN JOAQUIN IRRIGATION DISTRICT WATER TREATMENT PLANT	System No.: 501-0040
System and Location: Nick C DeGroot Water Treatment Plant 5855 DODDS ROAD, OAKDALE, CA 95361	

The following person(s) have been designated to implement the plan upon notification by the State Department of Health Services that an imminent danger to the health of the water user exists:

Name	Title	Telephone-Day & E-mail Address	Telephone-Night
1. Ed Erisman	Plant Manager	844-1506 erisman@ssjid.com	Home: 492-9217 Cell: 595-1841
2. Justin Ashworth	Operations Supervisor	844-1508 jashworth@ssjid.com	Home: 785-2207 Cell: 652-2823
3. Charles Galea	Lead Operator	844-1505 cgalea@ssjid.com	Home: 681-6687 Cell: 652-7446
4. Peter Rietkerk	General Manager	249-4645 prietkerk@ssjid.com	Home: 599-3220 Cell: 679-8005

STATE HEALTH DEPARTMENT PERSONNEL TO BE NOTIFIED:

Name	Title	Telephone-Day	Telephone-Night
1. Bhupinder Sahota	District Engineer	209-948-3881	209-608-9108
2. David Remick	Sanitary Engineer	209-948-3878	209-523-1503
3. Tahir Mansoor	Sanitary Engineer	209-948-3879	916-714-5383
4. Brian Kidwell	Sanitary Engineer	209-948-3963	209-603-2814

If the above personnel cannot be reached, call: Office of Emergency Services (24 Hrs.) @ (800) 852-7550 or (916) 845-8911. Ask for Division of Drinking Water Duty Officer.

COUNTY HEALTH DEPARTMENT TO BE NOTIFIED:

Name	Title	Telephone-Day	Telephone-Night
1. San Joaquin	Environmental Health	468-3421	468-6000
2. Stanislaus	Environmental Resources	525-6700	9-1-1 Request the Haz-Mat on call

State Water Resources Control Board
Division of Drinking Water

STATE OF CALIFORNIA

California Emergency Management Agency 24 hour emergency: 1-800-852-7550

SAN JOAQUIN COUNTY

San Joaquin County Office of Emergency Services: 468-4400 (24 Hour Emergency #)

This entity should be used for **ALL CITIES** within San Joaquin County in an emergency notification situation, as it responds to water contamination, hazardous spills or any other type of emergency. If required, they would notify KFBK (Sacramento) and KSTN (Stockton) who in turn would notify all TV and radio stations, similar to an Amber Alert.

Daytime non-emergency #'s: OES Duty Officer and Haz-Mat: 953-6200 (8:00 am – 5:00 pm)

STANISLAUS COUNTY

Stanislaus County Office of Emergency Services: 552-3911 or 552-3915 (in-house)

If required, they would notify local radio and television channels also in a way as an Amber Alert.

Stanislaus County Department of Environmental Resources: 525-6700 or 911 (after hours)

DER Haz-Mat responds to water contamination, hazardous spills, and any other type of emergency.

FROM A CELL PHONE: Emergency Medical Treatment @ WTP: Stan County Sheriff - 558-4357

FROM PLANT PHONE: NON-Emergency Medical Treatment @ WTP: Stan County Sheriff - 552-2468

Also used for other non-emergencies.

Stanislaus County Environmental Health Daytime: 525-6770

CITIES OF MANTECA, LATHROP, TRACY

Police / Sheriffs / Emergency Dispatch

Manteca Police Department – Direct Emergency and Non-Emergency Dispatch: 456-8101

Lathrop – Direct Emergency Dispatch – 468-4400

Lathrop - Business Office: 858-5551 (clerical staff only)

Tracy – Direct Emergency Dispatch: 831-4553

Tracy – Non-Emergency Dispatch: 831-4552

NEWSPAPERS:

Modesto Bee: 578-2028

Stockton Record: 943-6568 (fax: 547-8186)

Manteca Bulletin: 249-3500

Tracy Press: 835-3030

Tri-Valley Herald (Tracy): 832-6139, 832-6144 (fax: 832-6141)

State Water Resources Control Board
Division of Drinking Water

City of Lathrop – in call order (all 209 Area Code)

Name	Position	Contact Numbers
Milt Daley	Ops & Maint Superintendent	992-0044 Cell, 941-7430 Ofc
24 Hour On-Call	(employee varies)	992-0028 Cell
Chris Hart	Utility Operator II	992-0019 Cell, 941-7463 Ofc
Tim McCoy	Public Works Director	992-0020 Cell, 941-7499 Ofc
Stephen Salvatore	City Manager	992-0014 Cell, 941-7491 Ofc

City of Manteca – in call order (all 209 Area Code)

Name	Position	Contact Numbers
George Montross / Brian Maruca	(Shared) Water Systems Superintendent	George: 456-8468 Ofc, 456-7389 Cell / Brian: 456-8465 Ofc, 401-0686 Cell
George Montross	Well Treatment Operations Supervisor	456-8468 Ofc, 456-7389 Cell
Well Mechanics (Emergency)	5:00 pm-7:00 am Wknds/Holidays	639-4898 (CALL 1st for production/flow)
Ops (Emergency Stand-by)	5:00 pm-7:00 am Wknds/Holidays	639-4900 (CALL 2nd if Mechanic not avail)
Tom Reichmuth	Well Mechanic (after hour contact)	823-7553 Home 679-0678 Personal Cell
Ed Nicolay	Well Mechanic (after hour contact)	239-8995 Home 612-5491 Personal Cell
John Clymo	Deputy Public Works Director/Utilities	456-8413 Ofc
Greg Showerman	Assistant Public Works Director	456-8415 Ofc
Mark Houghton	Public Works Director	456-8416 Ofc, 456-4661 Cell 536-9231 Home

City of Tracy - in call order (209 Area Code UNLESS NOTED)

Dave Carter	Water Production Superintendent	831-6302 Ofc, 275-7500 Cell 825-1262 Home
Water Production Op's	Sr. Operator's @ Control Room (Nights)	831-6301
William (Bill) Tapia	Facilities Maintenance Superintendent	321-2745 Cell, 831-4480 Office 824-2135 Home
Erich Delmas	Laboratory Supervisor	831-4488 Ofc, 601-7770 Cell 394-3257 Home
Don Scholl	Director, Public Works	831-6360 Ofc 629-7728 Cell
Kuldeep Sharma	Deputy Director, Utilities	831-6320 Ofc, 510-468-2371 Cell 925-560-8386 Home



State Water Resources Control Board
Division of Drinking Water

Notifying the cities should be accomplished within 5 or 10 minutes. The plant is staffed 24/7 so there would always be staff available to initiate the process and additional personnel available by phone to assist as needed.

848-1901 is an additional analog line for the Plant Control Room. It would remain activated during a power outage. (Main Control Room number is 844-1513)

6:00 am to 6:00 pm: minimum of twelve (12) SSJID staff on site to start emergency notification to the cities with additional personnel at the District office available that could assist.

6:00 pm to 6:00 am: minimum of two (2) SSJID staff members on site to start emergency notification to the cities. There would be an additional 8 or 9 people available via cell phone that could assist with notification.

Prepared by:

Signature and Title

Date

Earthquakes Procedures for Staff

1. Protect yourself from injury until the quake has subsided.
2. Shut off plant processes if earthquake is significant and damage indicates to check normal process operations
3. Check chemical systems for leaks, and repair or isolate all leaks as soon as possible.
4. Check all structures, buildings, tanks, etc., for cracks or other structural damage
5. Check all machinery for damage or realignment that could have occurred, especially the mounting of all heavy machinery
6. Check machinery with extended flexible couplings for cracks and broken bolts which could allow the equipment to shift or break loose during normal operation
7. After all equipment, exposed piping, and structures have been visibly checked and appear to be undamaged, restart any equipment that was shut down due to the earthquake, and evaluate its operation
8. Check buried process, compressed air, and utility water piping for evidence of leaks (i.e., air or water jetting, or discharging up through the ground)
9. Plant Manager will make periodic reports of the treatment plant condition and operation to the District's General Manager

Power Failure Procedures for Operations / Maintenance Staff

1. Check the standby generator for proper operation
2. Check that the switchgear has transferred to the emergency power source.
3. Notify PG&E of the power outage and find out how long it will be before the power is restored. (PG&E direct contact # 1-800-468-4743)
4. If the power outage is expected to last beyond one hour, the Plant Manager or designated person will notify the District's General Manager

PG&E Power Restoration for Operations / Maintenance Staff

1. Check that the switchgear has re-transferred to the utility power source
2. Check that the standby generator runs the cool down time interval and automatically shuts down
3. If the Treatment Plant cannot be returned to normal operation, the Plant Manager or designated person will notify the District's General Manager

In-Plant Power Failure Emergency Procedures for Electrical Staff:

Electrical staff will check the following:

1. Check if the feeder breaker for the area or system has tripped open because of an overload or ground fault detection
2. If the feeder breaker tripped open due to overload, reduce the power demand by shutting down the unnecessary loads
3. Open the subsystem circuit breakers in the downstream system
4. Reset and close the feeder breaker
5. Close the subsystem breakers *one at a time*
6. If a ground fault was detected or the breaker trips open again, contact the Plant Manager so necessary arrangements can be made to troubleshoot and repair the problem
(A water treatment plant electrician will do electrical troubleshooting and replacement of fuses exceeding 120 volts)
7. Depending on the equipment and process units without power, readjust the plant operation to maintain the required degree of water treatment and, if possible, the required quantity of treated water
8. The Plant Manager or designated person shall make an operating status report to the District General Manager

Fire Emergency Procedures

1. Shift staff will assess the severity and type (i.e., electrical, chemical, trash, etc.) of fire, and immediately notify the Fire Department (dial 9, 9-1-1 using landline to provide WTP address)
2. All staff/visitors will assemble at flag pole in front parking lot
(Front gates will open in event of a fire alarm)
3. If the fire is electrical in nature, cut the power to the affected area at the appropriate circuit breaker box
4. If safe to do so, hose down nearby structures (a fire cannot start unless kindling temperature is reached)
5. If safe to do so, remove any combustible material (a fire cannot burn without fuel)
6. **Do not enter structures of confined areas that are on fire or contain a fire**
(The danger of smoke inhalation is too great in these types of areas)
7. The Plant Manager or designated person shall make periodic status reports of the plant condition and operation to the District General Manager

Flooding Emergency Procedures

1. Construct temporary dikes using sand bags to protect the structures with electrical switchgear and equipment
2. Install portable pumps to keep the structures as dry as possible
3. If a structure or any area where electrical equipment is located becomes flooded, immediately shut off the power to the structure or that area
(The underground electrical distribution system will not be damaged by high water if properly maintained)
4. Adjust the plant operation to obtain the required degree of water treatment if possible, the required quantity of treated water
5. De-water the flooded structure using a portable pump
6. WTP Electrician will inspect, dry out and, as required, restore the electric motors, motor control equipment, panels, switches, and other electrical devices
7. Return the WTP to normal operation
8. The Plant Manager or designated person shall make periodic reports of the treatment plant condition and operation to the District's General Manager

Chemical Spill Procedures for Operations Staff

1. Chemical Delivery Hours:

- A. Plant Manager requires chemical suppliers to make chemical deliveries between the hours of 7 a.m. to 3 p.m.

2. Delivery Transportation Requirements:

- A. The transport of all hazardous materials is strictly regulated by the U.S. Department of Transportation (DOT). Shipping papers identifying the hazardous materials being shipped must be in the cab of the motor vehicle. These shipping papers contain a UN number which identifies the material being shipped and can be used with the DOT Emergency Response Guidebook to determine the guide number for that material. The guide number sheet provides a description of the response required if a leak or spill occurs during transportation of the chemical.

3. Types of Chemical Spills:

- A. Chemical spills will fall into two categories, minor and major, characterized by the following:
 - B. Minor Chemical Spill
 1. Chemical is known
 2. Does not pose an immediate or potentially significant risk to safety or health, i.e., no fire, explosion or chemical exposure hazard
 3. Does not have the potential to become an emergency
 4. Can be absorbed, neutralized, or otherwise controlled and cleaned up by personnel in the immediate area or by Water Treatment Plant (WTP) facility personnel
 - C. Major Chemical Spill
 1. Chemical is unknown
 2. Chemical is highly toxic or reactive
 3. Poses an immediate significant risk to health
 4. Involves a fire hazard outside a fume hood or an explosion risk

5. Involves injury to personnel in the vicinity
6. Response to and clean-up of spill are beyond the expertise and ability of personnel in the immediate area, or WTP personnel, and the equipment and materials for adequately containing and cleaning up the spill are not available

4. Spill Control/Containment and Clean-up Materials/Supplies

- A. WTP areas utilizing chemicals must have access to a spill kit that is appropriate to the chemicals being used, with at least enough containment and clean-up supplies to handle up to the reportable amount spilled (depending on the type of chemical)
- B. Although the contents of most spill kits are common WTP items, spill kits must have these items consolidated into a labeled container for quick access in the event of an emergency
- C. Additionally, each work area utilizing chemicals, especially those with floor drains, will stock spill socks, pillows, pads, and/or enough bulk absorbent to contain the spilled material away from the drain
- D. Spill kits must be located strategically near work areas, making them easily accessible in an emergency

5. Personal Protective Equipment Requirements

- A. Appropriate protective clothing shall be worn when handling chemical solution
Have available and wear as appropriate:
 1. Chemical workers' safety goggles and face shield
 2. Wide brim hardhat
 3. Gloves made of rubber or neoprene
 4. Safety-toe boots made of rubber or neoprene
 5. Suit (jacket and pants) made of neoprene, rubber, or plastic-coated fabric
 6. Trousers should be worn outside shoes, not tucked in
 7. Full-face respirator with appropriate cartridges when handling fuming chemicals such as aqueous ammonia, and when an airborne mist such, as caustic soda and lime are present

6. Minor Chemical Spill Response Procedures

- A. Alert people in the immediate area of spill and evacuate them as necessary
- B. Isolate the area to prevent staff from becoming in contact with the chemical
- C. Put on personal protective equipment (PPE), including safety goggles, chemical resistant gloves, and respirator (if necessary)
- D. Use appropriate spill kit to neutralize, absorb, and contain the spilled chemical
- E. For solid/dry chemical spills, cover the spill with a slightly damp paper towel to avoid creating a cloud of dust and push the material into a dustpan or other collection receptacle using the towel
- F. Sweep material, used absorbents/neutralizing agents, etc. into a plastic dust pan and place into a plastic bucket or bag.
- G. Place all contaminated PPE into plastic bag
- H. Store waste in designated area until waste pick-up is scheduled
- I. Notify management and safety officer of incident
- J. Document spill using an incident report form

7. Major Chemical Spill Response Procedures

- A. Attend to any injured or contaminated persons and remove them from exposure
- B. Alert people in the immediate area to evacuate
- C. Call 911 for potential or actual fire or risk of explosion or if injuries are involved
- D. Provide as much of the following information as is known:
 1. Name and address of the facility

2. Time and type of incident (e.g., spill, fire)
 3. Name and quantity of the chemical(s) involved
 4. Location of the incident on site
 5. Nature and extent of any injuries or damage incurred, if any
 6. Control measures taken
 7. Your name and phone number (or where you will be located) and how you can be identified
 8. Possible hazards to human health, or the environment
- E. Use eyewash or safety showers in other areas as needed to rinse spilled chemicals off people
 - F. If spill material is flammable, turn off ignition and heat sources if that can be done safely
 - G. If a spill has occurred at a truck unloading station, transfer the spill, if possible, into the chemical spill recovery basin with ample water
 - H. If a major leak has occurred within the chemical storage area or in the chemical feed rooms of the chemical building, barricade the access ways and post warning signs
 - I. Wash down the equipment and structure with ample water
(The drain systems from these areas discharge into the chemical spill containment basin. At the chemical spill containment basin, the liquid chemical can be pumped into a tank truck)
 - J. Staff will contact the appropriate party, (i.e., chemical vendor, fire department, etc.)
 - K. An experienced operator shall supervise the chemical treatment and disposal
 - L. The Plant Manager or designated person shall make a status report of the disposal operation to the District General Manager
 - M. If a major spill occurs, Plant staff will call:**
 - 1. Stanislaus Consolidated Fire Protection District, by dialing 9, 9-1-1 from a WTP landline phone, which will automatically provide our physical address**
 - 2. Stanislaus County Office of Emergency Services (OES) at 209-552-3600**
 - N. For additional assistance call the following numbers:
 1. Stanislaus County Haz-Mat Team using 9-1-1
 2. Stanislaus County Environmental Resources at 209-525-6700
 3. National Response Center at 1-800-424-8202

Major Equipment Failures for Operations / Maintenance

The treatment process units have been designed with redundant tanks or basins allowing part of a process to be removed from service without seriously impinging the overall plant performance. In addition, the essential items of plant equipment have been provided with at least one redundant unit to provide 100% backup.

If a major equipment item fails, to place the standby unit in operation:

1. Shut down the malfunctioning item of equipment
2. Start the standby unit
3. Follow WTP "Lock Out Tag Out" procedures to attach a "Lock Out Tag Out" tag to the starter breaker of the failed unit

4. Sign and date the tag, and indicate the reason why the unit is not to be operated
5. Make an entry in the operating log regarding the malfunctioning equipment
6. Inform the in-charge operator
7. Adjust the plant operation to obtain the required degree of treatment, and to provide the required quantity of treated water
8. If the equipment failure prevents proper water treatment or will reduce the treatment plant design capacity, the Plant Manager or designated person shall notify the District General Manager

Response to Terrorist Threats



In 2011, the Department of Homeland Security (DHS) replaced the color-coded alerts of the Homeland Security Advisory System (HSAS) with the National Terrorism Advisory System (NTAS), designed to more effectively communicate information about terrorist threats by providing timely, detailed information to the American public.

NTAS will now consist of two types of advisories: Bulletins and Alerts. DHS has added Bulletins to the advisory system to be able to communicate current developments or general trends regarding threats of terrorism. NTAS Bulletins permit the Secretary to communicate critical terrorism information that, while not necessarily indicative of a specific threat against the United States, can reach homeland security partners or the public quickly, thereby allowing recipients to implement necessary protective measures. Because DHS may issue NTAS Bulletins in circumstances not warranting a more specific warning, NTAS Bulletins provide the Secretary with greater flexibility to provide timely information to stakeholders and members of the public.

As before, when there is specific, credible information about a terrorist threat against the United States, DHS will share an NTAS Alert with the American public when circumstances warrant doing so. The Alert may include specific information, if available, about the nature of the threat, including the geographic region, mode of transportation, or critical infrastructure potentially affected by the threat, as well as steps that individuals and communities can take to protect themselves and help prevent, mitigate or respond to the threat. The Alert may take one of two forms: Elevated, if we have credible threat information, but only general information about timing and target such that it is reasonable to recommend implementation of protective measures to thwart or mitigate against an attack, or Imminent, if we believe the threat is credible, specific, and impending in the very near term.

This Section of the Emergency Response Plan will continue to evolve and address issues concerning terrorist activities and the actions that SSJID staff will respond with in the event of such emergencies.

Important contact information when responding to a potential terrorist threat in our area:

1. Stanislaus County Sheriff Department 9-1-1
2. Stanislaus County Haz-Mat Team using 9-1-1
3. Stanislaus County Environmental Resources at 209-525-6700
4. Stanislaus Office of Emergency Services 209-552-3600
5. National Response Center at 1-800-424-8202

APPENDIX C

Stanislaus River Hydrology

South San Joaquin Irrigation District
New Melones Inflow and Allocation
1894 - 2009

(all units in Acre-feet)

WATER YEAR		NEW MELONES INFLOW	Percent Water Year	AVAILABLE TO DISTRICTS	FORMULA WATER	CONSERVATION ACCOUNT	WATER AVAILABLE TO DISTRICTS	WATER AVAILABLE TO SSJID
1894	1895	1,857,900	162%	600,000	0	0	600,000	300,000
1895	1896	1,236,900	108%	600,000	0	0	600,000	300,000
1896	1897	1,513,300	132%	600,000	0	0	600,000	300,000
1897	1898	484,700	42%	484,700	38,433	0	523,133	261,567
1898	1899	851,400	74%	600,000	0	0	600,000	300,000
1899	1900	1,055,900	92%	600,000	0	0	600,000	300,000
1900	1901	1,639,900	143%	600,000	0	0	600,000	300,000
1901	1902	938,200	82%	600,000	0	0	600,000	300,000
1902	1903	1,096,900	96%	600,000	0	0	600,000	300,000
1903	1904	2,010,000	176%	600,000	0	0	600,000	300,000
1904	1905	844,000	74%	600,000	0	0	600,000	300,000
1905	1906	2,380,000	208%	600,000	0	0	600,000	300,000
1906	1907	2,800,000	245%	600,000	0	0	600,000	300,000
1907	1908	593,000	52%	593,000	2,333	0	595,333	297,667
1908	1909	1,890,000	165%	600,000	0	0	600,000	300,000
1909	1910	1,405,800	123%	600,000	0	0	600,000	300,000
1910	1911	2,356,900	206%	600,000	0	0	600,000	300,000
1911	1912	599,700	52%	599,700	100	0	599,800	299,900
1912	1913	594,000	52%	594,000	2,000	0	596,000	298,000
1913	1914	1,769,400	155%	600,000	0	0	600,000	300,000
1914	1915	1,300,900	114%	600,000	0	0	600,000	300,000
1915	1916	1,668,500	146%	600,000	0	0	600,000	300,000
1916	1917	1,376,900	120%	600,000	0	0	600,000	300,000
1917	1918	827,500	72%	600,000	0	0	600,000	300,000
1918	1919	768,000	67%	600,000	0	0	600,000	300,000
1919	1920	742,600	65%	600,000	0	0	600,000	300,000
1920	1921	1,262,200	110%	600,000	0	0	600,000	300,000
1921	1922	1,430,400	125%	600,000	0	0	600,000	300,000
1922	1923	1,130,200	99%	600,000	0	0	600,000	300,000
1923	1924	261,100	23%	261,100	112,967	75,933	450,000	225,000
1924	1925	1,224,500	107%	600,000	0	0	600,000	300,000
1925	1926	606,500	53%	600,000	0	0	600,000	300,000
1926	1927	1,363,500	119%	600,000	0	0	600,000	300,000
1927	1928	950,000	83%	600,000	0	0	600,000	300,000
1928	1929	516,600	45%	516,600	27,800	0	544,400	272,200
1929	1930	731,700	64%	600,000	0	0	600,000	300,000
1930	1931	315,000	28%	315,000	95,000	40,000	450,000	225,000
1931	1932	1,352,900	118%	600,000	0	0	600,000	300,000
1932	1933	609,400	53%	600,000	0	0	600,000	300,000
1933	1934	424,200	37%	424,200	58,600	0	482,800	241,400
1934	1935	1,213,500	106%	600,000	0	0	600,000	300,000
1935	1936	1,321,900	116%	600,000	0	0	600,000	300,000
1936	1937	1,108,800	97%	600,000	0	0	600,000	300,000
1937	1938	2,044,800	179%	600,000	0	0	600,000	300,000
1938	1939	526,060	46%	526,060	24,647	0	550,707	275,353
1939	1940	1,400,410	122%	600,000	0	0	600,000	300,000
1940	1941	1,338,400	117%	600,000	0	0	600,000	300,000
1941	1942	1,485,400	130%	600,000	0	0	600,000	300,000
1942	1943	1,564,940	137%	600,000	0	0	600,000	300,000
1943	1944	675,810	59%	600,000	0	0	600,000	300,000
1944	1945	1,277,160	112%	600,000	0	0	600,000	300,000
1945	1946	1,178,050	103%	600,000	0	0	600,000	300,000
1946	1947	633,710	55%	600,000	0	0	600,000	300,000
1947	1948	897,710	78%	600,000	0	0	600,000	300,000
1948	1949	745,180	65%	600,000	0	0	600,000	300,000
1949	1950	1,076,120	94%	600,000	0	0	600,000	300,000
1950	1951	1,693,700	148%	600,000	0	0	600,000	300,000
1951	1952	1,919,370	168%	600,000	0	0	600,000	300,000
1952	1953	967,120	85%	600,000	0	0	600,000	300,000
1953	1954	888,390	78%	600,000	0	0	600,000	300,000
1954	1955	680,800	60%	600,000	0	0	600,000	300,000
1955	1956	1,882,700	165%	600,000	0	0	600,000	300,000
1956	1957	894,000	78%	600,000	0	0	600,000	300,000
1957	1958	1,677,510	147%	600,000	0	0	600,000	300,000
1958	1959	584,030	51%	584,030	5,323	0	589,353	294,677

South San Joaquin Irrigation District
New Melones Inflow and Allocation
1894 - 2009

(all units in Acre-feet)

WATER YEAR		NEW MELONES INFLOW	Percent Water Year	AVAILABLE TO DISTRICTS	FORMULA WATER	CONSERVATION ACCOUNT	WATER AVAILABLE TO DISTRICTS	WATER AVAILABLE TO SSJID
1959	1960	593,980	52%	593,980	2,007	0	595,987	297,993
1960	1961	403,760	35%	403,760	65,413	0	469,173	234,587
1961	1962	995,030	87%	600,000	0	0	600,000	300,000
1962	1963	1,267,790	111%	600,000	0	0	600,000	300,000
1963	1964	643,410	56%	600,000	0	0	600,000	300,000
1964	1965	1,701,800	149%	600,000	0	0	600,000	300,000
1965	1966	703,200	61%	600,000	0	0	600,000	300,000
1966	1967	1,925,500	168%	600,000	0	0	600,000	300,000
1967	1968	675,100	59%	600,000	0	0	600,000	300,000
1968	1969	2,117,400	185%	600,000	0	0	600,000	300,000
1969	1970	1,318,100	115%	600,000	0	0	600,000	300,000
1970	1971	1,028,790	90%	600,000	0	0	600,000	300,000
1971	1972	777,100	68%	600,000	0	0	600,000	300,000
1972	1973	1,224,300	107%	600,000	0	0	600,000	300,000
1973	1974	1,455,000	127%	600,000	0	0	600,000	300,000
1974	1975	1,203,500	105%	600,000	0	0	600,000	300,000
1975	1976	470,300	41%	470,300	43,233	0	513,533	256,767
1976	1977	129,300	11%	129,300	156,900	163,800	450,000	225,000
1977	1978	1,361,700	119%	600,000	0	0	600,000	300,000
1978	1979	1,090,800	95%	600,000	0	0	600,000	300,000
1979	1980	1,734,200	152%	600,000	0	0	600,000	300,000
1980	1981	628,600	55%	600,000	0	0	600,000	300,000
1981	1982	2,164,600	189%	600,000	0	0	600,000	300,000
1982	1983	2,747,400	240%	600,000	0	0	600,000	300,000
1983	1984	1,605,300	140%	600,000	0	0	600,000	300,000
1984	1985	714,400	62%	600,000	0	0	600,000	300,000
1985	1986	1,830,400	160%	600,000	0	0	600,000	300,000
1986	1987	424,600	37%	424,600	58,467	0	483,067	241,533
1987	1988	324,326	28%	324,326	91,891	33,783	450,000	225,000
1988	1989	586,303	51%	586,303	4,566	0	590,869	295,434
1989	1990	480,820	42%	480,820	39,727	0	520,547	260,273
1990	1991	502,597	44%	502,597	32,468	0	535,065	267,532
1991	1992	458,010	40%	458,010	47,330	0	505,340	252,670
1992	1993	1,275,510	111%	600,000	0	0	600,000	300,000
1993	1994	501,419	44%	501,419	32,860	0	534,279	267,140
1994	1995	2,160,125	189%	600,000	0	0	600,000	300,000
1995	1996	1,511,885	132%	600,000	0	0	600,000	300,000
1996	1997	1,902,478	166%	600,000	0	0	600,000	300,000
1997	1998	1,875,243	164%	600,000	0	0	600,000	300,000
1998	1999	1,319,496	115%	600,000	0	0	600,000	300,000
1999	2000	1,070,007	94%	600,000	0	0	600,000	300,000
2000	2001	591,273	52%	591,273	2,909	0	594,182	297,091
2001	2002	713,588	62%	600,000	0	0	600,000	300,000
2002	2003	896,986	78%	600,000	0	0	600,000	300,000
2003	2004	668,451	58%	600,000	0	0	600,000	300,000
2004	2005	1,572,588	137%	600,000	0	0	600,000	300,000
2005	2006	2,006,580	175%	600,000	0	0	600,000	300,000
2006	2007	581,049	51%	581,049	6,317	0	587,366	293,683
2007	2008	578,932	51%	578,932	7,023	0	585,955	292,977
2008	2009	746,829	65%	600,000	0	0	600,000	300,000
2009	2010	1,011,301	88%	600,000	0	0	600,000	300,000
Average		1,144,200						

APPENDIX D

Water Audit



Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

WATER SUPPLIED

Master Meter and Supply Error Adjustments

Pcnt:	Value:	
0.00%	☒ ☐	acre-ft/yr
	☒ ☐	acre-ft/yr
	☒ ☐	acre-ft/yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 15.594.000 acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: [?](#)
for help using option
buttons below

Pcnt:	Value:
1.25%	☒ ☐

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

AUTHORIZED CONSUMPTION:	15.499.925	acre-ft/yr
--------------------------------	-------------------	------------

Use buttons to select percentage of water supplied
OR
value

WATER LOSSES (Water Supplied - Authorized Consumption)

Apparent Losses

Unauthorized consumption: + ? 38,985 acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	+	?	8	0.000	acre-ft/yr
Systematic data handling errors:	+	?		39.788	acre-ft/yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: 78.773 acre-ft/yr

Pcnt: Value: acre-ft/yr

0.00%	☒ ☐	acre-ft/yr
0.25%	☒ ☐	acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? 15.303 acre-ft/yr

WATER LOSSES: 94.075 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: ? -321,000 acre-ft/yr

$$= \text{Water Losses} + \text{Unbilled Metered} + \text{Unbilled Unmetered}$$

SYSTEM DATA

Length of mains:	+	?	10	35.0	miles
Number of <u>active AND inactive</u> service connections:	+	?	10	3	
Service connection density:		?		0	conn./mile main

Are customer meters typically located at the curbstops or property line? (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line: ft

Average operating pressure: psi

COST DATA

Total annual cost of operating water system:	+	?	8	\$6,500,000	\$/Year
Customer retail unit cost (applied to Apparent Losses):	+	?	10	\$0.15	\$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	+	?	9		\$/acre-ft ☒ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 87 out of 100 ***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Unauthorized consumption

2: Systematic data handling errors

3: Billed metered



AWWA Free Water Audit Software: System Attributes and Performance Indicators

WAS v5.0

American Water Works Association.
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Water Audit Report for: **South San Joaquin Irrigation District (CA5010040)**

Reporting Year: **2015** **1/2015 - 12/2015**

***** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 87 out of 100 *****

System Attributes:

Apparent Losses: **78.773** acre-ft/yr
+ Real Losses: **15.303** acre-ft/yr
= **Water Losses: 94.075** acre-ft/yr

? Unavoidable Annual Real Losses (UARL): **See limits in definition** acre-ft/yr

Annual cost of Apparent Losses: **\$5,147**

Annual cost of Real Losses: Valued at **Customer Retail Unit Cost**

Return to Reporting Worksheet to change this assumption

Performance Indicators:

Financial:

Non-revenue water as percent by volume of Water Supplied: **-2.1%**

Non-revenue water as percent by cost of operating system: **-0.3%** Real Losses valued at Customer Retail Unit Cost

Operational Efficiency:

Apparent Losses per service connection per day: **23441.19** gallons/connection/day

Real Losses per service connection per day: **N/A** gallons/connection/day

Real Losses per length of main per day*: **390.32** gallons/mile/day

Real Losses per service connection per day per psi pressure: **N/A** gallons/connection/day/psi

From Above, Real Losses = Current Annual Real Losses (CARL): **15.30** acre-feet/year

? Infrastructure Leakage Index (ILI) [CARL/UARL]:

* This performance indicator applies for systems with a low service connection density of less than 32 service connections/mile of pipeline



AWWA Free Water Audit Software: User Comments

WAS v5.0

American Water Works Association.
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Use this worksheet to add comments or notes to explain how an input value was calculated, or to document the sources of the information used.

General Comment:	
Audit Item	Comment
Volume from own sources:	This volume represents the actual volume measured at the WTP for 2015.
Vol. from own sources: Master meter error adjustment:	
Water imported:	
Water imported: master meter error adjustment:	
Water exported:	
Water exported: master meter error adjustment:	
Billed metered:	This volume represents the sum of the three retail customer readings for 2015.
Billed unmetered:	
Unbilled metered:	This represents the difference between the master meter and customer meters. Customer meters are over registering 321 AF per year. The spreadsheet does not have a specific method to evaluate over registering at customer meters.



AWWA Free Water Audit Software: Water Balance

WAS v5.0

American Water Works Association.

Water Audit Report for: South San Joaquin Irrigation District (CA5010040)

Reporting Year: 2015

1/2015 - 12/2015

Data Validity Score: 87

Own Sources (Adjusted for known errors)	System Input	Water Exported	Billed Water Exported				Revenue Water
		0.000					0.000
15,594.000	15,594.000	Water Supplied 15,594.000	Authorized Consumption 15,499.925	Billed Authorized Consumption	Billed Metered Consumption (water exported is removed)	15,915.000	Revenue Water
				15,915.000	Billed Unmetered Consumption	0.000	15,915.000
			Unbilled Authorized Consumption	Unbilled Metered Consumption	Unbilled Metered Consumption	-610.000	Non-Revenue Water (NRW)
				-415.075	Unbilled Unmetered Consumption	194.925	
			Water Losses	Apparent Losses	Unauthorized Consumption	38.985	
					Customer Metering Inaccuracies	0.000	
					Systematic Data Handling Errors	39.788	
				Real Losses	Leakage on Transmission and/or Distribution Mains	Not broken down	
					Leakage and Overflows at Utility's Storage Tanks	Not broken down	
					Leakage on Service Connections	Not broken down	
Water Imported							
0.000							



AWWA Free Water Audit Software: Dashboard

WAS v5.0

American Water Works Association.
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The graphic below is a visual representation of the Water Balance with bar heights proportional to the volume of the audit components

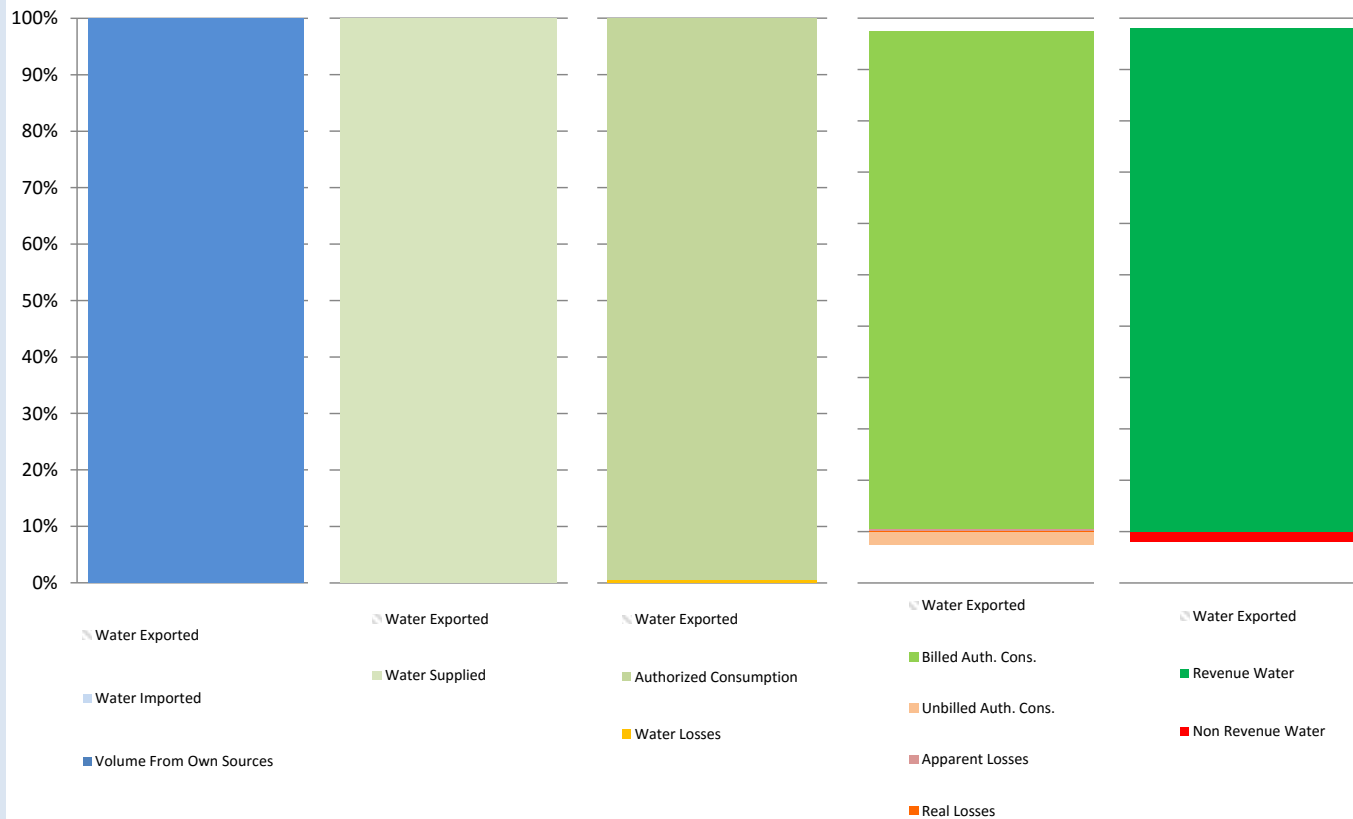
Water Audit Report for: **South San Joaquin Irrigation District (CA5010040)**

Reporting Year: **2015** **1/2015 - 12/2015**

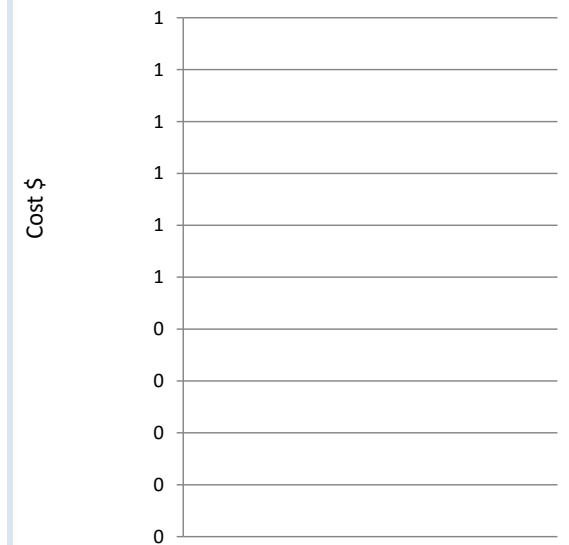
Data Validity Score: **87**

☐ Show me the VOLUME of Non-Revenue Water

☒ Show me the COST of Non-Revenue Water



Total Cost of NRW = \$



- Unbilled metered (valued at Cust.Ret.Unit Cost)
- Unbilled unmetered (valued at Cust.Ret.Unit Cost)
- Unauth. consumption
- Cust. metering inaccuracies
- Syst. data handling errors
- Real Losses (valued at Cust.Ret.Unit Cost)

APPENDIX E

UWMP Adoption Resolution



SOUTH SAN JOAQUIN
IRRIGATION DISTRICT

Certificate of Adoption of
Urban Water Management Plan 2015 Update

I certify that at a duly noticed Special Meeting of the Board of Directors of South San Joaquin Irrigation District held on June 28, 2016 in the Ripon City Council Chambers, the Board of Directors approved the Urban Water Management Plan 2015 Update, dated June 2016 prepared by Provost & Pritchard Consulting Group, on a motion by Director Roos, second by Director Holbrook and adopted with the following vote:

AYES:	HOLBROOK HOLMES KAMPER KUIL ROOS
NOES:	NONE
ABSTAIN:	NONE
ABSENT:	NONE

Dated: July 6, 2016



Peter M. Rietkerk, General Manager /
Secretary Board of Directors

*P.O. Box 747, Ripon, CA 95366-0747 (Mailing)
11011 E. Highway 120, Manteca, CA 95336-9750
(209) 249-4600*

APPENDIX F

UWMP Tables

Table 2-2: Plan Identification			
Select Only One	Type of Plan		Name of RUWMP or Regional Alliance <i>if applicable</i>
☒	Individual UWMP		
	☐	Water Supplier is also a member of a RUWMP	
	☐	Water Supplier is also a member of a Regional Alliance	
☐	Regional Urban Water Management Plan (RUWMP)		
NOTES:			

Table 2-3: Agency Identification	
Type of Agency (select one or both)	
☒	Agency is a wholesaler
☐	Agency is a retailer
Fiscal or Calendar Year (select one)	
☒	UWMP Tables Are in Calendar Years
☐	UWMP Tables Are in Fiscal Years
If Using Fiscal Years Provide Month and Date that the Fiscal Year Begins (mm/dd)	
Units of Measure Used in UWMP (select from Drop down)	
Unit	AF
NOTES:	

Table 2-4 Wholesale: Water Supplier Information Exchange (select one)

☐	Supplier has informed more than 10 other water suppliers of water supplies available in accordance with CWC 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.	
☒	Supplier has informed 10 or fewer other water suppliers of water supplies available in accordance with CWC 10631. Complete the table below.

Water Supplier Name *(Add additional rows as needed)*

City of Escalon

City of Lathrop

City of Manteca

City of Tracy

City of Ripon

NOTES:

Wholesale: Population - Current and Projected

Population Served	2015	2020	2025	2030	2035	2040(opt)
	201,774	243,203	282,037	325,089	371,338	423,594

NOTES: Population data from DOF and retailers.

Table 4-1 Wholesale: Demands for Potable and Raw Water - Actual

Use Type <i>(Add additional rows as needed)</i>	2015 Actual		
	Additional Description <i>(as needed)</i>	Level of Treatment When Delivered	Volume
Sales to other agencies	City of Lathrop	Drinking Water	241
Sales to other agencies	City of Manteca	Drinking Water	5,668
Sales to other agencies	City of Tracy	Drinking Water	10,006
Losses	Master meters at cities are over-registering by approximately 2%	Drinking Water	94
TOTAL			16,009

NOTES: Units of volume in acre-feet
 demands are not a part of this Plan. The 2015 SSJID AWMP covers all agricultural and irrigation water demands. These demands only account for SCWSP water delivered to the cities. Each city also has additional sources of water.

Table 4-2 Wholesale: Demands for Potable and Raw Water - Projected

Use Type	Additional Description (as needed)	Projected Water Use <i>Report To the Extent that Records are Available</i>				
		2020	2025	2030	2035	2040 (opt)
Sales to other agencies	City of Lathrop ¹	6,887	6,887	10,671	10,671	10,671
Sales to other agencies	City of Manteca ¹	11,500	18,500	18,500	18,500	18,500
Sales to other agencies	City of Tracy ²	11,600	13,447	15,589	18,072	20,950
Sales to other agencies	City of Ripon ¹	3,935	5,000	6,000	6,000	6,000
Sales to other agencies	City of Escalon ¹	250	500	1,000	2,000	4,000
TOTAL		34,172	44,334	51,760	55,243	60,121

NOTES: Units of volume in acre-feet

1- Projected volume based upon information provided by City.

2-

Projected volume based upon linear extrapolation of population growth rates.

Table 4-3 Wholesale: Total Water Demands

	2015	2020	2025	2030	2035	2040 (opt)
Potable and Raw Water <i>From Tables 4-1 and 4-2</i>	16,009	34,172	44,334	51,760	55,243	60,121
Recycled Water Demand <i>From Table 6-4</i>	0	0	0	0	0	0
TOTAL WATER DEMAND	16,009	34,172	44,334	51,760	55,243	60,121

NOTES: Units of Measure in acre-feet

Table 4-4 Wholesale: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss*
01/2014	94
* Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.	
NOTES: Master meters at Tracy, Manteca, Ripon and Lathrop are currently over-registering the flows metered at the WTP by approximately 2%. P&P is working with DWR staff to determine the best method to illustrate this condition in the worksheet and will further refine this volume once a final solution has been reached.	

Table 6-3 Wholesale: Wastewater Treatment and Discharge Within Service Area in 2015

☒	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	2015 volumes			
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
Total							0	0	0	0

NOTES: SSJID does not distribute nor provide supplemental treatment to recycled water and therefore is not considered in this UWMP.

Table 6-4 Wholesale: Current and Projected Retailers Provided Recycled Water Within Service Area

☒	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	2015	2020	2025	2030	2035	2040 (opt)
Total		0	0	0	0	0	0
NOTES: Wastewater is not processed at the WTP, recycled water occurs at the local City level.							

Table 6-5 Wholesale: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual

☐	Recycled water was not used or distributed by the supplier in 2010, nor projected for use or distribution in 2015. The wholesale supplier will not complete the table below.	
Name of Receiving Supplier or Direct Use by Wholesaler	2010 Projection for 2015	2015 actual use
Total	0	0
NOTES:		

Table 6-7 Wholesale: Expected Future Water Supply Projects or Programs

☒	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
☐	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.					
	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other agencies?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type	Expected Increase in Water Supply to Agency
NOTES:						

Table 6-8 Wholesale: Water Supplies — Actual

Water Supply	Additional Detail on Water Supply	2015		
		Actual Volume	Water Quality	Total Right or Safe Yield (optional)
Surface water	New Malones Reservoir flows diverted to SSJID	225,000	Raw Water	
Total		225,000		0
NOTES: Units of volume in acre-feet. Total surface water available for agriculture and urban use.				

Table 6-9 Wholesale: Water Supplies — Projected

Water Supply	Additional Detail on Water Supply	Projected Water Supply Report To the Extent Practicable									
		2020		2025		2030		2035		2040 (opt)	
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)
Surface water	New Melones flows include supplies for both WTP and agricultural uses.	300,000		300,000		300,000		300,000			
Total		300,000	0	300,000	0	300,000	0	300,000	0	0	0
NOTES:											

Table 7-1 Wholesale: Basis of Water Year Data

Year Type	Base Year <i>If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 1999-2000, use 2000</i>	Available Supplies if Year Type Repeats	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location
		☒	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available	% of Average Supply ¹
Average Year	2010	300,000	100%
Single-Dry Year ²	1977	225,000	75%
Multiple-Dry Years 1st Year ³	1990	260,300	87%
Multiple-Dry Years 2nd Year ³	1991	267,500	89%
Multiple-Dry Years 3rd Year ³	1992	252,700	84%

1 - Percent of normal year reflects the percent of the District's maximum allocation of 300,000 AF that was available under the 1988 Agreement.

2 - Allocations for Single-Dry Year scenario is hypothetical and based on actual hydrology with the assumption that New Melones Reservoir and 1988 Agreement are in place.

3 - Allocations for Multiple-Dry Year scenarios are based on actual water available.

Table 7-2 Wholesale: Normal Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 (Opt)
Supply totals (from Table 6-9)	300,000	300,000	300,000	300,000	0
Demand totals (from Table 4-3)	34,172	44,334	51,760	55,243	
Difference	265,828	255,666	248,240	244,757	
NOTES: Units of volume in acre-feet. These demands are for projected treated water only and do not include agricultural water. The difference is the volume available after projected urban demands. If both agricultural and treated water demands exceed the total supply, both would be reduced proportionately.					

Table 7-3 Wholesale: Single Dry Year Supply and Demand Comparison

	2020	2025	2030	2035	2040 (Opt)
Supply totals	225,000	225,000	225,000	225,000	225,000
Demand totals	34,172	44,334	51,760	55,243	60,121
Difference	190,828	180,666	173,240	169,757	164,879

NOTES: Units of volume in acre-feet. These demands are for projected treated water only and do not include agricultural water. The difference is the volume available after projected urban demands .If both agricultural and treated water demands exceed the total supply, both would be reduced proportionatly.

Table 7-4 Wholesale: Multiple Dry Years Supply and Demand Comparison

		2020	2025	2030	2035	2040 (Opt)
First year	Supply totals	260,000	260,000	260,000	260,000	260,000
	Demand totals	34,172	44,334	51,760	55,243	60,121
	Difference	225,828	215,666	208,240	204,757	199,879
Second year	Supply totals	267,500	267,500	267,500	267,500	267,500
	Demand totals	34,172	44,334	51,760	55,243	60,121
	Difference	233,328	223,166	215,740	212,257	207,379
Third year	Supply totals	252,700	252,700	252,700	252,700	252,700
	Demand totals	34,172	44,334	51,760	55,243	60,121
	Difference	218,528	208,366	200,940	197,457	192,579

NOTES: Units of volume in acre-feet. These demands are for projected treated water only and do not include agricultural water. The difference is the volume available after projected urban demands .If both agricultural and treated water demands exceed the total supply, both would be reduced proportionatly.

**Table 8-1 Wholesale
Stages of Water Shortage Contingency Plan**

Stage	Complete Both	
	Supply Reduction ¹	Water Supply Condition (Narrative description)
1 (Voluntary)	15%	Available flow is 10% to 15% less than estimated demand.
2 (Voluntary)	30%	Available flow is 15% to 30% less than estimated demand.
3 (Voluntary)	50%	Available flow is 30% to 50% less than estimated demand.
¹ One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.		
NOTES:		

Table 10-1 Wholesale: Notification to Cities and Counties (select one)

☐	Supplier has notified more than 10 cities or counties in accordance with CWC 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 location of this list in the UWMP.	
☒	Supplier has notified 10 or fewer cities or counties. Complete the table below.	
City Name	60 Day Notice	Notice of Public Hearing
City of Escalon	☒	☒
City of Lathrop	☒	☒
City of Manteca	☒	☒
City of Ripon	☒	☒
City of Tracy	☒	☒
County Name	60 Day Notice	Notice of Public Hearing
San Joaquin County	☒	☒
NOTES:		



SOUTH SAN JOAQUIN
IRRIGATION DISTRICT

