

Stockton East Water District
Water Management Plan
2024 Update



STOCKTON EAST WATER DISTRICT
PROVIDING SERVICE SINCE 1948

January 2025

PROVOST & PRITCHARD

Stockton East Water District

2024 WATER MANAGEMENT PLAN

Prepared in Accordance with

the Mid Pacific Region 2023 Standard Criteria

January 2025

Prepared by

PROVOST&
PRITCHARD

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PREFACE

This Water Management Plan (WMP or Plan) has been prepared by the Stockton East Water District (SEWD or District) in accordance with the Mid-Pacific Region 2023 Standard Criteria. In 2019, SEWD adopted a WMP to meet the requirements of the Mid-Pacific Region 2017 Standard Criteria. In 2020, SEWD also prepared an Agricultural Water Management Plan (AWMP) to meet the requirements of the Water Conservation Act of 2009, also known as Senate Bill x7-7 (SBx7-7).

The resolution of adoption and a cross-reference table are provided on the following pages. The cross reference table identifies the location(s) in the WMP within which each of the applicable requirements of the Mid-Pacific Region 2023 Standard Criteria is addressed. This cross-reference table is intended to support efficient review of the WMP to verify compliance with the 2023 Standard Criteria.

RESOLUTION
ADOPTION OF WATER MANAGEMENT PLAN

CROSS-REFERENCE TO REQUIREMENTS OF THE USBR MID-PACIFIC REGION 2023 STANDARD CRITERIA

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ACRONYMS AND ABBREVIATIONS

AB 3030	Assembly Bill 3030
ac-ft	acre-feet
ac-ft/yr	acre-feet per year
AWMP	Agricultural Water Management Plan
BMPs	Best management practices
Cal Water	California Water Service Company
CCTR	Central California Traction Railroad
CCWD	Calaveras County Water District
CDFW	California Department of Fish and Wildlife
CII	Commercial, Industrial, and Institutional
CIMIS	California Irrigation Management Information System
CPUC	California Public Utilities Commission
CSJWCD	Central San Joaquin Water Conservation District
CUWCC	California Urban Water Conservation Council
CVFPB	Central Valley Flood Protection Board
CVPIA	Central Valley Project Improvement Act
CV-SALTS	Central Valley Salinity Alternatives for Long-Term Sustainability
CWC	California Water Code
DBCP	dibromochloropropane
DJW	Dr. Joe Waidhofer
DWR	Department of Water Resources
EBMUD	East Bay Municipal Utility District
EDF	Environmental Defense Fund
ESU	evolutionarily significant unit
ET	evapotranspiration
ET_c	Crop Evapotranspiration
ET_o	Reference evapotranspiration
EDB	ethylene dibromide
EPA	U.S. Environmental Protection Agency
GMP	Groundwater Management Plan
GPM	gallons per minute
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GWA	Groundwater Authority
HECWs	High-efficiency clothes washers
HPC	Heterotrophic Plate Count
ILRP	Irrigated Lands Regulatory Program
ITRC	Irrigation Training and Research Center
M&I	municipal and industrial
MCL	maximum contaminant level
MGD	million gallon per day
mg/L	milligrams per liter
msl	mean sea level
MOU	Memorandum of Understanding
MUSD	Manteca Unified School District
NMFS	National Marine Fisheries Service (also NOAA Fisheries)
NOAA	National Oceanic and Atmospheric Administration
NOAA-NCEI	National Oceanic and Atmospheric Administration's - National Centers for Environmental Information
OID	Oakdale Irrigation District
OWUS	Owner's Water Use Statement
RCWD	Rock Creek Water District
RWCF	Regional Wastewater Control Facility
SAWS	Stockton Area Water Suppliers
SB 1938	Senate Bill 1938
SCADA	Supervisory Control and Data Acquisition
SEWD, or District	Stockton East Water District
SGMA	Sustainable Groundwater Management Act
SMCL	secondary maximum contaminant level
SSJID	South San Joaquin Irrigation District
TOC	Total Organic Carbon
USACE	U.S. Army Corps of Engineers
USBR, or Reclamation	United States Bureau of Reclamation

USFWS	U.S. Fish and Wildlife Service		
WMP, or Plan	Water Management Plan	WTP	water treatment plant
		µg/L	micrograms per liter
WSS	WaterSense Specification		

EXECUTIVE SUMMARY

INTRODUCTION

This Water Management Plan (WMP, or Plan) has been prepared by the Stockton East Water District (SEWD, or District) to describe the District's agricultural and urban water management activities in accordance with the U.S. Bureau of Reclamation (USBR, or Reclamation) Mid-Pacific Region 2023 Standard Criteria. Preparation of the WMP includes a detailed evaluation of the District's water management operations as they relate to the implementation of all critical and other locally cost-effective best management practices (BMPs).

This Plan is an update of the SEWD 2019 WMP and SEWD 2020 AWMP focusing on the Mid-Pacific Region 2017 Standard Criteria. Plan elements developed to address DWR AWMP requirements were not required to be updated at this time. These elements are included in this WMP as **Attachment Q** and will be updated in 2025 when the next five-year update of the AWMP is due.

SEWD is dedicated to its mission to ensure sustainable groundwater, high-quality drinking water, and supplemental surface water for agricultural use. In 2017, SEWD became a Groundwater Sustainability Agency (GSA) under the Sustainable Groundwater Management Act (SGMA) and has joined with 15 other GSAs covering the Eastern San Joaquin Groundwater Basin to form an Eastern San Joaquin Groundwater Authority (GWA) to manage the basin sustainably. The GWA prepared and submitted a Groundwater Sustainability Plan (GSP) to the State Department of Water Resources in 2020. The GSP was accepted by the State and an amended GSP is currently being prepared for submission before January 31, 2025.

Water for irrigation is foundational to supporting agriculture, which serves as the leading economic activity in San Joaquin County. In 2023, $3.2 billion in agricultural commodities were produced countywide[1]. SEWD also supplies wholesale treated drinking water to Stockton area customers that is retailed by the California Water Service Company (Cal Water), the City of Stockton, and San Joaquin County. Key strategies employed by SEWD to support overall water management objectives are the conjunctive management of surface and groundwater supplies and water conservation.

SEWD is an agricultural water supplier that is required to submit a WMP to Reclamation according to the Mid-Pacific Region Standard Criteria. Reclamation approved SEWD's most recent WMP in 2019. Recognizing the importance of water management planning, SEWD has made significant progress in water management in recent years and chose to develop and submit a 2020 AWMP according to the California Water Code (CWC) to comply with the requirement to submit an AWMP by December 31, 2015 (CWC §10820). This 2024 WMP was developed and adopted in compliance with the Mid-Pacific Region 2023 Standard Criteria and is submitted to comply with the requirement of Central Valley Project Improvement Act of 1992 and Section 210(b) of the Bureau of Reclamation Reform Act of 1982.

Development of the WMP represents a substantial effort by SEWD to evaluate its water management across both the agricultural and urban sectors. The WMP consists of an introduction to SEWD, its history, and previous water management activities; a detailed description of the District's physical setting, formation, organization, operations, and facilities; an inventory of water supplies and uses; and a review of SEWD's efforts to implement all critical and other locally cost-effective agricultural and urban BMPs.

[1] San Joaquin County 2023 Agricultural Report, San Joaquin County Office of the Agricultural Commissioner/Sealer.

IMPLEMENTATION OF BEST MANAGEMENT PRACTICES

The 2023 Standard Criteria lists 17 Agricultural BMPs and five Urban BMPs that are aimed at promoting efficient water management among Reclamation contractors. According to the 2023 Criteria, five Agricultural BMPs are considered critical and mandatory, while the remaining 12 BMPs are considered exemptible and are to be implemented if technically feasible and locally cost effective. Among the Urban BMPs, three are Foundational BMPs which are considered by Reclamation to be essential water conservation activities that should be conducted, as applicable, by any utility at any level of distribution as part of ongoing practices. The remaining two Urban BMPs are considered "Programmatic BMPs" that relate to direct efforts to manage residential, commercial, industrial, institutional, and landscape water use.

SEWD is implementing all of the agricultural contractor Critical BMPs and all of the urban contractor Foundational BMPs, as applicable. Of the twelve exemptible agricultural BMPs, SEWD is implementing all that are technically feasible at locally cost-effective levels. Because SEWD serves as a wholesale supplier of treated drinking water, it does not deliver water directly to urban customers and therefore does not play a direct role in leading Programmatic BMP efforts. However, SEWD supports its urban contractors in their efforts and policies to achieve the Programmatic BMPs.

Table ES-1 provides a summary of these BMPs as well as the District's past and future implementation activities related to each.

Table ES-1. Summary of BMP Implementation Status.

Reclamation 2023 Criteria	BMP	Position	Implementation Activities
CRITICAL (MANDATORY) BMPs FOR AGRICULTURAL CONTRACTORS			
Critical BMP A.1	Water Measurement/Measure the volume of water delivered to customers with sufficient accuracy	Implementing	• SEWD field-metering staff read and record irrigation delivery meters on a monthly basis from mid-April through mid-October during the irrigation season. Additionally accurate records are kept regarding the calibration of each irrigation outlet. • Of 225 total connections, 209 connections are equipped with measurement devices (185 active, 40 inactive), sixteen connections are unmeasured (inactive; will be equipped with measurement devices once active) • 209 connections measured with McCrometer magnetic meters (or similar) • 16 connections measured with PG&E (electric) meters or hour meters, volume calculated (will upgrade to higher accuracy meters as the connections' plumbing permits)
Critical BMP A.2	Designate the Water Conservation Coordinator	Implementing	*Name:* Kristin Coon (urban) / Chris Donis (agricultural) *Title:* Water Conservation Coordinator *Address:* 6767 East Main Street, Stockton, CA 95215 *Telephone:* (209) 444-3127 *E-mail:* kcoon@sewd.net / cdonis@sewd.net
Critical BMP A.3	Provide or Support the Availability of Water Management Services to Water Users/Provide for the availability of water management services to water users	Implementing	• SEWD has provided on-farm irrigation evaluations free to its customers since 1999 ($2,500 value per evaluation) • SEWD provides real-time weather data from the CIMIS network to its customers via a link on its website (https://sewd.net/california-irrigation-management-information-system-cimis/) • Irrigation Allowance Index (comparing the volume of water that should be applied (Irrigation Allowance) to the volume of water actually applied) and crop water requirements for growers in SEWD have been evaluated (ITRC, 2013) and are available to growers (more detail in **Attachment S**) • Water quality monitoring program for surface water at seven key points in the irrigation water conveyance system maintained since 1997 • Courtesy groundwater monitoring service (assesses for potential groundwater quality issues and monitors specific conductance) available to private well owners upon request • SEWD provides semi-annual newsletter and AG Water Report to interested growers (6,500 accounts) • SEWD hosts the City of Stockton "State of the City" agricultural education event (2,000 attendees) and numerous education events through Stockton Area Water Suppliers (SAWS)

Critical BMP A.4	Pricing Structure/Adopt a pricing structure based at least in part on quantity delivered	Implementing	• Surface water pricing structure is based on the quantity of water delivered
			  • Surface water rate: $23.00/ac-ft in 2023)
			• No water conservation pricing structure is used for municipal or agricultural groundwater because SEWD is not selling the water, but rather assessing for the use of a well
			  • Domestic well rate: $52.00/well in 2023
			  • Municipal groundwater rate: $421.45/ac-ft in 2023, based on 2.8 ac-ft/ac estimated consumptive use (assessment charge of $3.60/ac-ft, rate equalization charge of $425.05/ac-ft)
			  • Agricultural groundwater rate: $6.15/ac-ft in 2023, based on 2.8 ac-ft/ac estimated consumptive use

Critical BMP A.5	Evaluate and Improve Efficiencies of Contractor's Pumps/Evaluate and improve the efficiencies of the supplier's pumps	Implementing	• Two pumps used to transfer water from Mormon Slough to Potter Creek, used to supplement gravity flow pipeline since 2001 • Pumps last tested in 2019
EXEMPTIBLE (CONDITIONAL) BMPs FOR AGRICULTURAL CONTRACTORS			
BMP B.1	Facilitate Alternative Land Use	Not Applicable	Not Applicable—no land within SEWD that has high water table (<5 feet), poor drainage, groundwater Selenium concentration > 50 ppb, or poor productivity
BMP B.2	Facilitate Use of Available Recycled Water that Otherwise Would Not be Used Beneficially, Meets all Health and Safety Criteria, and Does	Not Applicable	Not Applicable—No available sources of recycled water

Reclamation 2023 Criteria	BMP	Position	Implementation Activities
	not Cause Harm to Crops or Soils		
BMP B.3	Facilitate the Financing of Capital Improvements for On-Farm Irrigation Systems	Implementing	• SEWD offers a Surface Water Incentive Program that encourages irrigators to convert to surface water from groundwater through water pricing incentives. • Majority of irrigation systems are high-efficiency, obviating an urgent need for a dedicated program. • Under SGMA future on-farm water management in SEWD will be required to support sustainable operations of the Eastern San Joaquin Groundwater Basin. • SEWD, in conjunction with South San Joaquin Irrigation District (SSJID), and North San Joaquin Water Conservation District (NSJWCD) secured a State Water Efficiency & Enhancement Project (SWEEP) Block Grant to fund water and energy conservation projects. In February 2024, these Districts opened up an application period for their growers.
BMP B.4	Implement an incentive pricing structure that promotes one or more of the following goals: (A) More efficient water use at farm level, (B) Conjunctive use of groundwater, (C) Appropriate increase of groundwater recharge, (D) Reduction in problem drainage, (E) Improved management of environmental resources, (F) Effective management of all water sources throughout the year by adjusting seasonal pricing structures based on current conditions.	Implementing	SEWD promotes conjunctive use of groundwater by charging a groundwater assessment fee in addition to the O&M costs incurred by groundwater users to pump and use groundwater. Proceeds from the groundwater charges subsidize District's surface water costs. As a result, using surface water is much less expensive than the cost to produce groundwater, thereby incentivizing the use of surface water.
BMP B.5	Canal Lining/Piping and Regulatory Reservoirs to Increase Distribution System Flexibility and Capacity, Decrease Maintenance, and Reduce Seepage	Implementing	Canal Lining/Piping: • SEWD actively monitors for leaks that can occur on the conveyance system along unlined canals, pipelines, and around concrete structures • 19 miles of pipeline have been constructed (Bellota Pipeline, Peters Pipeline) • Percolation from natural waterways and canals provides natural recharge to a critically overdrafted groundwater basin; no future lining planned as this would eliminate these benefits • 2010 Environmental Impact Report for the canal system found that lining the Upper Farmington Canal may affect terrestrial biological resources Reservoirs: • Ponds at Dr. Joe Waidhofer (DJW) Water Treatment Plant (WTP) act as buffers to regulate and settle out water during storm events (combined storage capacity of approximately 647 ac-ft)
BMP B.6	Increase Flexibility in Water Ordering By, and Delivery to, Water Users (Within Operational Limits)	Implementing	• SEWD delivers irrigation water to customers through an arranged demand system using a 48-hour notice scheduling system • Upgrades of DJW WTP SCADA system to full-plant Ignition SCADA (in place) • Planned SCADA upgrades of SEWD agricultural conveyance system (next 5 years)
BMP B.7	Construct and Operate Contractor Spill and Tailwater Recovery Systems	Not Locally Cost Effective	Not Locally Cost Effective— SEWD would need to build costly facilities to pump a small volume of water over 20 miles upstream (**Attachment U**)
BMP B.8	Plan to Measure Outflow	Implementing	• Planned upgrades of the DJW WTP SCADA system to full-plant Ignition SCADA (in place) • Planned SCADA upgrades of the SEWD agricultural conveyance system, including four outflow locations (next 5 years)
BMP B.9	Optimize Conjunctive Use	Implementing	• SEWD has secured and provides surface water from the New Melones and New Hogan Reservoirs in order to protect the District's groundwater • Groundwater recharge furnished largely by strategically regulated releases from New Hogan Reservoir down the Calaveras River into check dams along natural waterways (operated by SEWD) • Farmington Groundwater Recharge Program has resulted in approximately 12,235 ac-ft per year between 2019 and 2023. • Active and continued participation in local groundwater entities and initiatives, including SGMA.

Reclamation 2023 Criteria	BMP	Position	Implementation Activities
BMP B.10	Automate Distribution, and/or Drainage System Structures	Implementing	• Rubicon BladeMeter™ installed at PC-3 in 2021, allowing automated delivery of precise quantities of water from the Peters Pipeline. • Planned SCADA upgrades of conveyance system will help to reduce outflows from the SEWD system (next 5 years)
BMP B.11	Facilitate or Promote Water User Pump Testing and Evaluation	Implementing	• SEWD has provided customer pump tests free to its customers since 1999 ($2,500 value) • Three pump tests were completed at two farms in 2020. No tests were requested in 2021-2023. • SEWD plans to advertise its pump testing program in its newsletter, on its website (https://sewd.net/), and on the Owner's Water Use Statement
BMP B.12	Mapping	Implementing	• SEWD conducts ongoing maintenance of system maps and continues to develop its GIS-based system.
FOUNDATIONAL BMPS FOR URBAN CONTRACTORS			
1.1.A	Conservation Coordinator	Implementing	*Name:* Kristin Coon *Title:* Water Conservation Coordinator *Address:* 501 Pine Valley Court, Valley Springs, CA 95252 *Telephone:* (209) 304-1734 *E-mail:* water7996@gmail.com
1.1.B	Water Waste Prevention	Implementing	As a wholesaler, SEWD does not distribute urban water directly to customers, but is actively supporting its urban contractors (City of Stockton, Cal Water, and San Joaquin County) in their water waste prevention policies and programs.
1.1.C.	Wholesale Agency Assistance Programs	Implementing	SEWD supplies wholesale treated drinking water via its urban contractors (City of Stockton, Cal Water, and San Joaquin County) and monitors operations practices in its service area.
1.2	Water Loss Control	Implementing	SEWD conducts monthly water audits for the DJW WTP, measuring the total monthly volume of all diversions to the WTP, the total monthly volume treated at the DJW WTP, and the total monthly volume delivered to each of its urban customers. Any discrepancies are immediately investigated, and repairs made as necessary.
1.3	Metering with Commodity Rates for All New Connections and Retrofit of Existing Connections	Implementing	SEWD meters the connections to its urban contractors: • Two pipelines (24-inch and 42-inch) deliver water to Cal Water for south City of Stockton (one meter) • One pipeline (48-inch) delivers water to north City of Stockton (one meter) • City of Stockton wheels water to San Joaquin County The accuracy of these meters is within six percent, and is verified and calibrated annually by an outside testing company.
1.4	Retail Conservation Pricing	Implementing	• SEWD bills urban contractors based on the volume of water produced (per the Second Amended Contract). • **Attachment D.2** provides a copy of the 2023 and 2024 rate ordinances (Ordinance No. 49 and 50, respectively) • Each ordinance establishes a base cost (calculated by contract and water usage) and the municipal groundwater rate equalization set per contract between the District and the urban contractors
2.1	Public Information Programs	Implementing	SEWD participates in the SAWS, which jointly funds the Water Conservation Education Program in the Stockton urban area. The SAWS Water Education Program participates in and supplies hand-outs and outreach materials for numerous community gatherings and other special activities and events in Stockton, such as: • Rotary Read In (February 2023) • Stockton's Earth Day Festival (April 2023) • Water Treatment Plant Tours • Community Based Programs • DWR Water Education Committee
2.2	School Education	Implementing	Through SAWS, SEWD also sponsors and participates in school education programs. The SAWS Water Education Program: • visited 54 Stockton area schools/event venues • presented or staffed a booth in 347 classrooms/events

Reclamation 2023 Criteria	BMP	Position	Implementation Activities
			• reached 20,604 students and citizens Event highlights from the 2022-2023 school year include: • SAWS Water Education Program visited 54 Stockton area schools/event venues, presenting or staffing a booth in 347 classrooms/events for 20,604 students and citizens • San Joaquin County AgVentures (South County, Stockton & Lodi) • Rotary Read-In (February 2023) • Lincoln Unified School District "Window on Your Future" • Manteca Unified School District (MUSD) "Planet Party Day" (April 2023) • MUSD's Farm Days (Spring 2023)
3	Residential	Not Applicable (Supporting Contractor Implementation)	SEWD does not deliver water directly to urban customers, but supports its urban contractors in their efforts.
4	Commercial, Industrial, and Institutional (CII)	Not Applicable (Supporting Contractor Implementation)	SEWD does not deliver water directly to urban customers, but supports its urban contractors in their efforts.
5	Landscape	Not Applicable (Supporting Contractor Implementation)	SEWD does not deliver water directly to urban customers, but supports its urban contractors in their efforts.

SECTION 1 DESCRIPTION OF THE DISTRICT

Section 1 of this WMP provides a description of Stockton East Water District (SEWD) in accordance with the Mid Pacific Region 2023 Standard Criteria. This description is divided into the following subsections:

- 1.A. History (background, water supplies, land use, irrigation methods)
- 1.B. Location and Facilities (inflow/outflow points; conveyance, distribution, and storage facilities)
- 1.C. Topography and Soils (topography impacts on water operations and management, soil map)
- 1.D. Climate (average precipitation, temperature, reference evapotranspiration)
- 1.E. Natural and Cultural Resources (natural, recreational, and cultural resources in service area)
- 1.F. Operating Rules and Regulations
- 1.G. Water Measurement, Pricing, and Billing
- 1.H. Water Shortage Allocation Policies
- 1.I. Evaluation of Policies of Regulatory Agencies Affecting the Contractor and Identification of Policies that Inhibit Good Water Management

Contact information for SEWD is provided in **Table 1-1**. Additional detail is provided in the subsections that follow.

Table 1-1. District Contact Information.

District Name	Stockton East Water District
Contact Name	Justin Hopkins
Title	General Manager
Telephone	(209) 948-0333
Email	sewd@sewd.net
Web Address	http://www.sewd.net/

1.A. HISTORY

1.A.1. District Overview

Date district formed: 1948
Original size (acres): 79,500
Date of first Reclamation contract: 1964
Current year (last complete calendar year): 2023

Introduction

SEWD is located in San Joaquin County and provides surface water for both agricultural and urban uses throughout the District and City of Stockton area (**Figure 1-1**). By providing surface water for agricultural irrigation, SEWD supports San Joaquin County's $3.2 billion agricultural industry[2], which is the area's leading economic activity. SEWD also supplies wholesale treated drinking water that is retailed to Stockton area customers by the California Water Service Company (Cal Water), the City of Stockton, and San Joaquin County.

[2] According to the San Joaquin County Office of the Agricultural Commissioner/Sealer, the gross value of all agricultural production in the County was $3,220,324,000 in 2023.

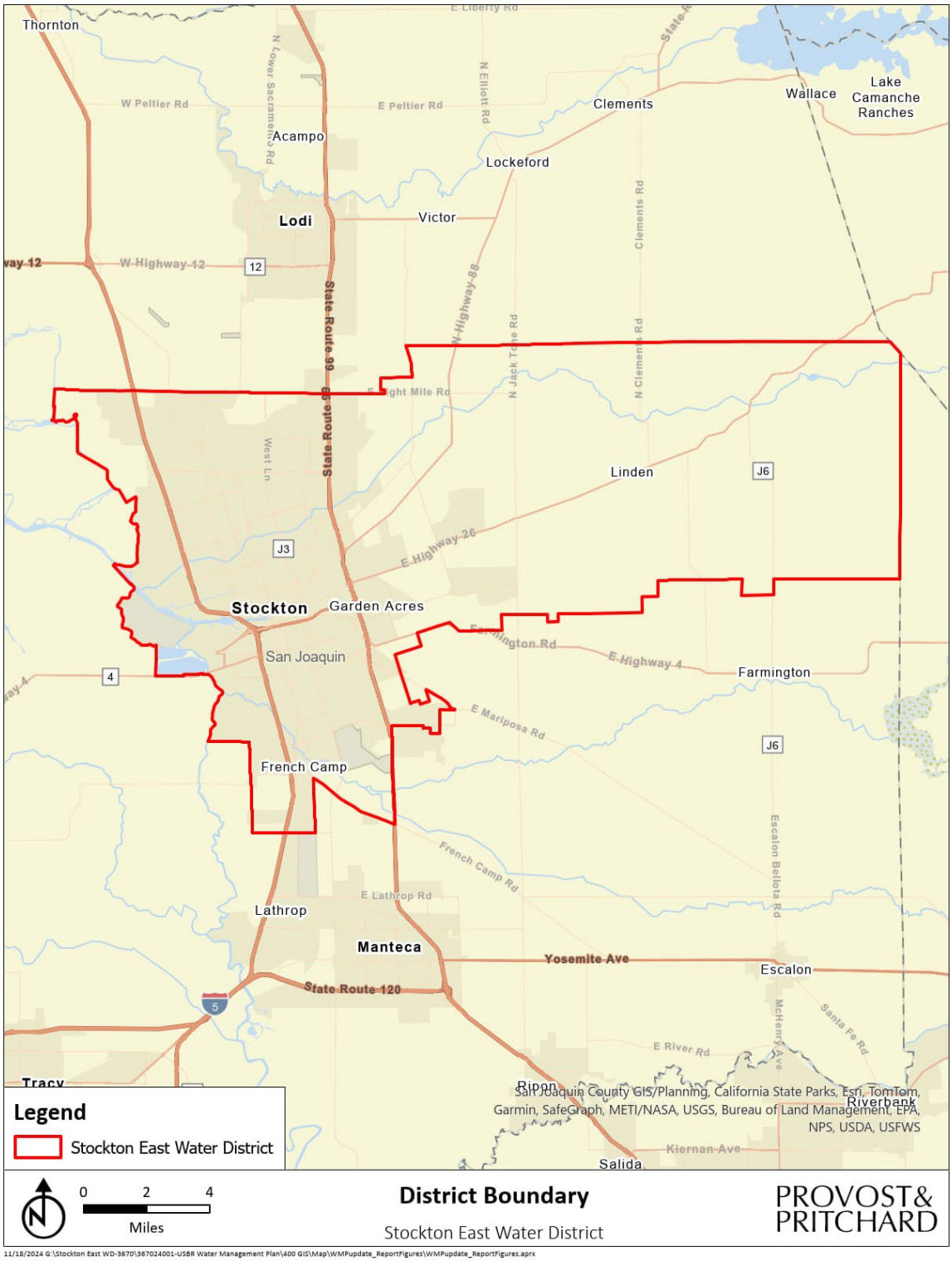


Figure 1-1. SEWD Service Area Boundaries.

SEWD owns and operates a drinking water treatment plant (WTP) in Stockton – the Dr. Joe Waidhofer (DJW) WTP – which has a primary intake from Goodwin Reservoir on the Stanislaus River, and a

secondary diversion from the Calaveras River at Bellota. The water diversion at Goodwin Dam marks the beginning of the New Melones Conveyance System. Since 1978, the DJW WTP has produced over a million acre-feet (ac-ft) of water for urban use.

Formation of SEWD

SEWD was formed in 1948 under the 1931 Water Conservation Act of the State of California. SEWD was originally organized as the Stockton and East San Joaquin Water Conservation District, an independent political subdivision of the state government. As such, SEWD was deemed responsible for acquiring a supplemental surface water supply and developing water use practices that will promote conjunctive use and secure a balance between SEWD's surface and groundwater supplies.

Establishment of Water Supply and Financial Structure

From 1948 to 1963, SEWD focused its efforts on water resource planning by evaluating groundwater conditions within the District and determining supplemental water supply requirements. These intensive efforts on the part of SEWD and other local agencies resulted in the construction of New Hogan Dam on the Calaveras River in 1964. SEWD signed a contract for supplemental surface water with the United States Bureau of Reclamation (USBR, or Reclamation) in 1970 (see **Attachment L**). Also in 1970, SEWD and Calaveras County Water District (CCWD) signed a Memorandum of Understanding (MOU) which assigned SEWD 56.5 percent of the yield from New Hogan Reservoir (see **Attachment L**).

From its inception until 1962, SEWD's financial structure was dependent upon property taxes. In 1963, the Governor of California signed a bill establishing SEWD's right to levy groundwater use fees and surface water charges. SEWD used the additional revenue to contract for New Hogan Reservoir water. During this period, SEWD began registering wells within the district, while check dams were built on the Calaveras River, Mormon Slough, and Mosher Creek to control surface irrigation water and promote groundwater recharge. SEWD also became actively involved in the pursuit of projects to mitigate significant groundwater issues, which included declining aquifer levels, pumping depressions under urban Stockton, and the continuing threat of saline intrusion in wells near the Delta.

Boundary Expansion and Drinking Water Treatment Plant Construction

In 1971, SEWD boundaries were expanded from its original 79,500 acres to a total of approximately 114,000 acres, including the entire Stockton urban area. Plans were also initiated at that time for a 30 million gallon per day (MGD) drinking water treatment plant. In 1975, a district-wide election resulted in the approval of a $25 million bond to fund the new plant. The DJW WTP, located at 6767 East Main Street, was constructed in 1977 and began operation in 1978. In 1979, the Independent Benefit Commission concluded that the new drinking water treatment plant was a benefit to Stockton's planning areas.

In 2005, SEWD annexed an additional 27,000 acres into the district. Today, SEWD's area encompasses approximately 143,300 acres.

Pursuit of Supplemental Water Supplies

SEWD has actively sought supplemental surface water from the American River via the Folsom South Canal and from the New Melones Reservoir. Efforts to obtain the American River supply have been thwarted by the Environmental Defense Fund (EDF), litigation by the East Bay Municipal Utility District (EBMUD), and the Freeport Regional Diversion Project recently constructed by EBMUD and Sacramento County.

In 1983, SEWD and the Central San Joaquin Water Conservation District (CSJWCD) contracted with Reclamation for annual allocations of 75,000 and 80,000 ac-ft, respectively, from New Melones Reservoir

(see **Attachment M**). Also in 1983, SEWD expanded its surface water irrigation capabilities by constructing the 12,000 gallons per minute (GPM) Potter Creek Pump Facility to facilitate diversions from New Hogan Reservoir.

In 1997, SEWD entered into a water transfer agreement with OID and SSJID. This agreement transferred between 8,000 and 30,000 ac-ft per year (ac-ft/yr) to SEWD based on New Melones Reservoir storage and inflow as of April 1 of each year. The contract period for the transfer ended in 2009. From time to time the District purchased water from SSJID and OID to supplement the District's water supply as needed. The terms of the purchases including price and amount of water purchased were negotiated for the year of the purchase. In 2023, SEWD entered into a similar long-term water transfer agreement with OID and SSJID. This agreement transfers between 10,000 and 20,000 ac-ft/yr to SEWD through the year 2033.

In 2024, SEWD entered into a water transfer agreement with Rock Creek Water District (RCWD). This agreement transfers between 1,500 and 3,000 ac-ft/yr to SEWD based on Reclamation's final determination of allocation to SEWD and a delivery schedule developed by SEWD and RCWD. The agreement extends through 2028.

The agreements with OID/SSJID and RCWD are both found in **Attachment Z**.

Plant Expansion and New Melones Conveyance Construction

In 1991, the DJW WTP was expanded to 40 MGD to accommodate increased demand from Stockton's urban areas. In anticipation of a new water supply from the New Melones Reservoir, construction of the New Melones Conveyance System was completed in 1994 to provide additional water to the DJW WTP. Currently, the New Melones Conveyance System consists, sequentially, of a diversion structure at Goodwin Dam, the Goodwin Tunnel, the Upper Farmington Canal, Shirley Creek, Hoods Creek, Rock Creek, the Lower Farmington Canal, and Peters Pipeline, which feeds into either the Bellota Pipeline or into the 6-mile Peters Pipeline extension constructed in 2003 (described below), which both supply the DJW WTP.

However, under the Central Valley Project Improvement Act (CVPIA), Reclamation did not supply water for the New Melones Reservoir project in 1993-1994. In 1995, SEWD began receiving New Melones Reservoir water, but the amount received was less than the contracted amount. Legal action in this matter is ongoing.

Under the current Reclamation operation of New Melones Dam, SEWD and CSJWCD are provided with a combined annual supply of up to 155,000 ac-ft of water from New Melones Reservoir. Water allocation amounts are based on the March-September water forecast and the February end of month storage in New Melones Reservoir each year. SEWD also receives the first 15,000 AF of the CSJWCD allotment.

Sustainable Groundwater Management Efforts

SEWD developed a local Groundwater Management Plan in 1995 and participated in a regional Groundwater Management Plan in 2006. These efforts were aimed at comprehensive management of groundwater supplies and working towards long-term sustainability. In 2017, SEWD became a Groundwater Sustainability Agency (GSA) under the Sustainable Groundwater Management Act (SGMA) and has joined with the 15 other GSAs covering the Eastern San Joaquin Groundwater Basin to form an Eastern San Joaquin Groundwater Authority (GWA) to manage the basin sustainably. This group developed a Groundwater Sustainability Plan (GSP) in 2020, which was subsequently approved by the State of California. The GSP is currently being updated for adoption before January 2025. SEWD has and will continue to take an active role in local groundwater sustainability initiatives, including SGMA.

1.A.2. Current Size, Population, and Irrigated Acres

Table 1-2 summarizes the current gross area and irrigated area of SEWD and the population served by the District, as of 2023. The District irrigated area was determined from the 2023 Crop Report, and the population served by the District is based on the SEWD Urban Water Management Plan and information provided by the Urban Contractors.

Table 1-2. Current Size, Population, and Irrigated Area (2023).

Year	2023
Gross Area (acres)	143,300
Population Served[a]	373,000
Irrigated Area (acres)	61,433

[a] SEWD supplies treated drinking water from DJW WTP to wholesalers, but does not directly supply drinking water to urban connections.

1.A.3. Water Supplies Received in Current Year

Table 1-3 summarizes the water supplies received by SEWD in 2023 by water source type. Additional detail regarding each water source is provided below in Section 5.

Table 1-3. Water Supplies Received in Current Year (2023).

Water Source	**Volume (ac-ft)**
Federal urban water[a] (Tbl 5-1)	62,168
Federal agricultural water (Tbl 5-1)	70,718
State water (Tbl 5-1)	0
Other Wholesaler (define) (Tbl 5-1)	0
Local surface water (Tbl 5-1)	0
Upslope drain water (Tbl 5-1)	0
District groundwater (Tbl 5-2)	0
Banked water (Tbl 5-1)	0
Transferred water (Tbl 5-6)	0
Recycled water (Tbl 5-3)	0
Other (transfer) (Tbl 5-1)	0
Total	132,886

Source: SEWD spreadsheets: New Melones 2023 Water Use, January 2024; New Hogan Flows, Calendar Year 2023, January 2024.

[a] SEWD supplies wholesale treated drinking water that is retailed to Stockton area customers by Cal Water, the City of Stockton, and San Joaquin County. SEWD does not own or operate an urban distribution system. The urban water source is both the New Melones and New Hogan Reservoirs.

1.A.4. Annual Entitlement Under Each Right and/or Contract

Table 1-4 summarizes SEWD's annual surface water entitlement under its two contracts with Reclamation. SEWD receives water from both the New Hogan and New Melones Reservoirs for agricultural and urban (municipal and industrial, or M&I) use.

1.A.5. Anticipated Land Use Changes

There are no anticipated changes in District agricultural areas. SEWD boundaries increase as the City of Stockton's incorporated boundaries increase. Thus, as the urban area grows, SEWD boundaries expand.

Agricultural acres are not expected to change significantly.

Table 1-4. Annual Entitlement Under Each Right and/or Contract.

Contract Type[a]	Entitlement, AF/yr	Source	Contract #	Availability
Reclamation Urban	56.5% of yield[b] Average Urban Supply (1979-2023): 18,500 ac-ft/yr	New Hogan	14-06-200-5057A	Mar-Apr
Reclamation Agriculture	56.5% of yield[b] Average Agricultural Supply (1979-2023): 28,000 ac-ft/yr	New Hogan	14-06-200-5057A	Mar-Apr
Reclamation Urban	75,000 ac-ft/yr total[c] Average Urban Supply (1995-2023): 16,700 ac-ft/yr	New Melones	4-07-20- W0329	Jan-Dec
Reclamation Agriculture	75,000 ac-ft/yr total[c] Average Agricultural Supply (1995-2023): 5,000 ac-ft/yr	New Melones	4-07-20- W0329	Jan-Dec
CA Division of Water Rights (Linden Irrigation District supply)[d]	11,500 ac-ft/yr total	Calaveras River	A006522	Jan-Jun

[a] Each contract provides water for both agricultural and M&I uses.
[b] The contract between SEWD and Reclamation entitles SEWD to take 56.5 percent of New Hogan Project water, which is used for both agricultural and urban use.
[c] Water allocation amount in a given year is based on the March-September water forecast and the February end of month storage in New Melones Reservoir. Water allocation is split between both agricultural and urban use.
[d] See **Attachment Y** for copy of water rights license

1.A.6. Cropping Patterns

Table 1-5 summarizes the acreage of crops currently and historically grown in SEWD. Walnuts and cherries have remained the predominant crops grown in the District, collectively representing between 40 and 75 percent of the total agricultural acreage since 1995. As of 2023, much of the agricultural area not planted to walnuts or cherries is comprised of other orchard crops.

Table 1-5. Agricultural Cropping Patterns.

Original Plan (1995)		Previous Plan (2018)		Current Plan (2023)[a]	
Crop Name	**Acres**	**Crop Name**	**Acres**	**Crop Name**	**Acres**
Walnuts	15,876	Walnuts	30,286	Walnuts	31,975
Cherries	6,711	Cherries	11,417	Cherries	11,984
Beans	5,782	Grapes/Vineyard	5,470	Other Orchards	7,369
Tomatoes	3,759				
Other (<5% each)	22,821	Other (<5% each)	12,538	Other (<5% each)	10,105
Total	54,949	Total	59,711	Total	61,433

[a] Source: SEWD 2023 Crop Report, September 2024.

When formed in 1948, agriculture in SEWD was fully developed. District expansion in 1970 added the urban Stockton area and approximately 10,000 acres of fully developed agricultural lands to SEWD. District expansion in 2005 added 27,000 additional agricultural acres, most of which are range land.

1.A.7. Major Irrigation Methods

Table 1-6 summarizes the major irrigation methods currently and historically used in the District. Information regarding irrigation methods are requested from and submitted by irrigators on the Owner's Water Use Statement (OWUS). The OWUS is completed by each grower and submitted to the District in January of each calendar year as part of the District billing process. A sample OWUS is provided in **Attachment N**. This information was unavailable at the time of the original SEWD WMP in 1995. In recent years, irrigation has increasingly shifted toward higher-efficiency sprinkler and low-volume systems typically used in irrigation of orchard and vineyard crops common throughout the district.

Table 1-6. Major Irrigation Methods, by Acreage.

Original Plan (1995)		Previous Plan (2018)		Current Plan (2023[a])	
Irrigation Method	**Acres**	**Irrigation Method**	**Acres**	**Irrigation Method**	**Acres**
Not available		Level Basin	105	Flood	1,812
		Furrow	3,075	Furrow	1,756
		Sprinkler[b]	38,548	Sprinklers[b]	36,861
		Low volume	15,253	Drip	17,317
		Multiple[c]	5,228	Micro	3,687
Other		Other	635	Other	0
Total		Total	62,846	Total	61,433

Source: SEWD Irrigation Reports.

[a] Irrigation methods are self-reported by irrigators as part of the SEWD billing process and are not compiled by the District until later in the following year.

[b] Sprinkler irrigation systems (self-reported by growers) are generally high-efficiency systems similar to low volume systems in SEWD.

There is little historical information on irrigation practices within SEWD, although it is generally known that local irrigation practices have followed statewide trends that have evolved from flood to sprinklers, and more recently, to micro-sprinklers and drip. Nevertheless, all forms of irrigation continue to be practiced in SEWD.

1.B. LOCATION AND FACILITIES

Maps of SEWD facilities are provided in **Attachment A** of this WMP and show the District's inflow locations, turnouts (internal delivery locations), outflow locations (spillage), conveyance system, storage facilities, and operational loss recovery system. These facilities are described below.

1.B.1 Incoming Flow Locations and Measurement Methods

SEWD receives surface water from both the Stanislaus and Calaveras Rivers. **Table 1-7** summarizes the locations of district inflows and the measurement devices used at each site.

New Melones Dam is on the Stanislaus River and forms New Melones Reservoir, which is owned and operated by Reclamation. SEWD diverts the New Melones Reservoir water supply from the Stanislaus River below Tulloch Reservoir at the Goodwin Tunnel diversion structure.

Table 1-7. Incoming Flow Locations and Measurement Methods.

Incoming Flow Location Name	Physical Location	Type of Measure-ment Device	Accuracy
Goodwin Tunnel Diversion from New Melones Reservoir	Goodwin Reservoir on the Stanislaus River (New Melones supply)	ultra sonic [a] (SONTEK-IQ)	+/- 6%[b]
Farmington Dam Diversion	Farmington Dam (New Melones supply)	FlumeGate (Rubicon)	+/- 2.5%[c]
New Hogan Reservoir	New Hogan Reservoir (New Hogan supply)	stilling well (water level) calculations	adjusted per stream flow measurements[d]
New Hogan Conveyance System	Bellota Intake (New Hogan supply)	ultra sonic (SONTEK-IQ)	+/- 6%
New Hogan Conveyance System	spillway at Mormon Slough (New Hogan supply)	SlipMeter (Rubicon)	+/- 2.5%
treatment plant inflow	Dr. Joe Waidhofer WTP (mixed supply)	venturi	+/- 6%[e]

[a] Measurement at Goodwin Tunnel is being replaced with a FlumeGate and will be operational in the first quarter of 2025 improving accuracies to +/-2.5%
[b] The Goodwin Reservoir measurement device is calibrated four times a year, and maintained monthly.
[c] The Farmington Dam Diversion measurement device is calibrated and maintained four times a year.
[d] Owned and maintained by USACOE.
[e] The Dr. Joe Waidhofer WTP measurement device is calibrated annually.

New Hogan Reservoir is the main water storage facility on the Calaveras River. The U.S. Army Corps of Engineers (USACE) operates the reservoir for multiple uses, including flood control, municipal and industrial water supply, agricultural irrigation, and recreation. SEWD coordinates daily water releases, other than flood control, with the USACE manager.

There are 27 total removable check dams on the Calaveras River, Mormon Slough, Mosher Creek, Potter Creek, and Diverting Canal from which surface water irrigators pump water. These dams serve to pond water to allow irrigator's pumps to deliver surface water to fields. Irrigation also occurs from the Lower Farmington Canal (an unlined District canal), Peters Pipeline (a distribution pipeline providing water to agriculture and the DJW WTP) and at a recent installation on the Bellota Pipeline.

SEWD also diverts water at the Bellota Weir on the Calaveras River into a 13-mile pipeline to the 65 MGD DJW WTP. Seven regulating reservoirs (3 lined and 4 unlined) and one overflow pond are located at the treatment plant with a combined capacity of approximately 831 ac-ft.

1.B.2. Current Year Agricultural Conveyance System

Table 1-8 summarizes the District's current agricultural water conveyance system, as of 2023. The entire system is approximately 100 miles long, and consists of natural waterways, flood control channels, pipelines, and unlined canals.

Table 1-8. Current Year Agricultural Conveyance System (2023).

Miles Unlined – Canal	Miles Lined – Canal	Miles Piped	Miles – Other[a]
17.5	0.04	19	64

[a] Other elements of the agricultural conveyance system include natural waterways and flood control channels.

1.B.3. Current Year Urban Distribution System

Although SEWD owns and operates the DJW WTP in Stockton, it does not distribute this water to urban customers directly. Thus, SEWD does not operate an urban distribution system at this time (**Table 1-9**). Instead, SEWD supplies wholesale treated drinking water to three urban contractors – Cal Water, the City of Stockton, and San Joaquin County – who then retail this water to Stockton area customers.

Table 1-9. Current Year Urban Distribution System (2023).

Miles AC Pipe	Miles Steel Pipe	Miles Cast Iron Pipe	Miles – Other
0	0	0	0

1.B.4. Storage Facilities (Tanks, Reservoirs, Regulating Reservoirs)

Table 1-10 summarizes the District's current water storage facilities, as of 2023.

Table 1-10. Storage Facilities (2023).

Name	Type	Capacity (ac-ft)	Distribution or Spill
New Hogan Reservoir[a]	reservoir	317,000	distribution
New Melones Reservoir[b]	reservoir	2,400,000	distribution
Dr. Joe Waidhofer WTP	ponds	831	distribution

[a] Reservoir operated by USACE, with SEWD serving as the water master.
[b] Reservoir owned and operated by Reclamation.

A portion of SEWD's water storage capacity is at New Hogan Reservoir along the Calaveras River, which receives its water supply primarily from rainfall runoff. This facility was completed in 1964 and has a total water conservation storage capacity of 317,000 ac-ft at maximum flood stage. The 10-year average storage in the reservoir at the beginning of April is 171,000 ac-ft based on available data between 1989 and 2023 (CDEC, 2024). USACE, DWR, and Reclamation jointly developed the operational plan for New Hogan Reservoir. USACE operates the reservoir for multiple uses, including flood control, municipal and industrial water supply, agricultural irrigation, and recreation. SEWD is the water master and coordinates with the USACE manager regarding daily dam releases to SEWD and CCWD for irrigation and municipal use during non-flood control periods. USACE ensures that the reservoir storage capacity is operated to provide flood control. New Hogan Reservoir is also used for recreation, offering camping, fishing, boating, etc. New Hogan Reservoir is located approximately 30 miles east of Stockton, south of State Highway 26 in Calaveras County.

Water is also stored at New Melones Reservoir, which has a capacity of 2.4 million ac-ft. The reservoir is formed by the New Melones Dam along the Stanislaus River and receives its water from rainfall and snowmelt runoff. The driving force to construct the 625-foot-tall rockfill dam was to provide water for irrigation. The reservoir, owned and operated by Reclamation, is multipurpose, providing flood control, drinking water supply, irrigation supply, hydroelectric power, and recreational activities, including camping, fishing, boating, etc. New Melones Reservoir is located approximately 40 miles east of Stockton, north of State Highway 120 in Stanislaus County.

Regulatory storage is available at the DJW WTP. The ponds at the DJW WTP were initially constructed to provide groundwater recharge, and also serve as a buffer to settle out stormwater. The ponds include a combination of both lined and unlined facilities. There are five ponds currently in service. These include a 19-acre storage and recharge deep pond, a 15-acre flat bottom recharge pond, a 14-acre ridged recharge pond, a 4-acre overflow pond, and a 73-acre storage and recharge pond which have a combined storage capacity of approximately 647 ac-ft. In addition there is 184 ac-ft capacity in lined ponds.

1.B.5. Description of the Agricultural Spill Recovery System

SEWD receives agricultural water from the New Hogan and New Melones Reservoirs on an as-needed basis, and delivers irrigation water to customers through an arranged demand system using a 48-hour notice scheduling system. Tail end loss is closely monitored. SEWD operates the agricultural conveyance system to minimize or prevent tail end loss. SEWD's water ordering system and arranged demand operations have prevented spillage from over-releases, as well as tailwater from over-irrigation.

In above average water years, the irrigation system is operated to ensure maximum recharge opportunities and to minimize end of year releases required to evacuate flood control storage space in New Hogan Reservoir. Wetter years, such as 2022 and 2023, result in higher system tail end loss.

SEWD has no formal agricultural spill recovery system, but the District previously sought and utilized grant funds to implement an early Supervisory Control and Data Acquisition (SCADA) system. Although SCADA is not a spill or tail water recovery system, it allows enhanced surface water management to minimize SEWD's limited system losses. In 2005, SEWD applied for and was awarded a Reclamation Challenge Grant in the amount of $150,255 over two years to implement this SCADA system. SEWD's contribution was $154,553. The equipment was installed in 2006 and was used to remotely monitor 12 sites in key locations within the water conveyance system (one flow monitoring site, 11 pool level monitoring sites), and to provide off-site water gate control at three locations. Before the 2019 update of this Plan, the system had gone offline. Since then, SEWD has installed meters and SCADA at 5 sites to measure spill and 2 are operational.

SCADA and network upgrades are being implemented for the DJW WTP and the conveyance system and are expected to be completed by March 2026. This will provide plant-wide monitoring and control.

SEWD is improving its monitoring system to reduce spillage and increase efficiency on the Calaveras River, Mormon Slough, Mosher Creek, Potter Creek, and at the Diverting Canal. It is estimated these improvements will ultimately conserve up to 3,600 ac-ft/yr of water in an average or below average water year, which would then be available for agriculture, municipal and industrial (M&I), or recharge uses. This effort will enhance water supply reliability for SEWD and improve groundwater conditions in the Eastern San Joaquin County Groundwater Basin, which is designated by DWR as being in a state of critical overdraft (DWR, 2003) and is subject to saline intrusion.

At diversion turnout gates, Doppler radar type meters are used from the following manufacturers: MACE, SONTEK, and Gray Line. In addition to the Doppler style meters, the Bellota pipeline outflow at DJW WTP is metered with a Rosemount venturi style flowmeter. The District employs field-metering staff to keep accurate records of each irrigation outlet's calibration and to monitor the meters at the 54-inch Bellota Pipeline and at the DJW WTP on a daily basis. The District maintains a Rubicon BladeMeter™ at PC-1, PC-2, and PC-3 along Potter Creek, which provides for automated delivery of precise quantities of water using only gravity pressure and solar energy. The BladeMeter™ is being piloted for other future sites.

Additional tasks to be conducted include the retrofit of two existing flow monitoring stations used to transmit data to the SCADA system, and the automation of five water control gates at three locations to allow off-site control. This includes installation of a Rubicon FlumeGate at 8-Mile Dam to be completed in 2025, a FlumeGate at Cotta-Ferreira Dam completed in 2022, a Rubicon SlipMeter at Duck Creek Headworks completed in 2022, and a Rubicon SlipMeter at Mosher Creek Headworks completed in 2021. Acquisition of this "real time" data and automation of the gates will enhance operation and management of SEWD's agricultural water delivery system.

1.B.6. Agricultural Delivery System Operation

The District's agricultural delivery system operation method is indicated in **Table 1-11**.

Table 1-11. Agricultural Delivery System Operation.

On-Demand	Scheduled	Rotation	Other (Arranged Demand)
			×

Agricultural water is delivered from New Hogan and New Melones Reservoirs on an as-needed basis. SEWD delivers irrigation water to customers through an arranged demand system using a 48-hour notice scheduling system. In 2014, SEWD changed its voluntary notification policy to be mandatory (see Rule 120 in **Attachment B** for more detail), however, this has since made ordering water easier. Irrigation customers are now able to order water online, by email, or by calling their water system operators.

SEWD initially assesses the available water supply in New Hogan Reservoir by April of each year and, in dry years, determines whether voluntary or mandatory reductions in water use are required (see Section 1.F. for more detail). The District informs its customers of the available water supply and any need for reductions through its newsletter, as-well-as postcard reminders and the SEWD website.

SEWD requires that its customers contact the District by phone, email, or through the District website (https://sewd.net/ag-water-order-form/) prior to diverting water so that SEWD can adjust releases at the dam. Customers are required to provide the following information 48 hours in advance: name of owner or operator, phone number of owner or operator, pump ID number (location of diversion), diversion rate, beginning diversion date/time, ending diversion date/time, and run time. The District may enforce penalties on customers who do not advise the District prior to their water use. SEWD's postcards remind customers of this penalty and advise customers of the official and actual lead times necessary for water orders and shut-off.

1.B.7. Restrictions on Water Source(s)

Restrictions on water sources historically available to SEWD are described in **Table 1-12**. Contractual restrictions on New Hogan supply stem from the MOU between SEWD and CCWD (see **Attachment L**). Under this MOU, SEWD is assigned 56.5 percent of the yield from New Hogan Reservoir, and any water not used by CCWD is available for SEWD use. New Melones supply follows CVP contractual restrictions and is determined according to water year allocation set by USBR (see **Attachment M**). Water allocation amounts are determined each year by the March-September water forecast and the February end of month storage in New Melones Reservoir. Thus, SEWD does not know how much water it will receive until February. This restriction poses challenges to annual water use planning and scheduling.

1.B.8. Proposed Changes or Additions to Facilities and Operations for the Next Five Years

To improve flexibility of water deliveries to its agricultural customers, SCADA upgrades for the SEWD agricultural conveyance system are planned for the next five years. These upgrades will integrate with the WTP SCADA system, as applicable, benefiting flexibility in water ordering and delivery to both agricultural water users and the urban contractors. Additionally, SEWD has installed Rubicon FlumeGates to measure the Goodwin Tunnel intake and will be operational in the 1st quarter of 2025. A new Replogle Flume will measure Goodwin Tunnel outlet/UFC headworks flow.

In the next five years, SEWD also plans to survey connections currently equipped with PG&E meters or hour meters, assess these for viable repairs, and explore other types of measuring devices that can be installed to volumetrically quantify deliveries to the required six percent accuracy. The majority of active

measured delivery points in SEWD are equipped with McCrometer propeller meters or similar propeller meters (95% of measured connections). However, some are still equipped with PG&E meters or hour meters and have plumbing configurations that do not provide room for propeller meters.

In addition to agricultural delivery meter upgrades, the Peters Pipeline project also has the ability to accommodate additional irrigation outlets that could be installed as desired in the coming years. Already, the project has included construction of 25-28 outlets for delivery of surface water to farmland adjacent to the pipeline, improving delivery flexibility to customers.

In an ongoing effort to improve fish passage through Mormon Slough and the Calaveras River, SEWD has participated with DWR for a fish passage study completed in 2007 and has worked with U.S. Fish and Wildlife Service and DWR to identify four crossings to achieve the most improvement of fish passages. The next projects scheduled under this effort are the Sitkin's Crossing, Fine Road Dam Replacement, Panella Dam Replacement, Prato Dam Replacement, and the Watkins Crossing fish passage projects. Construction of these projects is expected to begin in 2028.

In 2019, California Department of Fish and Wildlife (CDFW) awarded a grant to SEWD to begin design and environmental analysis for the Bellota Intake Fish Screen and Fish Passage Improvement Project. This project aims to protect, restore, and enhance anadromous fish habitat in California to aid the recovery of species. Among the top priorities in the California Water Action Plan is to provide fish passage and fish screening for intakes. The project includes removal of fish passage barriers, installation of fish screens, and construction of a fish bypass. The project is waiting for permits with construction expected to begin in quarter 2 of 2025.

Table 1-12. Restrictions on Water Sources.

Source	Restriction	Cause of Restriction	Effect on Operations
New Hogan	Per MOU any water not used by CCWD is available for SEWD use. Typically, CCWD uses between 3,500 and 3,700 ac-ft per year.	Contractual	Provides additional water supply for SEWD.
New Melones	Reclamation water year is Jan. 1 – Dec. 31, Availability is based on CVP allocations.	Contractual	Provides challenge to the annual water use plan.[a]
New Melones transfer water	Dependent on CVP allocations.	Contractual	Provides challenge to the annual water use plan.[a]

[a] The water years specified in the New Melones agreements, in particular, the transfer water agreement, make it difficult to schedule water use at the needed times.

1.C. TOPOGRAPHY AND SOILS

1.C.1. Topography of the District and its Impact on Water Operations and Management

SEWD is located on the floor of the San Joaquin Valley in San Joaquin County with the City of Stockton lying at its western end. The City of Stockton is located at the confluence of the San Joaquin and Calaveras Rivers on the eastern edge of the Sacramento-San Joaquin Delta. Westerly portions of the City of Stockton are slightly above sea level. SEWD extends 15 miles into the adjoining easterly foothills along the

alignment of the Calaveras River.

The land slopes gently upward as it extends to the east, comprised of basin soils, recent alluvial fans, and flood plain soils to an elevation of approximately 100 feet at the edge of the foothills of the Sierra Nevada. The eastern boundaries of SEWD are bordered by the adjoining foothills, which rapidly narrow the width of the district to the extent of the irrigable land lying along the Calaveras River within the foothills. SEWD extends along the Calaveras River for approximately 8 to 9 additional miles to the County line, between Calaveras, Stanislaus, and San Joaquin Counties, rising in elevation to approximately 170 feet.

The primary topographic difference between the Calaveras River and Stanislaus River watersheds is their elevation, which impacts the timing of surface water availability. Most of the Stanislaus River watershed lies in the upper elevations of the Sierra Nevada (over 7,000 ft mean sea level (msl)), where there is abundant snow melt in the spring and summer months. In contrast, the headwater elevations in the Calaveras River watershed are about 5,000 ft msl, and precipitation throughout the watershed is most often in the form of rainfall during the winter and spring months. Thus, releases from New Hogan Reservoir along the Calaveras River are often required for flood control purposes prior to or early in the irrigation season, resulting in a loss of stored water that is not replenished by spring snowmelt. See Section 1.D. for additional discussion.

1.C.2. District Soil Association Map

The major soil texture classes within SEWD are summarized in **Figure 1-2** and **Table 1-13**. Much of the western portion of the District is comprised of clay, clay loam, and other soil types. The eastern portion of the district is dominated by loam, sandy loam, and gravelly loam soils. See **Attachment A** for soil maps.

1.C.3. Agricultural Limitations Resulting from Soil Problems

SEWD does not have soil problems that affect water operations or management (**Table 1-14**).

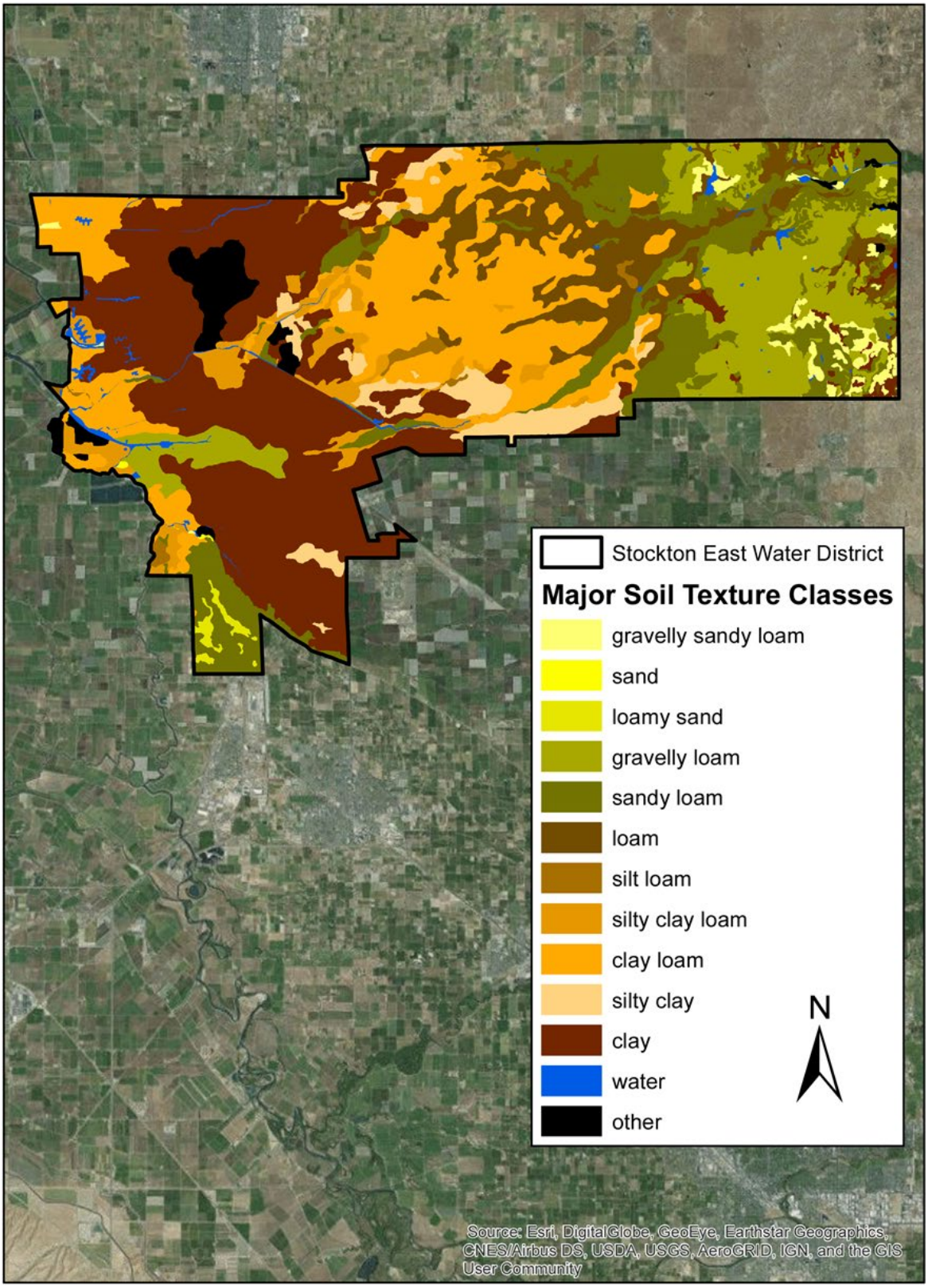


Figure 1-2. Major Soil Texture Classes Within the SEWD Service Area Boundaries.

Table 1-13. Major Soil Texture Classes in SEWD (Representing Areas Greater than 1,000 Acres) (NRCS, 2024).

Soil Texture	Map Unit Name	Area (acres)	Percent of Total Area (%)
Clay Loam	Archerdale clay loam, 0 to 2 percent slopes	12,439	9%
Loam	Cogna loam, 0 to 2 percent slopes	11,953	8%
Gravelly Loam	Redding gravelly loam, 0 to 8 percent slopes, dry, MLRA 17	8,079	6%
Clay Loam	Finrod clay loam, 0 to 2 percent slopes	6,459	5%
Silty Clay	Hollenbeck silty clay, 0 to 2 percent slopes	5,495	4%
Clay	Stockton clay, 0 to 2 percent slopes	4,388	3%
Sandy Loam	Pentz sandy loam, 15 to 50 percent slopes	3,443	2%
Fine Sandy Loam	Columbia fine sandy loam, drained, 0 to 2 percent slopes	3,164	2%
Gravelly Loam	Redding gravelly loam, 1 to 30 percent slopes, dry, MLRA 17	2,185	2%
Sandy Loam	San Joaquin sandy loam, 0 to 2 percent slopes	2,161	2%
Sandy Loam	San Joaquin sandy loam, 2 to 5 percent slopes	1,958	1%
Clay	Jacktone clay, 0 to 2 percent slopes	1,896	1%
Clay	Galt clay, 0 to 1 percent slopes, MLRA 17	1,887	1%
Silty Clay Loam	Vignolo silty clay loam, 0 to 2 percent slopes	1,830	1%
Other	Pentz-Redding complex, 2 to 15 percent slopes	1,736	1%
Clay Loam	Boggiano clay loam, 0 to 2 percent slopes	1,689	1%
Other	Keyes-Redding complex, 2 to 8 percent slopes	1,645	1%
Other	Keyes-Bellota complex, 2 to 15 percent slopes	1,616	1%
Other	Pentz-Bellota complex, 2 to 15 percent slopes	1,406	1%
Fine Sandy Loam	Cogna fine sandy loam, 0 to 2 percent slopes, overwashed	1,399	1%
Clay	Peters clay, 2 to 8 percent slopes	1,223	1%
Silty Clay Loam	Stockton silty clay loam, 0 to 2 percent slopes, overwashed	1,072	1%
Miscellaneous	Other	64,177	45%
Total	All	143,300	100%

Table 1-14. Agricultural Limitations Resulting from Soil Problems.

Soil Problem	Estimated Area (acres)	Effect on Water Operations and Management
Salinity	0	N/A
High-water table	0	N/A
High or low infiltration rates	0	N/A
Other (define)	0	N/A

1.D. CLIMATE

1.D.1. General Climate of the District Service Area

SEWD is located in the heart of the fertile Central Valley of California and has a semi-arid climate featuring hot, dry summers and mild winters. **Table 1-15** provides a summary of average historical weather and climate data obtained from the California Irrigation Management Information System (CIMIS) and the National Oceanic and Atmospheric Administration's - National Centers for Environmental Information (NOAA-NCEI). Average monthly temperatures in SEWD range from 46.3 °F in January to 77.5 °F in July, with a mean annual temperature of 61.8 °F. The average annual precipitation is 13.7 inches, consisting entirely of rainfall. The average annual grass reference evapotranspiration (ET_o) is 52.6 inches.

Table 1-15. General Climate of the District Service Area.

Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Avg. Precip.[a] (in)	2.76	2.15	2.05	1.14	0.42	0.08	0.02	0.03	0.23	0.72	1.64	2.44	13.7
Avg. Temp.[a] (°F)	46.3	50.7	54.5	59.7	66.5	73	77.5	76.4	72.8	64.5	53.5	46.1	61.8
Max. Temp.[a] (°F)	54.6	61.1	66.3	73.2	81.2	89	94.5	92.9	88.6	78.7	64.9	54.6	75.0
Min. Temp.[a] (°F)	37.9	40.3	42.8	46.3	51.7	57.1	60.5	59.9	57.1	50.2	42.1	37.7	48.7
Avg. ETo[b] (in)	1.1	2.0	3.6	5.2	6.8	7.5	8.0	7.0	5.2	3.4	1.7	1.0	52.6

[a] Source: Stockton Metro Airport (WBAN:23237), NOAA-NCEI, period of record: 1948-2024.

[b] Source: Manteca (#70), CIMIS station, period of record: 1987-2024.

Weather station ID: Stockton Metro Airport (WBAN:23237) NOAA-NCEI
Data period: 1948-2024
Average wind velocity (ft/s): 7.7
Average annual frost-free days[3]: 355

Weather station ID: Manteca (#70), CIMIS Station
Data period: 1987-2024
Average wind velocity (ft/s): 4.5
Average annual frost-free days[3]: 358

1.D.2. Impact of Microclimates on Water Management within the Service Area

Given the topography and size of the irrigation service area, microclimates do not impact water management within the service area. However, as described below, the topography of the Calaveras River watershed significantly affects the water supply for the District.

The primary difference between the microclimates of the Calaveras River and Stanislaus River watersheds is their elevation. As described in Section 1.C, most of the Stanislaus River watershed lies in the upper elevations of the Sierra Nevada and receives abundant snowfall, whereas the lower elevations of the

[3]Frost-free days are defined as days with temperatures greater than 28 °F, based on "hard freeze" criteria (NWS, 2018).

Calaveras River watershed rarely receive precipitation in the form of snow. Because of the lack of snow storage in the Calaveras River watershed, New Hogan Dam operations are more difficult because releases often need to be made for flood control purposes, which are not replenished by spring snowmelt. Water that would otherwise be stored is released downstream even in very dry water years.

The Stanislaus River flows are derived largely from snowmelt. Any decrease in snow storage resulting from climate change would thus have a significant impact on Stanislaus River flows and New Melones Dam storage. The Calaveras River flows are derived entirely from rainfall; therefore, the Calaveras River water supply would not be affected by a decrease in snow storage. Nevertheless, other climate changes (e.g., less rainfall) would affect both water supply sources.

1.E. NATURAL AND CULTURAL RESOURCES

1.E.1. Natural Resource Areas within the Service Area

Natural resource areas within the SEWD service area are summarized in **Table 1-16**. SEWD's past and present efforts to manage these resources are described below.

Table 1-16. Natural Resource Areas within the Service Area.

Name	Estimated Area (acres)	Description
Farmington Canal Wetland Mitigation Area	9.9	wetland habitat
Giant Garter Snake Mitigation Area	1.0	giant garter snake habitat
Calaveras River Habitat Conservation Plan	531	Calaveras River and Mormon Slough, Central Valley steelhead critical habitat

1.E.2. Description of District Management of these Resources in the Past or Present

The Farmington Canal Wetland and Giant Garter Snake Mitigation Areas were designed to offset the impacts of the New Melones Conveyance project to wetlands and the giant garter snake habitat. Both sites are outside of SEWD, but on district property. The sites were constructed at a 2:1 ratio of wetland habitat created to wetland impacted. The giant garter snake site uses one-third of an acre-foot of flood control water. The site drains into CSJWCD.

In March 1998, the National Marine Fisheries Service (NMFS) (also known as NOAA Fisheries) listed the Central Valley steelhead as a threatened species evolutionarily significant unit (ESU) under the Endangered Species Act. In March 2000, NOAA Fisheries designated the Calaveras River and Mormon Slough as critical habitat for the Central Valley steelhead ESU. Any actions that might harm the Central Valley steelhead or its habitat are restricted. Because this brought the entire management of the Calaveras River under review, SEWD immediately entered into a pre-informal consultation with federal and state regulators to begin discussing possible changes in the operation of New Hogan Dam and the Calaveras River water supply system.

To improve conditions for salmonids in the Calaveras River, SEWD is working with NOAA National Marine Fisheries Service (NMFS) through an Endangered Species Act Section 10 consultation. Conservation measures and an adaptive management plan are being developed as part of a Calaveras River Habitat Conservation Plan. The Calaveras River Habitat Conservation Plan will provide SEWD with legal

permission to continue using the water resources of the Calaveras River for agricultural, municipal, and industrial purposes.

Since 2001, SEWD has voluntarily implemented several temporary fish passage improvements, including placing sandbags at road crossings to provide better depths and velocities for passage at these structures; installing a temporary Denil fish ladder at the Bellota Weir to allow fish access above the weir; installing a temporary barrier (i.e., net) at the head of the Old Calaveras River channel to prevent juveniles from entering and becoming stranded in the channel; and creating a sandbag wall on the Bellota Weir apron to direct flow into a lower fish ladder so that it would operate more effectively.

The District's Dam Removal Schedule is maintained on the SEWD website and provides information on the termination of irrigation season and when the winter weir and fish ladder is installed. A recent sample schedule is provided at: https://www.sewd.net/irrigation-dam-schedule.

In an ongoing effort to improve fish passage through Mormon Slough and the Calaveras River, SEWD has participated with DWR for a fish passage study completed in 2007. As part of the study and in cooperation with U.S. Fish and Wildlife Service (USFWS) and DWR, SEWD identified four crossings to achieve the most improvement of fish passages. By 2013, fish passage improvements were completed at Budiselich Dam and Caprini Crossing. In September 2015, USFWS provided a federal grant of $170,000 to SEWD to complete the design and implementation of fish passage improvements at the Central California Traction Railroad (CCTR) Crossing (**Figure 1-3**) and to begin coordinating efforts for the Hosie Crossing fish passage projects. Construction of the Hoise Low-Water Crossing project was completed on October 30, 2023 increasing the cross sectional flow area allowing for easier fish passage. DWR completed the design of the CCTR Crossing and construction was completed in 2019. Additional CCTR Crossing project information is provided in **Attachment O**. Additional low water crossing projects completed along the Calaveras River and Mormon Slough since 2019 include the McGurk Low Water Crossing Fish Passage Project, Watkins Low Water Crossing Replacement and Hogan Low Flow Crossing.



Figure 1-3. Central California Traction Railroad Crossing Fish Passage Project Site.

In 2019, CDFW awarded a grant to SEWD to begin design and environmental analysis for the Bellota Intake Fish Screen and Fish Passage Improvement Project. This project aims to protect, restore, and enhance anadromous fish habitat in California to aid the recovery of species. Among the top priorities in the California Water Action Plan is to provide fish passage and fish screening for intakes. The project includes removal of fish passage barriers, installation of fish screens, and construction of a fish bypass.

SEWD will continue to implement interim fish passage improvements until long-term fish passage and screening solutions are identified and put into operation. All of these studies have been, or are currently being, conducted to collect information that will aid in the design and management of the long-term conservation measures and adaptive management processes that will be incorporated into the Calaveras River Habitat Conservation Plan.

1.E.3. Recreational and/or Cultural Resources Areas within the Service Area

The City of Stockton features many neighborhood and community parks, the largest of which are described in **Table 1-17**. These parks offer an array of recreational facilities, sports complexes, and other amenities to serve the Stockton area community. The larger regional parks, such as Oak Grove and Micke Grove, are outside of the city limits as well as the SEWD boundaries.

Table 1-17. Recreational and/or Cultural Resource Areas within the Service Area.

Name	Estimated Area (acres)	Description
Parks in City of Stockton		
Oak Park	61	Located in central Stockton, this city park offers a large tennis complex, an ice arena, baseball and softball fields, pool, and senior citizen center.
Louis Park	60	Located on the San Joaquin River, this city park offers boat ramps and baseball and softball fields, as well as the Pixie Woods Amusement Park which features a carousel, train rides, and children's theater.
Buckley Cove Park	53	Located on the San Joaquin River, this city park offers a boat launch.
Other Community Parks	237	Other Community Parks in City of Stockton
Neighborhood Parks	215	Smaller neighborhood parks and greenspaces in City of Stockton (less than 15 acres each)
Specialty Parks	14	Other specialty parks (e.g. dog park, public school property)
Other Parks in SEWD		
Kennedy Memorial Park	18	Located just west of Highway 99 in southern Stockton, this county park features baseball fields, a basketball court and pool.
Giannone County Park	15	Located just west of Highway 99 in central Stockton, this county park features baseball and soccer fields, and a basketball court.

Source: City of Stockton, Envision Stockton 2040 General Plan, 2018.

The City of Stockton has designated two Historic Preservation Districts — the Magnolia Historic District and Doctor's Row District — and an area designated the "Old City," that is bounded by Harding Way, Wilson Way, Charter Way, and Pershing Avenue (City of Stockton, 2007). The City of Stockton has also designated four historical sites, 13 structures of merit, and 52 historic landmarks, of which two are identified as California Historic Landmarks and 17 are listed in the National Register of Historic Places (City of Stockton, 2018). In addition to resources identified by the City, the National Register and the California Register of Historic Landmarks also designate an additional four historical landmarks (City of Stockton, 2018). San Joaquin County has also designated a number of scenic roadways in the County, including portions of Interstate 5 in SEWD (San Joaquin County, 2016).

Most prehistoric settlement in San Joaquin County was focused along the San Joaquin, Cosumnes, and Mokelumne Rivers, and along the banks on high ground above marshy areas. Much of the historically significant resources are clustered around the City of Stockton downtown area. The evidence from previous survey work and site investigations in the area indicates that the prehistoric site types encompass the following:

- Surface scatters of lithic artifacts and debitage resulting from short-term occupation, and/or specialized economic activities, or long-term occupation.
- Bedrock milling stations, including mortar holes and metate slicks, in areas where suitable bedrock outcrops are present.
- Petroglyphs and/or pictographs.
- Isolated finds of cultural origin, such as lithic flakes and projectile points (City of Stockton, 2007).

1.F. OPERATING RULES AND REGULATIONS

1.F.1. Operating Rules and Regulations

The District Rules and Regulations are provided in **Attachment B**.

1.F.2. Water Allocation Policy (Agricultural Only)

SEWD's agricultural water allocation and delivery policies are provided in **Attachment B** (Rule 166, page 52) and are summarized below.

As water master of New Hogan Reservoir, SEWD assesses the water supply by April of each year. Riparian right users have first call on up to approximately 13,000 acre-feet of water from New Hogan Reservoir pursuant to a settlement agreement. Through contract, the urban area is guaranteed 20,000 ac-ft of water if supplies are available (see **Attachment L**). Water is then allocated to all other surface water users.

As an initial assessment, if a water year is identified as a dry year based on CVP projections and DWR forecasts, SEWD asks its customers for voluntary reductions in use. If a second subsequent year is identified as a dry year, SEWD still requests voluntary reductions, but identifies these reductions as critical. A third subsequent dry year may result in continued voluntary reductions or may require mandatory reductions. SEWD makes this determination at the beginning of the water year. New Hogan Reservoir generally has sufficient water to withstand two to three dry years.

The District informs its customers of the available water supply, and any need for reductions, through its newsletter, as well as postcard reminders and the SEWD website. A final option is to allow diversions only by riparian users and the water treatment plant. In all water years, SEWD requires that its customers call the District in advance of diverting water so that SEWD can adjust releases at the dam.

Customers are required to provide the following information 48 hours in advance of the diversion: location of diversion, name of owner or operator, beginning diversion time, pumping rate, and ending diversion time. The District may enforce penalties on customers who do not advise the District prior to their water use. The postcard reminds customers of this penalty and official and actual lead times necessary for water orders and shut-off.

Under the current Reclamation operation of New Melones Dam, SEWD is also provided with up to 75,000 ac-ft of water from New Melones Reservoir. New Melones Dam releases are controlled by Reclamation CVP allocations. In any year that Reclamation determines there to be a shortage of available water, Reclamation has the right to reduce the quantity of water delivered to each contractor capable of receiving New Melones supply, as necessary, to meet the needs of all Basin contractors.

In total, approximately 220,000 ac-ft to 232,000 ac-ft from all sources is required to supply enough water to meet agricultural demand in SEWD for a full irrigation season, including both surface water and groundwater, based on 3-foot per acre irrigation practice for primary crops grown in the area within the district boundary.

1.F.3. Official and Actual Lead Times Necessary for Water Orders and Shut-Off

SEWD has a mandatory call-in program for water orders and requires at least 48 hours' notice. The District may enforce penalties on customers who do not advise the District prior to their water use, including issuing citations and fines. Customers are reminded of this penalty and advised of official and actual lead times necessary for water orders and shut off. See SEWD Rule 120 in **Attachment B** (page 22) for more detailed information.

1.F.4. Policies Regarding Return Flows (Surface and Subsurface Drainage from Farms) and Outflow

Soils within SEWD boundaries are permeable, so most irrigation tail water penetrates rapidly beyond the root zone of the crops and presents no problems during the irrigation season. Some drainage water collects in open farm ditches and flows to natural waterways where it is reused for irrigation. Present drainage practices present no problems to agriculture.

1.F.5. Policies on Water Transfers by the District and its Customers

Transfer water policy is in Section 6 of the District Act establishing SEWD. The policy specifies that SEWD can sell water outside the district as long as the SEWD water users' needs are met first and water is available. Further details are provided in **Attachment P**.

Customers are not allowed to transfer water to other users.

1.G. WATER MEASUREMENT, PRICING, AND BILLING

1.G.1. Agricultural Customers

a. Number of delivery points (turnouts and connections) 245 (185 active turnouts)
b. Number of delivery points serving more than one farm 0
c. Number of measured delivery points (meters and measurement devices) 176 (all active measured)
d. Percentage of delivered water that was measured at a delivery point 95 (estimate)
e. Total number of delivery points not billed by quantity 17
f. Delivery point measurement device table **Table 1-18**

Table 1-18 summarizes the agricultural delivery point measurement devices installed at active and inactive

turnouts, as of 2023. In 2023, SEWD had a total of 245 agricultural delivery connections, of which 228 are measured with McCrometer propeller and electromagnetic saddle meters (or similar propeller meters). By 2026, all propeller meters are expected to be replaced by electromagnetic saddle meters.

The remaining measured connections are equipped with PG&E meters or hour meters, which use an equation to calculate volumes (see **Attachment Q.4**.), however, these meters are charged a flat rate based on irrigated acreage as described later on in this section. Many of these connections have been surveyed for retrofit with propeller meters. However, the plumbing configurations of these connections do not provide room for these measurement devices. In the next five years, these connections will be assessed for viable repairs and to explore other types of measuring devices to volumetrically quantify deliveries to the required accuracy.

Table 1-18. Agricultural Delivery Point Measurement Devices, Active and Inactive (2023).

Measurement Type	Number	Accuracy (+/- %)	Reading Frequency (Days)	Calibration Frequency (Months)	Maintenance Frequency (Months)
Orifices	0				
Propeller meter	228 (176 active)	+/- 6%[a]	30	As needed	As needed
Weirs	0				
Flumes	0				
Venturi	0				
Metered gates	0				
Acoustic doppler	0				
Other: Hour meters	17 (9 active)	+/- 25-30%[b]	30	As needed	As needed
Total	245 (185 active)				

[a] New meter technology ensures accuracy +/-6% with calibration as needed. See example of factory certification in **Attachment C**.

[b] The plumbing configurations of these connections do not provide room for propeller meters. In the next five years, these connections will be assessed for viable repairs and to explore other types of measuring devices to volumetrically quantify deliveries to the required accuracy.

Currently, the District charges a fixed non-metered rate of 2.8 ac-ft per acre for non-metered delivery locations. The fixed rate charges are based on the irrigated acreage that is self-reported by the customer on the Owner's Water Use Statement (OWUS). The OWUS is completed by each grower and submitted to the District in January of each calendar year. A sample OWUS is provided in **Attachment N**.

For 2023, there are 9 active turnouts without meters. The connections will be assessed for viable repairs and to explore other types of measuring devices that could volumetrically quantify deliveries. In the interim, SEWD could make comparisons with the groundwater metering usage for customers who are non-metered and help address self-reporting discrepancies regarding the irrigated acreage. See Section 3.A for additional information.

1.G.2. Urban Customers

a. Total number of connections 3
b. Total number of metered connections 3
c. Total number of connections not billed by quantity 0
d. Percentage of water that was measured at delivery point 100
e. Percentage of delivered water that was billed by quantity 100
f. Delivery point measurement device table **Table 1-19**

Table 1-19 summarizes the delivery point measurement devices installed at SEWD's urban connections. SEWD is under contract to supply wholesale treated surface water from DJW WTP to Cal Water, the City of Stockton, and San Joaquin County. Drinking water is retailed to Stockton area customers by these three urban contractors. SEWD does not own or operate an urban distribution system.

1.G.3. Agricultural and Urban Rates

a. Current year agricultural and/or urban water charges - including rate structures and billing frequency.

See **Attachment D.2**. for the 2023 and 2024 rate ordinances (Ordinance No. 49 and 50, respectively).

Table 1-19. Urban Delivery Point Measurement Devices (2023).

Meter Size and Type	Number	Accuracy (+/- percentage)	Reading Frequency (Days)	Calibration Frequency (Months)	Maintenance Frequency (Months)
5/8-3/4"					
1"					
1 ½"					
2"					
3"					
4"					
6"					
8"					
10"					
Compound					
Turbo					
Other[a]	3 (all active)	+/- 6%	annual	annual	annual
Total	3 (all active)				

[a] Two pipelines (24-inch and 42-inch) deliver water to south City of Stockton, as measured by one meter, and a third pipeline (48-inch) delivers water to north City of Stockton, as measured by a second meter. A 42-inch pipeline delivers water to Cal Water and is measured by a third meter. The City of Stockton wheels water to San Joaquin County.

b. Annual charges collected from urban and agricultural customers

Table 1-20 provides a summary of the annual charges collected from urban and agricultural customers in 2023, including both fixed and volumetric charges. SEWD does not sell agricultural and domestic groundwater to its customers, but instead issues assessment fees for the use of the wells as part of their mandate to protect the groundwater supply. The domestic groundwater assessment is based on domestic use units One domestic unit is equivalent to one building infrastructure (ex. home, office) that has access to the groundwater through the well on the property. . The agricultural groundwater assessment is $6.15 per ac-ft, assuming 2.8 ac-ft per acre of irrigated land. The assessment volume represents the average estimated consumptive use of irrigation water by groundwater-irrigated crops in the district. The assessment charges are based on the irrigated acreage that is self-reported by the customer on the Owner's Water Use Statement (OWUS). The OWUS is completed by each grower and submitted to the District in January of each calendar year. A sample OWUS is provided in **Attachment N**.

See **Attachment D.1**. for a 2023 sample District bill.

Table 1-20. Annual Charges Collected from Urban and Agricultural Customers (2023).

Charge Type	Customer Type	Water Type	Charge per Unit	Units Billed	Charges Collected
Fixed	Urban	Domestic groundwater	$54.00/domestic use unit	5,998	$323,892
	Agricultural	Surface water	$23.00/ac-ft	1,932[a]	$44,436
		Agricultural groundwater	$6.15/ac-ft[b,c]	127,595[a]	$784,709
Volumetric	Urban	Municipal groundwater	$425.05/ac-ft[d]	1,213	$515,586
	Agricultural	Metered surface water	$23.00/ac-ft	21,496[a]	$494,408
		Metered groundwater	$6.15/ac-ft[b,c]	5,977[a]	$36,759
		Surface Water, Out of District	$215.94/ac-ft	6,303[e]	$1,361,070

[a] Source: SEWD 2023 Crop Report, January 2024.

[b] SEWD does not sell agricultural groundwater to its customers; SEWD assesses the use of the wells, based on acreage, as part of their mandate to protect the groundwater supply.

[c] Groundwater assessments calculated based on 2.8 ac-ft/ac of irrigated land.

[d] Based on a water use rate of $3.60/ac-ft plus a rate equalization charge of $425.05/ac-ft.

[e] Source: 2023 Agricultural Surface Water Report.

c. Description of the contractor's record management system

The District employs field-metering staff to keep accurate records of each irrigation delivery meter's calibration, and to monitor the meters at the 54-inch Bellota Pipeline and at the DJW WTP on a daily basis. Irrigation delivery meters are read on a monthly basis from mid-April through mid-October.

SEWD's agricultural water use records contain information on the location, acres irrigated, gate numbers, meter numbers, water usage, crops irrigated, and miscellaneous information on growers' equipment and water history.

Information regarding crop types, irrigation methods, acres fallowed/not irrigated, acres irrigated with groundwater, acres irrigated with surface water, and a statement of non-agricultural irrigation water use are requested as part of the District billing process and submitted by each grower on the OWUS (see **Attachment N**). This information is submitted by the irrigator under penalty of perjury.

Agricultural water use and information regarding crop types, irrigation methods, acres fallowed/not irrigated, acres irrigated with groundwater, acres irrigated with surface water, and non-agricultural irrigation water uses are all accounted in the District's Annual Crop Report. These records are entered and managed in Microsoft® Excel. New Melones and New Hogan surface water supplies are accounted in the District's Annual Agricultural Surface Water Report (agricultural use) and in the metered inflows to the DJW WTP, including inflows to percolation ponds, and metered outflows to the urban contractors (urban use).

1.H. WATER SHORTAGE ALLOCATION POLICIES

1.H.1. Current Year Water Shortage Policies or Shortage Response Plan

SEWD's agricultural water allocation policies and water shortage plan are described in Section 1.F of this Water Management Plan. Additional detail is also provided in the District's Drought Management Plan (**Attachment E.1**). This plan documents SEWD's compliance with the requirements established by DWR and Governor Brown's April 1, 2015 Executive Order B-29-15.

In summary, SEWD serves as water master of New Hogan Reservoir and is responsible for assessing water supply and managing allocations. In all years, riparian right users have first access to a maximum of 13,000 ac-ft of water from New Hogan Reservoir pursuant to a settlement agreement. Through contract, the urban area is guaranteed 20,000 ac-ft of water if supplies are available. Water is then allocated to all other surface water users.

New Hogan Reservoir generally has sufficient water to withstand two to three dry years. During an initial dry year following a period of wet years, SEWD asks its customers for voluntary reductions in use. If a second subsequent year is identified as a dry year, SEWD still requests voluntary reductions, but identifies these reductions as critical. A third subsequent dry year may result in continued voluntary reductions, or may require mandatory reductions SEWD makes this determination at the beginning of the water year.

The District's Urban Water Shortage Plan is provided in **Attachment E.2**.

1.H.2. Current Year Policies that Address Wasteful Use of Water and Enforcement Methods

SEWD's Rule 120 establishes a mandatory 48-hour notification requirement for any person desiring to divert surface water provided by the district. The stated objective of this rule is to avoid waste of surface water. This rule establishes penalties for customers who do not properly request water or who do not inform the district of their cessation of use. The District may send a warning notification and/or a notification failure, impose fines, and lock-off water service, as determined by the Board of Directors in their sole discretion. A penalty of $100 is assessed for the first failure to notify; $200 for the second; and $500 for each subsequent failure (see **Attachment B, page 22**).

No procedures have been established for wasting water once the customer diverts the water, as customers pay for water received, and would not be expected to waste it.

1.I. EVALUATE POLICIES OF REGULATORY AGENCIES THAT AFFECT THE CONTRACTOR AND INHIBIT GOOD WATER MANAGEMENT

SEWD has two water contracts that have different contract water years. These differing water years have posed challenges to annual water use planning and scheduling. See Section 1.B.7 for additional detail. For ease of scheduling and providing the most economical water for its customers, SEWD continues to negotiate for a standard contract year.

The current Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary by the State Water Resources Control Board (dated December 12, 2018) and the resulting voluntary agreement process will have a significant impact on the operation of New Melones Reservoir, affecting water availability and reliability for SEWD. The potential reduction will force additional groundwater usage, which is contrary to the intent of SGMA. The phased approach could also potentially affect the Calaveras River flow, creating a larger impact on SEWD.

SECTION 2 INVENTORY OF WATER RESOURCES

2.A. SURFACE WATER SUPPLY

2.A.1. Surface Water Supplies Imported and Originating within the Service Area

The monthly surface water supplies available to SEWD are summarized in the Section 5 Water Inventory Tables (**Table 5-1**). In 2023, SEWD received both federal agricultural water and federal non-agricultural water from New Hogan and New Melones Reservoirs. No other surface water supplies were imported into the District.

2.A.2 Amount of Water Delivered to the District by each of the District Sources for the Last 10 Years

The annual surface water supplies available to the District between 2014 and 2023 are summarized in the Section 5 Water Inventory Tables (**Table 5-10**). Both the source and volume are provided for each delivery.

2.B. GROUNDWATER SUPPLY

2.B.1. Groundwater Extracted by the District and Delivered

Monthly groundwater volumes extracted and delivered by the District and private users are summarized in the Section 5 - Water Inventory Tables (**Table 5-2**).

2.B.2. Groundwater Basin that Underlies the Service Area

SEWD is a conjunctive use District and overlies the Eastern San Joaquin Groundwater Basin[4] (**Table 2-1**). The Eastern San Joaquin basin encompasses 1,195 square miles (764,800 acres), generally bounded by Highway 99, Jack Tone Road, Mokelumne River and Temple Creek, and has an estimated sustainable yield of approximately 704,000 ac-ft/yr (Eastern San Joaquin Groundwater Authority, 2019).

Table 2-1. Groundwater Basin that Underlies the Service Area.

Name	Area (sq. mi.)	Usable Capacity (ac-ft)	Sustainable Yield (ac-ft/yr)
Eastern San Joaquin Groundwater Basin	1,195	See website: https://www.esjgroundwater.org/Documents/GSP	713,200

2.B.3. Map of District-Operated Wells and Managed Groundwater Recharge Areas

District Maps of Groundwater Facilities are included in **Attachments A**.

The District currently has five wells located at the DJW WTP site that are used for emergency purposes only, such as during dry years when surface water supplies are reduced. A new well is planned to be added by the first quarter of 2025. All other wells in the district are privately owned. If groundwater is needed to supplement surface water, it is blended with surface water for processing through the DJW WTP and is subsequently delivered to the City of Stockton, San Joaquin County, and Cal Water for urban distribution.

[4] Groundwater basin number 5-022.01, part of the San Joaquin Valley Groundwater Basin, as defined by DWR Bulletin 118 (DWR, 2003) and updated in 2020.

The primary effort for managed groundwater recharge in SEWD using dedicated groundwater recharge areas is from the Farmington Groundwater Recharge Program. This program is led by SEWD in partnership with the Sacramento division of the USACE. The goal of the program is to recharge an average of 35,000 acre-feet of water annually into the Eastern San Joaquin Basin, in part by directly recharging surface water to the groundwater aquifer. Available surplus water from SEWD's conveyance system is diverted into recharge cells at the project site, enabling recharge largely through field-flooding.

In 2003, SEWD completed the Pilot Phase of the Program, which consisted of 60 acres of recharge ponds and fields adjacent to the DJW WTP. Recharge rates at these ponds currently average over 0.45 feet per day, with an average annual recharge of approximately 2,820 ac-ft per year between 2019 and 2023. The Demonstration Phase, which began in 2003, aimed to obtain 25 to 30 parcels of land, totaling 1,200 acres, for directly recharging surface water to the groundwater aquifer. As of 2020, the new North Reservoir consisting of 73-acres of recharge area is in operation adding 384 ac-ft of storage at the DJW WTP.

Additional information regarding the Farmington Groundwater Recharge Program is provided in Sections 2.B.4, 2.B.5 and 2.B.6.

2.B.4. Description of Conjunctive Use of Surface and Groundwater

SEWD promotes conjunctive use of surface and groundwater through efforts to increase groundwater recharge and to encourage in-lieu recharge by providing surface water deliveries to irrigators as an alternative to private groundwater pumping. The overarching goals of the conjunctive use programs in SEWD include reversing groundwater overdraft and salinity intrusion, protecting water quality, meeting the challenges of climate change, and providing a sustainable water supply.

Across the Eastern San Joaquin Groundwater Basin, groundwater levels have decreased at the rate of 0.5 ft per year between 1996 and 2015 (Eastern San Joaquin Groundwater Authority, 2019). Since the early 1960s, hydrographs for wells underlying SEWD east of Stockton show a long-term average decline in groundwater of nearly 1.0 ft per year.

Recent analysis of historical groundwater conditions in the 2024 Eastern San Joaquin Final Groundwater Sustainability Plan (GSP) has estimated that the historical groundwater storage in the basin decreased by an average of 48,000 ac-ft per year between 1996 and 2023. The same plan estimates that approximately 56,000 ac-ft per year of increased groundwater recharge and/or reduction in groundwater extraction is required to achieve sustainability over the next 55 years.

Drought conditions between 2012 and 2016 reemphasized the importance of recharge from surface water supplies for the Eastern San Joaquin Groundwater Basin to be operated sustainability, as required by the enactment of the Sustainable Groundwater Management Act of 2014 (SGMA). In its efforts to achieve this basin-wide sustainability goal, SEWD is promoting conjunctive use of surface and groundwater through efforts to increase groundwater recharge and to encourage in-lieu recharge.

The Draft 2024 Eastern San Joaquin Groundwater Basin GSP shows that seepage and deep percolation of SEWD's surface water supply serves as a significant source of recharge to the groundwater subbasin. Thus, management of surface water resources by SEWD and its irrigation customers is crucial for achieving the basin's sustainability goals. SEWD is and will continue to actively work with others within San Joaquin County to comply with SGMA. In addition to its own water management practices, SEWD will work with local interests to develop the tools needed to achieve long-term groundwater sustainability by identifying additional ways to maximize local water supplies, enhance conjunctive management practices, and recharge the groundwater system.

At present, groundwater recharge within SEWD is furnished largely by regulated releases from New Hogan Reservoir down the Calaveras River. These releases are regulated by SEWD to achieve the greatest beneficial use for the district. In the 1960s, check dams were built on the Calaveras River, Mormon Slough, and Mosher Creek to promote groundwater recharge from percolation. Measurements made by Murray, Burns & Kienlen (now MBK Engineers) for a water rights study of the Calaveras River system indicate that there is an average percolation of 6 cfs between New Hogan Dam and Jenny Lind, and more than 7 cfs between Jenny Lind and Bellota (Murray, Burns & Kienlen, 1969). Without the check dams in place, the percolation along Mormon Slough and the old Calaveras River below Bellota is 13 cfs each; with the check dams in place, the percolation rates increase to 19 cfs and 31 cfs, respectively.

Assuming that the check dams are in place and full for the maximum period permitted (213 days) and that sufficient water is flowing in the channels, the maximum annual percolation is 34,000 ac-ft, of which approximately 29,000 ac-ft percolates below Bellota. Water is not available for recharge during the maximum period during average years. Recharge for an average year is estimated at 26,000 ac-ft of which approximately 21,000 ac-ft percolates below Bellota.

SEWD also provides groundwater recharge through the Farmington Groundwater Recharge Program, which was initiated in 2003 following a series of studies that identified groundwater overdraft as a problem in Eastern San Joaquin County. The Farmington Dam and Reservoir Conjunctive Use Study, completed in 1998, evaluated potential structural and operational changes at Farmington Dam and found that long-term storage at Farmington Reservoir does not appear to be cost-effective. However, operations modifications to Farmington Dam and construction of groundwater recharge facilities appeared to be cost-effective. The Conjunctive Use Study recommended that the feasibility of groundwater recharge with integrated seasonal waterfowl habitat areas in eastern San Joaquin County be evaluated.

The 2001 Farmington Groundwater Recharge and Seasonal Habitat Study, prepared by SEWD in conjunction with the USACE and other local agencies, resulted from these concerns. This feasibility-level study was developed to determine the potential for development of integrated groundwater recharge and seasonal habitat improvements in Eastern San Joaquin County.

Conclusions of the study became the outline for the first phase of the subsequent Farmington Groundwater Recharge Program, launched in 2003, which plans for implementation of the flooded-field groundwater recharge technique on up to 1,200 acres for an average water recharge of approximately 35,000 ac-ft per year. The Pilot Phase of the program, completed in 2003, and current recharge rates average _2,820___ AF/year (2019-2023).

In addition to direct groundwater recharge, the estimated in-lieu recharge in SEWD is approximately 76,000 ac-ft per year, as of 2013 (DWR, 2013).

Analysis shows that seepage and deep percolation of much of SEWD's surface water supply serves as a major source of recharge to the groundwater subbasin. Thus, management of surface water resources by SEWD and its irrigation customers is crucial for achieving the basin's sustainability goals. SEWD is and will continue to actively work with others within San Joaquin County to comply with SGMA. In addition to its own water management practices, SEWD will work with local interests to develop the tools needed to achieve long-term groundwater sustainability by identifying additional ways to maximize local water supplies, enhance conjunctive management practices, and recharge the groundwater system

2.B.5. Groundwater Management Plan

The Eastern San Joaquin Final Groundwater Sustainability Plan (GSP) is provided on the Eastern San Joaquin Groundwater Authority's website: (https://www.esjgroundwater.org/Documents/GSP)

The GSP was initially prepared in 2020, revised in 2022 and revised again in 2024. The GSP described the regions hydrology and water resources, discusses monitoring programs, develops criteria for managing groundwater sustainably, and includes projects that will help the region meet sustainability.

As a GSA in the Eastern San Joaquin Groundwater Basin, SEWD plans to implement two in-lieu recharge projects described in the Final GSP (Section 6). The first planned project is the Lake Grupe In-lieu Recharge project, in which a surface water diversion turn-out would be constructed on the Calaveras River upstream of Bellota and used to supply surface water to an estimated 2,500 acres of orchard crops currently using groundwater. The project includes two phases. The first phase included construction of the turnout, and it is complete. The second phase included installation of private pumps from the Lake into orchards. The second planned project is the Surface Water Implementation Expansion project, in which SEWD would encourage landowners adjacent to surface water conveyance systems to utilize surface water as part of the SGMA implementation, effectively increasing surface water usage by about 18,000 to 20,000 ac-ft/year with in-lieu groundwater recharge benefits.

Additionally, SEWD has proposed one potential project, the Farmington Dam Repurpose project, that would increase the reservoir capacity from 52,000 ac-ft of flood control storage to 112,000 ac-ft of combined water supply and flood control storage. This additional supply could be stored and used even in drought conditions and could also be used to encourage surface water irrigation.

2.B.6. Groundwater Banking Plan

SEWD actively pursues any possible groundwater banking activities.

The Farmington Groundwater Recharge Program is one program led by SEWD in partnership with the Sacramento division of the USACE and aims to identify areas suitable for recharge and seasonal habitat development, evaluate recharge techniques, and conduct pilot recharge tests. SEWD and the USACE, in a cost-share agreement, created the program with the intent of replenishing the aquifer to help ensure future groundwater supply and protect against further saltwater intrusion in the Eastern San Joaquin County Basin.

In 2003, SEWD completed the Pilot Phase of the Farmington Groundwater Recharge Program, which consisted of 60 acres of recharge ponds and fields adjacent to the DJW WTP. This project was awarded the American Society of Civil Engineers Water/Environmental Project of the Year in 2003 and the San Joaquin Council of Government's Regional Excellence award in 2004.

SEWD is continuing to identify and develop new recharge sites for this phased program. Available surplus water from SEWD's conveyance system is diverted into recharge cells at the project site. Stored surface water would be pumped from the aquifer for agricultural, municipal, and industrial use. Recharge afforded by this program averaged approximately 12,235 ac-ft per year between 20219 and 2024.

See **Attachment G** for a program brochure and the most recent newsletter, which gives an overview of the program. Additional information is provided at: https://www.spk.usace.army.mil/Missions/Civil-Works/Farmington/.

2.C. OTHER WATER SUPPLIES

2.C.1. "Other" Water Used as Part of the Water Supply

Other water supplies used by SEWD are summarized in the Section 5 Water Inventory Tables (**Table 5-1**).

In the past, SEWD has obtained transfer water from Rock Creek Water District (RCWD), OID and SSJID. SEWD now has water transfer agreements with these agencies and typically receives some transfer water each year it is available. See **Attachment Z** for copies of the agreements.

2.D. SOURCE WATER QUALITY MONITORING PRACTICES

2.D.1. Potable Water Quality (Urban Only)

SEWD supplies wholesale treated drinking water from the DJW WTP to three urban contractors – Cal Water, the City of Stockton, and San Joaquin County – that retail this water to Stockton area customers. Water quality reports for the outflows from and inflows to the DJW WTP are provided in **Attachments H.1. and H.2**., respectively.

2.D.2. Agricultural Water Quality Concerns

Yes _____ No ×

There are no current surface water quality problems that limit the use of surface water as an agricultural or potable water supply. However, in the past *Phytophthora* fungus has been identified in the Calaveras River water and is of concern to some irrigators. *Phytophthora* originates on land but is spread through water and can cause root rot, crown rot, and the decline and death of fruit and nut trees. Thus, there is concern among growers regarding the use of surface water for their crops and orchards. *Phytophthora* could be a limiting factor regarding the use of surface water for irrigation of affected permanent crops. A report on the *Phytophthora* fungus can be found on the District's website:
https://www.sewd.net/files/5d36e19f9/Phytophthora-Study.pdf

While groundwater quality in the Eastern San Joaquin Subbasin is generally sufficient to meet beneficial uses, a number of constituents of concern are either currently impacting groundwater use or have the potential to impact it in the future. These include salinity, nitrate, arsenic, and point-source contamination from generally anthropogenic sources (e.g. petroleum hydrocarbons, solvents, and emerging contaminants). In its role as a GSA in the Eastern San Joaquin Groundwater Basin, SEWD is helping to establish guidelines for efforts to preserve groundwater quality with other various stakeholders as part of the Eastern San Joaquin GSP development. See the final GSP for additional details.

Extensive groundwater pumping has caused declining aquifer water levels, which have contributed to movement of saline water eastward from under the Delta since the 1940s (DWR, 1967 and Eastern San Joaquin Groundwater Authority, 2019). Groundwater degradation has been particularly evident in the Stockton area, where groundwater chloride concentrations at some wells have exceeded 250 milligrams per liter (mg/L) – the EPA's (Environmental Protection Agency) secondary maximum contaminant level used to identify salinity concerns (Eastern San Joaquin Groundwater Authority, 2019). It is expected that additional surface water from New Melones Reservoir and other sources used in groundwater recharge efforts will stabilize the movement of the saline water.

Since the 1970s, elevated concentrations of arsenic have been observed in groundwater within the Stockton area, with several measurements exceeding the EPA's maximum contaminant level of 10 micrograms per liter (µg/L) (Eastern San Joaquin Groundwater Authority, 2019). Determining the source of arsenic in groundwater is a challenge as arsenic is both naturally occurring and used in human activities, such as agriculture. However, elevated arsenic concentrations have not been found to be related to groundwater management activities in the basin. SEWD will continue to monitor arsenic and other regulated and unregulated constituents of interest in its water supply.

Also, since the 1970s, nitrate concentrations have increased in Stockton and surrounding agricultural areas, in some places exceeding 10 mg/L – the EPA's MCL for nitrate in drinking water sources. Two existing regulatory programs for monitoring and regulating nitrate in the Eastern San Joaquin Groundwater Basin include the Irrigated Lands Regulatory Program (ILRP) and Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS). The ILRP requires testing and potential mitigation for nitrate in domestic wells, while the 2017 Salt and Nitrate Management Plan developed by CV-SALTS identifies long-term nitrate management practices. As a GSA in this basin, SEWD supports these efforts.

2.D.3. Description of the Agricultural Water Quality Testing Program and the Role of Each Participant, Including the District, in the Program

SEWD began irrigation water quality monitoring for surface water at seven key points in the irrigation water conveyance system in 1997. On an annual basis SEWD samples eight offsite locations (**Table 2-2**) to test for typical water quality parameters important to agricultural irrigation, as described in Section 2.D.4. See **Attachment H.2**. for sample detailed reports for 2023. All results indicate a high-quality water supply that is suitable for irrigation of all crops grown in the District.

Table 2-2. Surface Water Quality Monitoring Program Sampling Locations.

Code	Monitoring Location
CR-1	New Hogan Reservoir
CR-5	Calaveras River at Bellota
MS-1	Beginning of Mosher Creek
MS-2	Mosher Creek after last irrigator
CR-6	Calaveras River after last irrigator
PC-1	Potter Creek after last irrigator
M-1	Mormon Slough after last irrigator
PP-1	Peters Pipe at Potter Creek Siphon

The results are available on SEWD's web site (https://sewd.net/water-quality/) and upon request from the SEWD Water Quality Control Analyst:

Kyle Brothers
Chief Plant Operator
Post Office Box 5157
Stockton, CA 95205
209-948-0537
KBrothers@sewd.net

2.D.4. Current Agricultural Water Quality Monitoring Programs by Source

The current agricultural and domestic water quality monitoring programs overseen by SEWD are summarized in **Table 2-3**.

SEWD's water quality lab staff monitor typical water quality parameters important to agricultural irrigation, including calcium, magnesium, potassium, sodium, carbonate, bicarbonate, sulfate, chloride, nitrate, boron, fluoride, pH, electrical conductivity, and turbidity. Sample test results during 2023 are summarized in **Table 2-4**.

SEWD staff also evaluate DJW WTP raw water influent for operational purposes, specifically monitoring cryptosporidium, total coliforms, Total Organic Carbon (TOC), Heterotrophic Plate Count (HPC).

Table 2-3. Current Agricultural Water Quality Monitoring Programs for Surface Water.

Analyses Performed	Frequency	Concentration Range	Average
Domestic Water Quality and Monitoring Regulations California Code Chapter 15, Title 22	As required by code	See **Attachments H.1. and H.2**.	See **Attachments H.1. and H.2**.
Agricultural Irrigation Suitability Test	Annual	See **Attachment H.2., Table 2-5**	See **Attachment H.2**.

Table 2-4. Sample Agricultural Water Quality Test Results for Parameters Monitored in SEWD Surface Water (2023).

Constituent	Units	Calaveras River at Bellota[a]	Stanislaus River, End of Pipeline[a]
Cations			
Calcium	mg/L	15	7
Magnesium	mg/L	7	3
Potassium	mg/L	2	1
Sodium	mg/L	5	3
Anions			
Carbonate	mg/L	<10	<10
Bicarbonate	mg/L	60	40
Sulfate	mg/L	8.8	2.9
Chloride	mg/L	3	1
Nitrate	mg/L	<2	<2
Fluoride	mg/L	<0.1	<0.1
Other Constituents			
pH	std units	8.1	7.9
Specific Conductivity	dS/m	0.2	0.07
Lab Turbidity	NTU	2.4	5.5

[a] FGL Environmental, Inorganic Chemicals Analysis, report dated July 3, 2023.

No significant changes in water quality were found compared to the values reported in the 2019 Water Management Plan.

In general, groundwater quality within the Eastern San Joaquin Subbasin is suitable for municipal, industrial, and agricultural supplies. However, as discussed above, saline water has been moving eastward from the Delta as a result of declining water levels. **Table 2-5** summarizes the District's groundwater quality monitoring programs.

SEWD provides a courtesy monitoring service for private well-owners upon request. This service can include an assessment for potential groundwater quality issues and monitoring of groundwater specific conductance. In the past, one well owner in French Camp requests the service due to the high salinity of groundwater in this area. Test results have ranged from 600 to 2,500 µmhos/cm (0.6-2.5 dS/m) with an average of 1,000 µmhos/cm (1 dS/m).

As required by code, SEWD also monitors water quality from District wells when used for M&I purposes.

Table 2-5. Current Water Quality Monitoring Programs for Groundwater.

Analyses Performed	Frequency	Concentration Range	Average
Specific Conductivity	As requested in past years by well owner in the French Camp only. A high salinity area within SEWD.	600-2,500 µmhos/cm	1,000 µmhos/cm
Domestic Water Quality and Monitoring Regulations California Code Chapter 15, Title 22, District wells 74-01 & 74-02 (M&I use only)	As required by code	Included in DJW WTP outflow following mixing with surface water (**Attachment H**)	

2.E. WATER USES WITHIN THE DISTRICT

2.E.1. Agricultural

Agricultural water use to satisfy crop needs is summarized in the Section 5 - Water Inventory Tables (**Table 5-7**).

2.E.2. Types of Irrigation Systems Used for Each Crop in Current Year

Table 2-6 summarizes the major irrigation methods currently used in the District for irrigating each crop. As described above, information regarding irrigation methods are requested from and submitted by irrigators in the OWUS as part of the District billing process.

Higher-efficiency sprinkler and low-volume irrigation systems are most commonly used throughout the District, reflecting the rise in orchard and vineyard crops typically irrigated by these methods. Slight differences in irrigation system acreage and crop acreage may be due to double counting of areas where multiple systems are used, missing non-agricultural irrigated areas, and reporting of irrigation systems on land that has been idled or ripped and replanted, a process that may take several years.

2.E.3. Urban Use by Customer Type in Current Year

SEWD supplies wholesale treated drinking water from the DJW WTP to three urban contractors – the California Water Service Company (Cal Water), the City of Stockton, and San Joaquin County – that retail this water to Stockton area customers. Urban water use reported by each of these contractors is summarized in **Tables 2-7 through 2-9**.

2.E.4. Urban Wastewater Collection/Treatment Systems Serving the Service Area

Urban wastewater in the SEWD Service Area is collected and treated by the Stockton Regional Wastewater Control Facility (RWCF). The RWCF is a 55-MGD tertiary wastewater treatment facility owned and operated by the City of Stockton that collects and treats an average of 33 MGD of municipal wastewater generated within the City's wastewater service area (City of Stockton, 2021). In 2020, the RWCF produced approximately 31,000 ac-ft of treated wastewater. Historically, treated wastewater was released into the San Joaquin River, through which it entered the Sacramento/San Joaquin River Delta. Since 2017, City of Stockton has reused all treated wastewater, leaving no excess treated wastewater available for nearby agricultural use.

Table 2-6. Types of Irrigation Systems Used for Each Crop (2023[a]).

Crop name	Total Area (acres)	Flood (acres)	Furrow (acres)	Sprinkler[b] (acres)	Drip (acres)	Micro (acres)
Alfalfa	580	125	0	0	455	0
Almonds	2,970	0	54	151	1,811	955
Apples	220	0	0	170	30	20
Basil	1	0	0	0	1	0
Beans	165	0	64	0	101	0
Blueberry	47	0	0	47	0	0
Cherries	10,320	297	0	7,710	1,679	634
Chestnuts	40	0	0	40	0	0
Corn	349	77	184	0	89	0
Eggplant	30	0	0	0	30	0
Field Crop	744	5	305	369	65	0
Grapes	1,511	0	0	48	1463	0
Grass	86	0	0	0	4	82
Landscape	5	0	0	5	0	0
Lilac	0	0	0	0	0	0
Melons	248	0	0	72	176	0
Mixed	22	0	10	8	5	0
Not Applicable	2,877	1,031	90	984	742	31
Nursery	15	0	0	15	0	0
Oats	21	6	0	15	0	0
Olives	353	0	0	2	352	0
Onions	68	4	0	32	32	0
Orchard	1,928	43	0	1,685	41	159
Pasture	1,158	853	2	290	14	0
Peaches	588	11	0	185	209	184
Pears	23	0	0	23	0	0
Pecans	3	0	0	1	2	0
Peppers	46	0	7	37	2	0
Persimmon	19	0	0	19	0	0
Pistachios	97	0	0	19	78	0
Plums	4	0	0	0	0	4
Pomegranate	1	0	0	0	1	0
Pumpkins	110	0	10	97	4	0
Squash	43	0	43	0	0	0
Strawberry	4	0	0	3	2	0
Tomatoes	345	61	20	149	115	0
Vineyard	4,394	0	0	572	3,822	0
Walnuts	31,862	156	127	24,599	5,541	1,439
Wheat	79	70	0	0	0	9
Total	61,377[c]	2,739	915	37,343	16,863	3,517

Source: SEWD Irrigation Reports.

[a] Irrigation methods are self-reported by irrigators as part of the SEWD billing process and are not compiled by the District until later in the following year. This information is unavailable for 2024 at the time of this WMP development (January 2023).

[b] Sprinkler irrigation systems (self-reported by growers) are generally high-efficiency systems similar to low volume systems in SEWD.

[c] An error of 0.09% between Table 1-2 Irrigated Acres and Table 2-6 Total Area exists potentially due to rounding errors in grower's self-reported values or the practice of double cropping a single field.

Table 2-7. Urban Use by Customer Type, City of Stockton (2020).

Customer Type	Number of Connections	Volume (ac-ft)
Single-family	41,920	15,758
Multi-family	5,068	3,030
Commercial	N/A	4,700
Industrial	N/A	533
Industrial (Walnut Plant Area)	N/A	176
Landscape	N/A	3,255
Wholesale	N/A	1,830
Other (hydrant meters and jumpers)	N/A	132
Losses	N/A	4,991
Total	49,573	34,404

Source: City of Stockton 2020 Urban Water Management Plan, 2021.
Note: Number of connections only provided for single-family residential, multi-family residential and total connections in the UWMP

Table 2-8. Urban Use by Customer Type, California Water Service Company (2020).

Customer Type	Number of Connections[a]	Volume (ac-ft)
Single-family	N/A	12,293
Multi-family	N/A	1,545
Commercial	N/A	5,019
Institutional/Gov't	N/A	2,133
Industrial	N/A	1,626
Other Potable	N/A	14
Landscape	N/A	77
Losses	N/A	1,399
Total	43,752	24,106

Source: California Water Service Company 2020 Urban Water Management Plan, 2021.
[a] A breakdown of connections by water user type was not provided in the UWMP.

Table 2-9. Urban Use by Customer Type, San Joaquin County (2020).

Customer Type	Number of Connections	Volume (ac-ft)
Single-family	0	0
Multi-family	0	0
Commercial	20	100
Industrial	0	0
Institutional	10	100
Landscape irrigation	10	100
Wholesale	0	0
Recycled	0	0
Other (assessed)	1,760	1,400
Unaccounted for		0
Total	1,780	1,500

Source: Estimated based on projected deliveries to San Joaquin County in Stockton East Water District 2020 Urban Water Management Plan (2021) and historical San Joaquin County Utilities Operations Department of Public Works records (2010).
Note: Until water use is at or above 2,000 ac-ft annually, San Joaquin County is not subject to the Urban Water Management Planning process.

Table 2-10. Urban Wastewater Collection/Treatment Systems Serving the Service Area.

Treatment Plant	Treatment Level (1, 2, 3)	Volume[a] (ac-ft)	Disposal Location / Uses
Stockton Regional Wastewater Control Facility	3	26,111	San Joaquin River
Total		26,111	
Total Discharged to Ocean and/or Saline Sink		-	

[a] 2020 volume, from the City of Stockton 2020 Urban Water Management Plan, 2021.

2.E.5. Groundwater Recharge/Management in Current Year

Groundwater recharge in SEWD is provided by the Farmington Groundwater Recharge program and by seepage from natural rivers, creeks, and canals within the District boundaries. The total recharge volume in 2023 is summarized in **Table 2-11** for each source.

2.E.6. Transfers and Exchanges into the Service Area in Current Year

SEWD purchases water from OID and SSJID through a water transfer agreement established in 2023 (**Tables 2-12 and 2-13**). In 2023, SEWD purchased 1,200 ac-ft from OID and SSJID.

SEWD purchases water from RCWD through a long-term water transfer agreement. In 2023, SEWD purchased 1,000 ac-ft from RCWD.

In addition, transfers are not allowed between agricultural water users.

2.E.7. Wheeling or Other Transactions In and Out of the District Boundaries in Current Year

SEWD wheels water to CSJWCD through the Upper and Lower Farmington sections of the New Melones

Conveyance System. The total recorded deliveries in 2023 are summarized in **Table 2-14**.

Table 2-11. Groundwater Recharge (2023).

Recharge Area	Method of Recharge	Volume (ac-ft)	Method of Retrieval
60 ac	Farmington Groundwater Recharge Program ponds	3,703	Groundwater pumping
73 acres	North Recharge Basin	8,310	Groundwater pumping
849 ac	Seepage during agricultural and M&I deliveries (natural rivers, creeks, and canals)	61,409[a]	Groundwater pumping
700 ac	Seepage during natural flows and flood flows (natural rivers and creeks)	299,880[b]	Groundwater pumping
Total		373,302	

Sources:
[a] From **Table 5-5**. Combined seepage from Mormon Slough, Potter Creek, and Mosher Creek during agricultural deliveries, and Calaveras River and the New Melones Conveyance System during agricultural and M&I deliveries.
[b] Total estimated seepage along natural creeks and rivers in SEWD when agricultural and M&I deliveries are not occurring.

Table 2-12. Transfers and Exchanges Into the Service Area (2023).

From Whom	To Whom	Volume (ac-ft)	Use
OID/SSJID	SEWD	1,200	Urban/agricultural
RCWD	SEWD	1,000	Urban/agricultural

Table 2-13. Transfers and Exchanges Out of the Service Area (2023).

From Whom	To Whom	Volume (ac-ft)	Use
SEWD	N/A	0	N/A

Table 2-14. Wheeling or Other Transactions In and Out of the District Boundaries (2023).

From Whom	To Whom	Volume (ac-ft)	Use
SEWD	CSJWCD	38,759	agricultural

2.E.8. Other Uses of Water in Current Year

SEWD does not collect information on other water uses in the District, except for irrigation and municipal usage (**Table 2-15**).

Table 2-15. Other Uses of Water (2023).

Other Uses	Volume (ac-ft)
N/A	0

2.F. OUTFLOW FROM THE DISTRICT

The locations of surface and subsurface outflow points, outflow measurement points, and outflow water-quality testing locations are identified in **Attachment A**. These locations and outflows are also described below.

2.F.1. Surface and Subsurface Drain/Outflow in Current Year

SEWD primarily uses natural waterways to convey surface water to growers. Surface outflows from the District occur along natural waterways at three locations on the district boundary: Mormon Slough at Main Street, the Calaveras River at McAllen Road, and Mosher Creek at Leffler Dam (**Table 2-16**). Outflows along these waterways provide required instream flows. The total outflows are estimated based on measured releases from New Hogan Reservoir and New Melones Reservoir, measured surface water inflows to SEWD for irrigation, measured deliveries to growers, and measured surface water inflows to the DJW WTP. Total outflows from the District are estimated, based on a water balance of the distribution system, to be approximately 3,000 ac-ft per year, on average; however, the outflow volume and acreage that drains through each particular discharge location is unknown. Installation of radio and SCADA is in process, each site will measure outflows along natural waterways. Outflow from these points flow to the Stockton Diverting Canal and subsequently flow to the Delta (**Table 2-17**). Additional outflows occur from the Lower Farmington Canal at Rock Creek. All excess releases from New Melones Reservoir flow down Rock Creek into CSJWCD.

Table 2-16. Surface and Subsurface Drainage/Outflow (2023).

Outflow Point	Location Description	Volume (ac-ft)	Type of Measurement	Accuracy (%)	Percent of Total Outflow	Area Drained (ac)
Main Street	along Mormon Slough	-[a]	Calculated based on measured inflows and deliveries	-[a]	90%[b]	-[a]
McAllen Road	along Calaveras River	-[a]	Calculated based on measured inflows and deliveries	-[a]		-[a]
Leffler Dam	along Mosher Creek	-[a]	Calculated based on measured inflows and deliveries	-[a]		-[a]
Rock Creek	along Lower Farmington Canal	-[a]	Calculated based on measured inflows and deliveries	-[a]		-[a]

[a] The total outflow volume and acres drained per outflow location is not known. There are no accurate measurements available at this time.
[b] The three sites together measured an estimated 90% of the total outflow from the District.

Table 2-17. Drainage/Outflow Locations (2023).

Outflow Point	Where the Outflow Goes (Drain, River or Other Location)	Type Reuse
Main Street	Stockton Diverting Canal	Unknown (Outside of District)

McAllen Road	Stockton Diverting Canal	Unknown (Outside of District)
Leffler Dam	Stockton Diverting Canal	Unknown (Outside of District)
Rock Creek	CSJWCD	Unknown (Outside of District)

2.F.2. Description of the Outflow Water Quality Testing Program

At this time, SEWD does not participate in an outflow water quality testing program.

2.F.3. Outflow Quality Testing Program

SEWD does not have a water quality testing program for surface or subsurface outflows from the District (**Table 2-18** and **2-19**).

Table 2-18. Outflow (Surface Drainage and Spillage) Quality Testing Program.

Analyses Performed	Frequency	Concentration Range	Average	Reuse Limitation
N/A				

Table 2-19. Outflow (Subsurface Drainage) Quality Testing Program.

Analyses Performed	Frequency	Concentration Range	Average	Reuse Limitation
N/A				

2.F.4. District Involvement in Central Valley Regional Water Quality Control Board Programs or Requirements

SEWD is not currently involved in any remediation or monitoring programs in conjunction with the Central Valley Regional Water Quality Control Board.

2.G. WATER ACCOUNTING (INVENTORY)

The agricultural and urban water supplies available to and delivered by SEWD are summarized in the Section 5-Water Inventory tables. These tables include detailed monthly and annual accounting of the following District inflows and outflows:

1. Water Supplies
   a. Surface water supplies, imported and originating within the service area, by month (Table 5-1)
   b. Surface water supplies, imported and originating within the service area, each of the last 10 years (Table 5-10)
   c. Groundwater extracted by the district, by month (Table 5-2)
   d. Estimated annual groundwater extracted by private pumping, by month (Table 5-2)
   e. Recycled urban wastewater, by month (Table 5-3)
   f. Effective precipitation, by crop (Table 5-7)
   g. Other supplies, by month (Table 5-1)

2. Water Used
   a. Agricultural conveyance losses, including evaporation, seepage, and operational spillage from canal systems (Table 5-5)
   b. Urban distribution system losses, including leaks, breaks, and flushing/fire losses (Table 5-6)
   c. Consumptive use of applied water, by crop (Table 5-7)

d. Water use for leaching and cultural practices (e.g., frost protection, soil reclamation, etc.), by crop (Table 5-7)
e. Consumptive use by riparian vegetation or environmental use (Table 5-8)
f. Groundwater recharge (Table 5-8)
g. Water transfers out of district (Table 5-8)
h. Drainwater outflow from the District (Table 5-8)
i. Estimated deep percolation within the service area (Table 5-8)
j. Change in groundwater storage (Table 5-9)
k. Outflow to a perched water table or saline sink (Table 5-9)

SECTION 3 BEST MANAGEMENT PRACTICES (BMPS) FOR AGRICULTURAL CONTRACTORS

3.A. CRITICAL AGRICULTURAL BMPS

The 2023 Standard Criteria describe five critical BMPs that are required for all federal water suppliers:

1. Measure the volume of water delivered to customers with sufficient accuracy for aggregate reporting.
2. Designate a water conservation coordinator.
3. Provide or support the availability of water management services to water users.
4. Adopt a pricing structure based at least in part on the quantity delivered.
5. Evaluate and improve efficiencies of contractor's pumps/evaluate and improve the efficiencies of the supplier's pumps.

SEWD is implementing all federal, critical BMPs. Each one is discussed in greater detail in the following sections.

3.A.1. Measure the Volume of Water Delivered by the District to each Turnout with Devices Operated and Maintained to a Reasonable Degree of Accuracy

STATUS: IMPLEMENTING

a. Number of delivery points (turnouts and connections) 245 (185 active turnouts)
b. Number of delivery points serving more than one farm 0
c. Number of measured delivery points (meters and measurement devices) 176 (all active measured)
d. Percentage of delivered water that was measured at a delivery point 95 (estimate)
e. Total number of delivery points not billed by quantity 17
f. Delivery point measurement device table Table 3-1

Table 3-1 summarizes the agricultural delivery point measurement devices installed at active and inactive turnouts, as of 2023. In 2023, SEWD had a total of 245 agricultural delivery connections, of which 228 are measured with McCrometer propeller meters and electromagnetic saddle meters (or similar propeller meters). By 2026, all propeller meters are expected to be replaced by electromagnetic meters. The remaining measured connections are equipped with PG&E (electric) meters or hour meters, which use an equation to calculate volumes (see **Attachment Q.4.**). Many of these connections have been surveyed for retrofit with propeller meters; however, their plumbing configurations do not provide room for such measurement devices. The District also began to use magnetic meters in 2018 and will continue to explore other types of measuring devices to volumetrically quantify deliveries to the required accuracy.

For 2023, there are 9 active turnouts without meters. These connections will be assessed for viable repairs and to explore other types of measuring devices that could volumetrically quantify deliveries. In the interim, SEWD could make comparisons with the groundwater metering usage for customers who are non-metered and help address self-reporting discrepancies regarding the irrigated acreage.

Irrigation delivery meters are read on a monthly basis from the start of irrigation season in April through the end of the season in October/November. Among other information, SEWD's records track the water usage and acres irrigated at each delivery point. The District employs field-metering staff to keep accurate records regarding the calibration of each irrigation outlet. Additionally, SEWD is looking into developing

an ongoing program that would calibrate each meter every 5-years so that the District is following California SB-88 and "Emergency Regulation for Measuring and Reporting The Diversion of Water."

Table 3-1. Agricultural Delivery Point Measurement Devices, Active and Inactive (2023).

Measurement Type	Number	Accuracy[a] (+/-%)	Reading Frequency (Days)	Calibration Frequency (Months)	Maintenance Frequency (Months)
Orifices	0				
Propeller meters	228 (176 active)	+/- 6%	30	As needed	As needed
Weirs	0				
Flumes	0				
Venturi	0				
Metered gates	0				
Acoustic doppler	0				
Other: Hour meters[b]	17 (9 active)	+/- 25-30% [b]	30	As needed	As needed
Total	245 (185 active)				

[a] New meter technology ensures accuracy +/-6% without the need for field calibration. See example of factory certification in **Attachment C**.

[b] The plumbing configurations of these connections do not provide room for propeller meters. In the next five years, these connections will be assessed for viable repairs and to explore other types of measuring devices to volumetrically quantify deliveries to the required accuracy

3.A.2. Designate a Water Conservation Coordinator to Develop and Implement the Plan and Develop Progress Reports

STATUS: IMPLEMENTING

In 2004, the District created a position for a full time Water Conservation Coordinator with the responsibility to develop and implement a comprehensive public outreach and water conservation education program. The District designated Kristin Coon of Kristin Coon Consulting as the District's urban water conservation coordinator to manage conservation and outreach activities and coordinate with the retailers to implement water conservation efforts. The job description and minimum qualifications of this position are provided in **Attachment R**. Chris Donishas taken on the role as the Agricultural Water Conservation Coordinator, and is responsible for the five-year plan preparation, plan implementation and annual USBR updates. SEWD will maintain an appropriate and responsible staff person in the position of water conservation coordinator.

Name: Kristin Coon / Chris Donis
Title: Water Conservation Coordinator
Address: 6767 East Main Street, Stockton, CA 95207
Telephone: (209) 444-3126
E-mail: kcoon@sewd.net / Cdonis@sewd.net

3.A.3. Provide or Support the Availability of Water Management Services to Water Users

SEWD collaborates with other local agencies to provide technical assistance to growers with the goal of

increasing on-farm water use efficiency throughout the Stockton area. Information on these programs is provided below and in **Attachment I**, Notices of District Education Programs and Services Available to Customers. Specific implementation efforts are described for each BMP below.

3.A.3.a. Provide On-farm Evaluations and Water Delivery Information

STATUS: IMPLEMENTING
Using grant funding from Reclamation, SEWD has provided on-farm irrigation evaluations free to its customers since 1999. The evaluations have been promoted through SEWD's semi-annual newsletter, District field personnel, and at District Advisory Committee meetings, which are attended by stakeholders representing the urban and agricultural areas of SEWD. The on-farm evaluation program is voluntary but is encouraged and supported by SEWD.

. In recent years, between one and three farms have been surveyed per year (**Table 3-2**). SEWD will continue to offer these services free to its customers. In the future, SEWD plans to advertise its on-farm irrigation and pump testing program in its newsletter, on its website (https://sewd.net/), and on the Owner's Water Use Statement.

The actual cost of an irrigation evaluation is approximately $2,500. Offering this evaluation free to customers represents a discount of greater than 25 percent off the fair market price of the evaluation, thereby complying with Reclamation's example of an adequate program per the 2023 Standard Criteria.

Table 3-2. Number of On-Farm Evaluations.

Survey	Number of Farms	Irrigated Area (acres)
Total in District[a]	224	59,711
Number Surveyed (2020)	3	70
Number Surveyed (2021)	0	0
Number Surveyed (2022)	0	0
Number Surveyed (2023)	0[b]	0[b]
Number Projected (2024)	3	15-70[b]

[a] Based on number of active and inactive farm gates.

In its efforts to provide timely field and crop-specific water delivery information to customers, SEWD collects meter readings on a monthly basis. As described previously, field-level crop information is self-reported by customers as part of the District billing process. With this information, SEWD prepares an Annual Crop Report that summarizes water use per crop, water use per method of irrigation, and estimated total water use and metered use. This report is posted and available to SEWD customers at the SEWD office.

3.A.3.b. Provide Real-time and Normal Irrigation Scheduling and Crop Evapotranspiration Information

STATUS: IMPLEMENTING

SEWD has provided its customers with ET information available from the California Irrigation Management Information System (CIMIS). CIMIS is a program of the DWR Office of Water Use Efficiency and was developed in 1982 by DWR and the University of California, Davis, to assist irrigators in managing their water resources efficiently.

SEWD provided daily and seven-day-average evapotranspiration (ET) information from the Lodi West Station 166 and Manteca Station 70 through its CIMIS Hotline (209-942-4647) beginning in January 1998. Between 1998 and 2004 there were no inquiries; therefore, the hotline was discontinued.

Subsequently, SEWD provided its customers with ET information through a link to the CIMIS web site on the District website home page. Signage at the District office and SEWD's spring and fall newsletters, which are delivered to all of SEWD's customers, have also been used to direct customers to the CIMIS website. However, CIMIS has historically provided reference evapotranspiration (ET_o) rather than crop-specific ET information. Although growers can calculate ET for their crop based on information available on the CIMIS website (i.e. adjusting CIMIS ET_o by crop coefficients for particular crop types and ages), crop-specific ET information was not readily available on the CIMIS website.

Consequently, the Irrigation Training and Research Center (ITRC) at California Polytechnic State University, San Luis Obispo, working under a technical services agreement with the U.S. Bureau of Reclamation Mid-Pacific Region, undertook a review of the procedure and materials used to create estimates for Irrigation Allowance Index evaluations and Crop Water Requirements for the growers in SEWD (ITRC, 2013). The Irrigation Allowance Index compares two values: the volume of water that should be applied to a certain crop (termed Irrigation Allowance; based on crop evapotranspiration, effective precipitation, and estimated distribution system uniformity), and the volume of water that is actually applied. These values can be used to create a real-time irrigation scheduling tool for the growers as well as a simple evaluation of total water use at the end of the irrigation season. A list of crops and Crop Evapotranspiration (ET_c) values was compiled specifically for SEWD to provide growers with a resource for irrigation management. A complete explanation of the methodology, as well as the irrigation allowance values and the Irrigation Allowance Index developed for SEWD growers, is provided in **Attachment S**.

3.A.3.c. Provide Surface, Ground, and Drainage Water Quantity and Quality Data to Water Users

STATUS: IMPLEMENTING

SEWD began a water quality monitoring program for surface water at seven key points in the irrigation water conveyance system in 1997. As described in Section 2.D.4, District staff monitor typical water quality parameters important to agricultural irrigation and evaluate DJW WTP raw water influent for operational purposes. The results are displayed on SEWD's web site and Water Conservation Information table at the SEWD office. As required by code, SEWD also monitors water quality from District wells when used for M&I purposes. Sample results of urban and agricultural water quality tests from 2023 are presented in **Attachments H.1. and H.2**.

SEWD's agricultural groundwater quality monitoring programs are also described in Section 2.D.4. SEWD provides a courtesy monitoring service for private well owners upon request, which can include an assessment for potential groundwater quality issues and monitoring of groundwater specific conductance. The results are provided to the private well owners.

3.A.3.d. Provide Agricultural Water Management Educational Programs and Materials for Farmers, Staff, and the Public

STATUS: IMPLEMENTING

Agricultural water management educational materials and programs available to growers, staff, and the public are summarized in **Table 3-3**. The primary educational material provided by SEWD is the AG Water Report, which is co-funded by the SEWD Advisory Committee. This report is distributed with the SEWD newsletter and has a circulation of 6,500 accounts that include growers, District staff, and other interested parties (**Figure 3-1**). A sample newsletter and AG Water Report is provided in **Attachment I**.

One major agricultural educational event hosted by SEWD is the State of the City event, which is co-funded by the City of Stockton, California Water Service Company, and San Joaquin County. The target yearly attendance of this event is 2,000 attendees.

In addition to this event, SEWD, as a member of the Stockton Area Water Suppliers (SAWS), sponsors and hosts numerous public outreach and school education programs. These are discussed in further detail in Section 4.A.2.

In its role as a Groundwater Sustainability Agency (GSA) in the Eastern San Joaquin Groundwater Basin, SEWD also conducts outreach to growers regarding the Sustainable Groundwater Management Act (SGMA) and development of the basin's Groundwater Sustainability Plan (GSP).

Table 3-3. Agricultural Water Management Educational Programs and Materials Available to Farmers, Staff, and the Public.

Program	Co-Funders	Yearly Targets
AG Water Report	SEWD Advisory Committee	6,500 accounts
Chamber of Commerce State of the City	City of Stockton, Cal Water, San Joaquin County	2,000 attendees
SAWS programs	City of Stockton, Cal Water, San Joaquin County	See Section 4.A.2 for targets and details.

3.A.3.e. Other
STATUS: IMPLEMENTING

SEWD plans to continue incorporating agricultural BMPs into its daily operations and support ongoing efforts to provide water management services to growers.

3.A.4. Pricing Structure based on Quantity Delivered

STATUS: IMPLEMENTING

SEWD's adopted rates for agricultural and urban water are described in Section 1.G.3.

SEWD's surface water pricing structure is based on the quantity of water delivered. In 2023, customers in the District were charged at a rate of $23.00/ac-ft. Approximately ninety-five percent of the volume delivered is based on measurements recorded by water meters (described in Section 1.G.1.). In the remaining cases where installation of a water meter would require capital improvements to the private owner's water pumping system, water quantity is determined using pump tests and hour meters.

Domestic groundwater users were charged a flat rate of $52.00 for each private domestic well in 2023.



STOCKTON EAST WATER DISTRICT

Newsletter & AG Water Report

2024/2025 Fall & Winter

SUSTAINABLE GROUNDWATER MANAGEMENT ACT (SGMA) UPDATES

The Eastern San Joaquin Groundwater Authority (GWA) is currently working on the five-year Groundwater Sustainability Plan (GSP) update, due in January 2025. The draft five-year GSP update will be available for public review beginning October 1. The GWA also adopted a Domestic Well Mitigation Program to help well owners impacted by declining groundwater levels. For more information about the GSP update and Domestic Well Mitigation Program, please visit **www.esjgroundwater.org**

The good news in the five-year GSP update is many Groundwater Sustainability Agencies (GSAs), like SEWD, are completing projects that help progress the groundwater basin towards sustainability. Since implementing the GSP, the District has reduced groundwater demand by more than 12,000 acre feet annually by providing surface water. The bad news is the Department of Water Resources is requiring development of a demand reduction (curtailment) program to decrease groundwater pumping if groundwater levels reach a certain threshold. Current modeling estimates the basin-wide reduction between 56,000 and 166,000 acre-feet annually, depending on the modeling scenario. Thankfully, the District has surface water supplies and programs available for our customers to minimize potential impacts of demand reduction. The District offers a cost recovery program to growers converting to surface water and is working on securing Federal grant funding to support construction of new surface water divisions. We also off compensation to growers that recharge flood water during the non-irrigation season. Please reach out to our office for more information about connecting to surface water and/or recharging flood water. Additional information is available on our website **www.sewd.net/sewd-sgma**.

2024 Dam Removal Schedule

Begin Date Wednesday, October 9, 2024

2024			
System	Site	Begin Date	End Date
Calaveras River	Bellota Weir	10/9/2024	10/11/2024
Mormon Slough	Motoike Dam	10/15/2024	10/15/2024
Mormon Slough	Fine Road Dam		
Mormon Slough	Avansino Dam	10/16/2024	10/16/2024
Mormon Slough	Hosie Dam		
Mormon Slough	Bonomo Dam		
Mormon Slough	Piazza Dam		
Mormon Slough	Prado Dam	10/17/2024	10/17/2024
Mormon Slough	Fuginaka Dam		
Mormon Slough	Lovagi Dam		
Mormon Slough	Panella		
Mormon Slough	Main St. Dam	10/18/2024	10/18/2024
Duck Creek	Duck Creek		
Potter Creek	Lagorio Dam		
Old Calaveras River	Clements Dam	10/21/2024	10/21/2024
Old Calaveras River	Tully Dam		
Mosher Creek	Tully Mosher Dam	10/22/2024	10/22/2024
Mosher Creek	Lyons Dam		
Mosher Creek	Bear Creek Dam	10/23/2024	10/23/2024
Old Calaveres River	8 Mile Dam	10/24/2024	10/24/2024
Mormon Slough	8000 Pump		
Old Calaveras River	Murphy Dam	10/25/2024	10/25/2024
Old Calaveras River	Pezzi Dam		
Old Calaveras River	Solari Dam		
Old Calaveras River	McAllen Rd. Dam	10/28/2024	10/28/2024
Potter Creek	Cherryland dam		
Potter Creek	Moitoike Dam #2		
Potter Creek	Billingmeier Dam	10/29/2024	10/29/2024
Potter Creek	Drais Rd. dam	10/29/2024	10/29/2024

In accordance with the District's Habitat Conservation Plan (HCP) all New Hogan system dams will be removed in downstream order.

Updates to this tentative schedule will be posted online at *www.sewd.net*

The last day for New Melones water is September 30th.

CALAVERAS HCP

As part of this long-term agreement, NOAA fisheries has issued a 50-year Incidental Take Permit (ITP) for the operations and maintenance of SEWD facilities on the Calaveras River. In turn, SEWD has committed to an array of conservation actions to benefit fish populations on the Calaveras River over that time period. The Calaveras HCP allows for an adaptive management plan that would support future studies of the fish community below New Hogan Dam. The HCP was approved in August 2020 and has been implemented for three full years. The District has made considerable progress towards design completion for a new fish screening, fish passage, and fish exclusion facility at Bellota, in addition to designing four other fish barrier removal projects. The District is also eager to partner with surface water diverters to install fish screens on pump intakes and will assist customers with pursuit of grant funding. Any stakeholders interested in implementation of the HCP are encouraged to visit the District website at **www.sewd.net/habitat-conservation-plan/**.

More information about the plan, including monthly reports and videos are available on the District's website "HCP" page

BOARD OF DIRECTORS

The District's Board of Directors meet regularly every Tuesday at 12:30 p.m. located at 6767 East Main Street Stockton, CA 95215

DIVISION 1—Richard Atkins, President
DIVISION 2—Andrew Watkins
DIVISION 3—Alvin Cortopassi
DIVISION 4—Melvin Panizza
DIVISION 5—Paul Sanguinetti
DIVISION 6—Paul Nakaue
DIVISION 7—Thomas McGurk, Vice President

Figure 3-1. SEWD Newsletter and AG Water Report, Fall/Winter 2024/2025, Page 1.

There is no water conservation pricing structure for municipal or agricultural groundwater because SEWD is not selling the water, but rather assessing for the use of a well. Municipal groundwater users are assessed on the quantity of water used at a rate of $3.60/ac-ft, with a rate equalization charge of $421.45/ac-ft resulting in a total charge of $425.05/ac-ft (in 2023). Agricultural groundwater users are assessed on the quantity of water used at a rate of $6.15/ac-ft.

3.A.5. Evaluate and Improve Efficiencies of District Pumps

STATUS: IMPLEMENTING

SEWD owns two pumps which can pump water from Mormon Slough into Potter Creek. In 2001, modifications were made to SEWD's Bellota Pipeline which allowed for gravity flow from the SEWD pipeline to Potter Creek. The cost savings realized from this project are comparable to the 2001 expenses, approximately $30,000. However, this practice can only be used when there is an adequate water supply from both the New Melones and New Hogan water contracts. The pipeline is dedicated to M&I use only when SEWD is relying 100 percent on the New Hogan water supply. Since these pipeline modifications, SEWD's two pumps have been used a few days per year in most years to provide sufficient volume to meet downstream needs when gravity flow is not available or insufficient through Bellota Pipeline. SEWD maintains these pumps regularly and last evaluated their efficiencies in 2019 (**Table 3-4**). The results of these pump tests are provided in **Attachment T**. SEWD plans to continue testing these pumps on a regular basis in the next several years.

Table 3-4. SEWD Agricultural Pump Efficiency Evaluations.

Pump Location	Total in District	Number Surveyed, Last Year (2022)	Number Surveyed, Current Year (2023)	Number Next Year (2024)
Wells	N/A	-	-	-
Lift Pumps	2	0	0	0

3.B. EXEMPTIBLE BMPS FOR AGRICULTURAL CONTRACTORS

3.B.1. Facilitate Alternative Land Use

STATUS: NOT APPLICABLE

The SEWD service area does not include agricultural lands with poor drainage characteristics (**Table 3-5**). Thus, no programs have been required or developed to encourage alternative land uses.

Table 3-5. Facilitate Alternative Land Uses for Agricultural Lands with Poor Drainage Characteristics.

Drainage Characteristic	Area (acre)	Potential Alternative Uses
High water table (<5 feet)	0	N/A
Poor drainage	0	N/A
Groundwater selenium concentration > 50 ppb	0	N/A
Poor productivity	0[a]	N/A

[a] SEWD is not aware of significant acreage within the district that is subject to poor productivity.

3.B.2. Facilitate Use of Available Recycled Urban Wastewater

STATUS: NOT APPLICABLE

Since 2017, the City of Stockton has reused all treated wastewater, leaving no excess treated wastewater available for nearby agricultural use. SEWD supports the City of Stockton's recycling efforts.

SEWD's agricultural area is also primarily upstream of urban recycled wastewater from City of Stockton. Considerable pumping would be required to provide this recycled water to SEWD customers.

Table 3-6. Facilitate Use of Available Recycled Urban Wastewater.

Sources of Recycled Urban Wastewater	Volume Available (ac-ft/yr)	Volume Currently Used in District (ac-ft/yr)
City of Stockton	0	0

3.B.3. Facilitate the Financing of Capital Improvements for On-Farm Irrigation Systems

STATUS: IMPLEMENTING

SEWD offers a Surface Water Incentive Program that encourages irrigators to convert from groundwater to surface water by offering surface water to irrigators at lower cost while they are paying the capital costs for facility improvements (**Table 3-7**). Under this program, the owner of the pumping facility is charged the groundwater assessment rate for water until the capital costs of the facility have been amortized or for up to seven (7) years, whichever occurs first. SEWD advertises this program to customers in its newsletter and on its web page.

SEWD, in conjunction with South San Joaquin Irrigation District (SSJID), and North San Joaquin Water Conservation District (NSJWCD) secured a State Water Efficiency & Enhancement Project (SWEEP) Block Grant to fund water and energy conservation projects. In February 2024, these Districts opened up an application period for their growers. SWEEP was developed in 2014 in response to severe drought in California. SWEEP provides financial incentives for California agricultural operations to invest in irrigation systems that save water and reduce greenhouse gas (GHG) emissions. Through the SWEEP Block Grant Pilot Program, the California Department of Food and Agriculture (CDFA) aims to support regional capacity building and provide opportunities for regional strategic use of SWEEP funding to address local concerns regarding water conservation and water efficiency by providing funding to organizations to provide both technical and financial assistance.

Table 3-7. Facilitate the Financing of Capital Improvements for On-Farm Irrigation Systems.

Programs	Description
Surface Water Incentive Program	Program encourages system conversion from groundwater to surface water through water pricing incentives. Under this program, participating owners of pumping facilities are offered surface water at the reduced groundwater assessment rate until the capital costs of the facility have been amortized
State Water Efficiency & Enhancement Program Block Grant (SWEEP)	Program provides financial incentives for SEWD constituents to invest in irrigation systems that save water and reduce GHG emissions. Under this program, approximately 35 projects will be awarded from $20,000 to $200,000.

3.B.4. Incentive Pricing

STATUS: IMPLEMENTING

SEWD is implementing this BMP by promoting conjunctive use of groundwater by charging a low groundwater assessment fee that, combined with the O&M costs incurred by groundwater users, incentivizes the use of surface water. The District uses this assessment fee to promote the use of available

surface water supplies (goals B and C). By maintaining low water rates for surface water relative to groundwater pumping, SEWD is promoting conservation of precious groundwater resources and sustainability of the subbasin through in-lieu and direct recharge. As a result, the District's surface water rate is much less expensive than the cost to produce groundwater, thereby incentivizing the use of surface water.

SEWD's enabling legislation limits its ability to offer further pricing incentives for water (see **Attachment P**).

3.B.5. Improve District Ditches, Canals, and Reservoirs

STATUS: IMPLEMENTING

3.B.5.a. Line or Pipe Ditches and Canals

SEWD primarily distributes surface water through 64 miles of unlined natural channels on the Calaveras River, Mormon Slough, Mosher Creek, and Potter Creek. Seepage from these natural waterways and canals provides natural recharge to the groundwater basin.

SEWD also has two main canal systems, Upper Farmington Canal and Lower Farmington Canal, which are part of the New Melones Conveyance System that brings water from New Melones Reservoir to SEWD (described in Section 1.A.1.). Both canals are unlined. Part of this seepage is reclaimed through groundwater pumping as a component of SEWD's conjunctive use plan.

Seepage was also addressed in a 2010 Environmental Impact Report for the canal system, which found that lining the Upper Farmington Canal may affect terrestrial biological resources developed as a result of ongoing existing seepage. Furthermore, SEWD and CSJWCD both use the Upper Farmington Canal and are both situated over the Eastern San Joaquin Groundwater Basin, which is considered to be critically overdrafted (DWR, 2003). Seepage thus also benefits subbasin recharge.

SEWD has already taken action to construct 19 miles of pipeline across its service area. As of 2023, the District's conveyance system includes the Bellota Pipeline and Peters Pipeline, which distribute water for agriculture and/or provide water to the DJW WTP. SEWD built a 6-mile long, 60-inch diameter extension to the Peters Pipeline. The pipeline was completed in 2006 and provides water for agriculture, recharge, and the DJW WTP.

SEWD actively monitors for leaks that can occur on the conveyance system along unlined canals, pipelines, and around concrete structures (**Table 3-8**). The system efficiency is improved by the District's routine canal inspection and maintenance program that serves to locate and repair both potential and current leaks. Once an area of canal is surveyed, a punch list of repair items is compiled and used to correct deterioration and other issues. Due to the destructive nature of rodents, a rodent abatement program is also a component of the District's inspection and maintenance program. This approach allows for proactive repairs, effectively thwarting leaks before they occur.

3.B.5.b. Construct/Line Regulatory Reservoirs

The recharge ponds surrounding the DJW WTP have a combined storage capacity of approximately 831 ac-ft and act as buffers to regulate water supplies for the DJW WTP (**Table 3-9**). This includes a new 73-acre, 368 ac-ft, storage and recharge basin north of the DJW WTP that began operation in 2019. The ponds also percolate water, recharging the aquifer at the treatment plant. Reservoir maintenance and groundwater monitoring are ongoing.

Table 3-8. Line or Pipe Ditches and Canals.

Canal/Lateral (Reach)	Type of Assessment or Improvement	Length (miles)	Estimated Seepage	Accomplished/ Planned Date
Calaveras Pipeline	Pipeline will divert New Hogan System water for agricultural water	1.5	N/A	2025
All unlined canals and pipelines	Canal and pipeline inspection and maintenance program	36.5	N/A	Ongoing

Table 3-9. Construct/Line Regulatory Reservoirs.

Reservoir Name	Location	Estimated Volume Savings[a] (ac-ft/yr)	Improved Operational Flexibility
Farmington Project Recharge ponds (19-acre, 15-acre, 14-acre)	Dr. Joe Waidhofer WTP	0	allows for a constant inflow to the DJW WTP by regulating changes in flow into the recharge ponds
New North Recharge basin (73-acre)	Dr. Joe Waidhofer WTP	0	allows for a constant inflow to the DJW WTP by regulating changes in flow into the recharge ponds

[a] Recharge ponds and recharge basin at DJW WTP provide a combined storage volume of 831 ac-ft that is used for recharge and regulating inflows to the DJW WTP. Their location does not provide for reduction of spillage or losses from the SEWD system.

3.B.6. Increase Flexibility in Water Ordering by, and Delivery to, Water Users

STATUS: IMPLEMENTING

SEWD delivers irrigation water to customers through an arranged demand system using a 48-hour notice scheduling system. Details regarding this system are provided in Section 1.B.6 and Rule 120 in **Attachment B**.

This advance notice helps SEWD manage its irrigation supplies more efficiently, while the arranged demand operation provides flexibility in water ordering and delivery to water users. Together, SEWD's water ordering system and arranged demand operations have prevented spillage from over-releases, as well as tailwater from over-irrigation.

To improve the flexibility of water deliveries to its urban contractors, SEWD has upgraded the DJW WTP SCADA system in the last five years. This allows DJW WTP SCADA system to be used for monitoring and data acquisition or control. The upgrades installed a plant-wide SCADA system, allowing monitoring, data acquisition, and control for the entire plant. The SEWD SCADA Master Plan was prepared to inform and guide these upgrades, however, the plan is confidential as it includes IT components and network infrastructure information.

SCADA upgrades for the SEWD agricultural conveyance system are planned to follow the DJW WTP

SCADA upgrades and be completed by the end of 2025. These upgrades will integrate with the WTP SCADA system, as applicable, benefitting flexibility in water ordering and delivery to both agricultural water users and the urban contractors.

3.B.7. Construct and Operate District Spill and Tailwater Recovery Systems

STATUS: NOT LOCALLY COST EFFECTIVE

Based on a cost-benefit analysis prepared by SEWD and provided in **Attachment U**, spill and tailwater systems are not locally cost effective. SEWD would need to build costly facilities to pump a small volume of water over 20 miles upstream.

In its efforts to limit spillage, SEWD receives agricultural water from the New Hogan and New Melones Reservoirs on an as-needed basis. Crops in SEWD are also predominantly irrigated with higher efficiency sprinkler, drip, and other low volume systems that have low runoff potential. As the Water Master of the New Hogan Reservoir releases in non-flood season periods, SEWD operates the agricultural conveyance system to minimize or prevent tail end losses, with the exception of years when SEWD needs to pass excess USACOE releases through the water supply system. Currently, excess water released into Potter Creek is naturally recovered through spillage into Mormon Slough. Other excess water flows downstream along the natural waterways used in the SEWD conveyance system and is put to beneficial use either by other growers or by flowing into the San Joaquin River (**Table 3-10**).

Table 3-10. Construct and Operate District Spill and Tailwater Recovery Systems.

Conveyance System Lateral[a]	Annual Spill (ac-ft/yr)	Quantity Recovered and Reused (ac-ft/yr)
Natural waterways[a]	3,000[b]	N/A

[a] Outflows from the SEWD conveyance system occur along natural waterways (Calaveras River, Mormon Slough, Mosher Creek). SEWD does not use separate distribution and drainage systems.
[b] Estimated average annual outflow volume available for pump back (**Attachment U, Table 3**).

3.B.8. Plan to Measure Outflow

STATUS: IMPLEMENTING

Outflows from SEWD occur along natural waterways used in the SEWD conveyance system.

As described in Section 2.F.1, surface outflow from the SEWD conveyance system occurs along natural waterways at three locations within the District: Main Street along Mormon Slough, McAllen Road along the Calaveras River, and Leffler Dam along Mosher Creek. Outflows from SEWD along these waterways provide for required instream flows. It is estimated that 90 percent of the total outflows are estimated based on measured releases from New Hogan Reservoir, measured surface water inflows to the SEWD service area for irrigation, and measured deliveries to growers. Releases from New Hogan Reservoir provide for irrigation and flood control, and are controlled by SEWD and USACE, respectively. Outflows for in-stream flow requirements are estimated to be approximately 3,000 ac-ft per year, on average; however, the outflow volume and acreage that drains through each particular discharge location is unknown. Releases from New Melones Reservoir provide water for irrigation and supply the DJW WTP. For both purposes, water is released based on demand and measured at each connection. There are typically no "outflows" of New Melones supply because all releases are delivered to customers or the WTP. If and when there is an outflow,

it is considered an operational "error." Operational "error" does not occur often. Excess releases from New Melones Reservoir flow through Lower Farmington Canal and out along Rock Creek into CSJWCD. These flows are deliveries, rather than outflows.

As part of its planned SCADA system upgrades, SEWD has installed SCADA at all four locations above and two are operational measuring outflow. SEWD plans to continue efforts to improve measurement of water leaving the District by integrating the new SCADA systems into the District wide system (**Table 3-11**).

a. Total # of outflow (surface) locations/points: 5
b. Total # of outflow (subsurface) locations/points: 0
c. Total # of measured outflow points: 5 (planned for 2025)
d. Percentage of total outflow (volume) measured during report year: 90*

* Percent of total outflow is estimated. There are no accurate measurements at individual outflow locations at this time.

Table 3-11. Plan to Measure Outflow.

Location and Priority	Estimated Cost ($)				
	2023	2024	2025	2026	2027
First priority: SCADA Maintenance	$28,000[a]	$28,000[a]	$28,000[a]	$28,000[a]	$28,000[a]
Second priority: Calaveras River at McAllen Road	$0	$57,000	-	-	-
Third priority: Mosher Creek at Leffler Dam	$0	$57,000	-	-	-
Fourth priority: Potter Creek at Mormon Slough[b]	$0	$57,000	-	-	-

[a] Recurring budget for SCADA system maintenance; does not apply to a singular site.
[b] Spillage from Potter Creek to Mormon Slough is not a direct outflow from the SEWD boundaries.

3.B.9. Optimize Conjunctive Use of Surface and Groundwater

STATUS: IMPLEMENTING

SEWD's goal is to optimize conjunctive management of surface and groundwater. SEWD has secured and provides surface water from the New Melones and New Hogan Reservoirs in order to protect the District's groundwater. To promote conjunctive use, SEWD has made efforts to increase groundwater recharge and to encourage in-lieu recharge by providing surface water deliveries to irrigators as an alternative to private groundwater pumping.

At present, groundwater recharge within SEWD is furnished largely by regulated releases from New Hogan Reservoir down the Calaveras River. SEWD releases these flows and uses check dams on the Calaveras River, Mormon Slough, and Mosher Creek to achieve the greatest beneficial use and groundwater recharge for the district. Additional information on these efforts is provided in Section 2.B.4.

SEWD is in the process of looking for and developing more recharge sites through the Farmington Groundwater Recharge Program. The Farmington Groundwater Recharge Program identifies areas suitable for recharge and seasonal habitat development, evaluates recharge techniques, and conducts pilot

recharge tests. Through this phased program, available surplus water from SEWD's conveyance system is diverted into recharge cells at the project site. Stored surface water would be pumped from the aquifer for agricultural, municipal, and industrial use. With the addition of the North Recharge Basin, recharge averaged approximately 12,235 ac-ft per year between 2019 and 2023. See Section 2.B.6 for more information.

3.B.10. Automate Distribution and/or Drainage System Structures

STATUS: IMPLEMENTING

This BMP is being implemented through the District's SCADA system and recent automation of PC-3 along Potter Creek.

SEWD has upgraded its conveyance system recently with an Ignition SCADA system that when fully integrated will allow monitoring of system outflows and potential automation of upstream structures, particularly those serving the DJW WTP (described in Section 3.B.6. above). Recent Ignition SCADA upgrades at the DJW WTP also allow plant-wide monitoring, data acquisition, and control.

SEWD recently installed a Rubicon BladeMeter™ at PC-3 along Potter Creek, which provides for automated delivery of precise quantities of water using only gravity pressure and solar energy (**Figure 3-2**). The BladeMeter™ is being piloted for other future sites. Construction was completed in 2021, and flow data will be available in the next update to the WMP.

Additional tasks to be conducted include the retrofit of two existing flow monitoring stations used to transmit data to the SCADA system, and the automation of five water control gates at three locations to allow off-site control. This includes installation of a Rubicon FlumeGate at 8-Mile Dam to be completed in 2025, a FlumeGate at Cotta-Ferreira Dam completed in 2022, a Rubicon SlipMeter at Duck Creek Headworks completed in 2022, and a Rubicon SlipMeter at Mosher Creek Headworks completed in 2021. Acquisition of this "real time" data and automation of the gates will enhance operation and management of SEWD's agricultural water delivery system.

3.B.11. Facilitate or Promote Water Customer Pump Testing and Evaluation

STATUS: IMPLEMENTING

SEWD promotes its own pump testing program for its customers. SEWD has received Reclamation grant funding and offered free pump tests and irrigation evaluations to its customers, as described in Section 3.A.3. The pump tests are promoted in SEWD's twice annual newsletter, at Stockton East Advisory Committee meetings, and through SEWD field personnel in their communication with customers. SEWD completed three pump tests at one farm in 2020, and no tests for 2021-2023.

SEWD will continue to offer these services free to its customers. In the future, SEWD plans to advertise its on-farm irrigation and pump testing program in its newsletter, on its website (https://sewd.net/), and on the Owner's Water Use Statement.



Figure 3-2. Rubicon BladeMeter™ Installed at PC-3.

3.B.12. Mapping

STATUS: IMPLEMENTING

SEWD is implementing the mapping BMP through the maintenance of system maps and ongoing maintenance of its GIS-based system. The District will budget, as necessary, sufficient funds between 2023 and 2027 to facilitate the mapping maintenance BMP efforts (**Table 3-12**).

Table 3-12. Mapping.

GIS maps	Estimated Cost ($)				
	2023	2024	2025	2026	2027
Layer 1 – Distribution system	$0[a]	$0[a]	$0[a]	$0[a]	$0[a]
Layer 2 – Drainage system	$0[a]	$0[a]	$0[a]	$0[a]	$0[a]
Layer 3 – Groundwater information	$0[a]	$0[a]	$0[a]	$0[a]	$0[a]
Layer 4 – Soils map	$0[a]	$0[a]	$0[a]	$0[a]	$0[a]
Layer 5 – Natural & cultural resources	$0[a]	$0[a]	$0[a]	$0[a]	$0[a]
Layer 6 – Problem areas	$0[a]	$0[a]	$0[a]	$0[a]	$0[a]

[a] SEWD will budget, as necessary, sufficient funds between 2023 and 2027 to facilitate mapping maintenance BMP efforts.

3.C. PROVIDE A 5-YEAR BUDGET FOR IMPLEMENTING BMPS

SEWD has developed projected five-year budgets for continuing and engaging in new planned BMP implementation activities. **Tables 3-13 through 3-17** summarize the total planned spending for all BMP implementation activities beyond normal planned maintenance expenditures over the next five years (2023 through 2027).

Table 3-13. Amount Actually Spent for Implementing BMPs in Current Year (2023).

BMP	#	BMP Name	Budgeted Expenditure (not including staff time)	Staff Hours
A	1	Measurement	$7,000	11
	2	Conservation staff	$3,400	40
	3a	On-farm evaluations/water delivery info	$5,700	2
	3b	Irrigation Scheduling	$100	1
	3c	Water quality	$1,100	8
	3d	Agricultural Education Program	$700	25
	4	Quantity pricing	$0	0
	5	Contractor's pumps	$0	0
B	1	Alternative land use	$0	0
	2	Urban recycled water use	$0	0
	3	Financing of on-farm improvements	$1,000	8
	4	Incentive pricing	$0	0
	5	Line or pipe canals/install reservoirs	$125,200	700
	6	Increase delivery flexibility	$0	40
	7	District spill/tailwater recovery systems	$0	0
	8	Measure outflow	$0	0
	9	Optimize conjunctive use	$1,300	24
	10	Automate canal structures	$0	0
	11	Customer pump testing	$8,600	8
	12	Mapping	$0	0
		Total	$154,100	867

Table 3-14. Projected Budget Summary for Implementing BMPs in Second Year (2024).

BMP	#	BMP Name	Budgeted Expenditure (not including staff time)	Staff Hours
A	1	Measurement	$220,000	100
	2	Conservation staff	$3,500	40
	3a	On-farm evaluations/water delivery info	$5,800	2
	3b	Irrigation Scheduling	$100	1
	3c	Water quality	$1,100	8
	3d	Agricultural Education Program	$700	25
	4	Quantity pricing	$0	0
	5	Contractor's pumps	$0	0
B	1	Alternative land use	$0	0
	2	Urban recycled water use	$0	0
	3	Financing of on-farm improvements	$33,000	8
	4	Incentive pricing	$0	0
	5	Line or pipe canals/install reservoirs	$128,200	700
	6	Increase delivery flexibility	$0	40
	7	District spill/tailwater recovery systems	$0	0
	8	Measure outflow	$0	0
	9	Optimize conjunctive use	$1,400	24
	10	Automate canal structures	$401,500	300
	11	Customer pump testing	$8,700	8
	12	Mapping	$0	0
		Total	$804,000	1,256

Table 3-15. Projected Budget Summary for Implementing BMPs in Third Year (2025).

BMP	#	BMP Name	Budgeted Expenditure (not including staff time)	Staff Hours
A	1	Measurement	$209,000	100
	2	Conservation staff	$3,500	40
	3a	On-farm evaluations/water delivery info	$5,900	2
	3b	Irrigation Scheduling	$100	1
	3c	Water quality	$1,100	8
	3d	Agricultural Education Program	$700	25
	4	Quantity pricing	$0	0
	5	Contractor's pumps	$0	0
B	1	Alternative land use	$0	0
	2	Urban recycled water use	$0	0
	3	Financing of on-farm improvements	$1000	8
	4	Incentive pricing	$0	0
	5	Line or pipe canals/install reservoirs	$0	0
	6	Increase delivery flexibility	$0	40
	7	District spill/tailwater recovery systems	$0	0
	8	Measure outflow	$7,200	0
	9	Optimize conjunctive use	$1,400	24
	10	Automate canal structures	$217,600	390
	11	Customer pump testing	$8,900	8
	12	Mapping	$0	0
		Total	$456,400	646

Table 3-16. Projected Budget Summary for Implementing BMPs in Fourth Year (2026).

BMP	#	BMP Name	Budgeted Expenditure (not including staff time)	Staff Hours
A	1	Measurement	$209,000	100
	2	Conservation staff	$3,500	40
	3a	On-farm evaluations/water delivery info	$6,100	2
	3b	Irrigation Scheduling	$100	1
	3c	Water quality	$1,100	8
	3d	Agricultural Education Program	$800	25
	4	Quantity pricing	$0	0
	5	Contractor's pumps	$0	0
B	1	Alternative land use	$0	0
	2	Urban recycled water use	$0	0
	3	Financing of on-farm improvements	$1000	8
	4	Incentive pricing	$0	0
	5	Line or pipe canals/install reservoirs	$0	0
	6	Increase delivery flexibility	$0	40
	7	District spill/tailwater recovery systems	$0	0
	8	Measure outflow	$250,800	270
	9	Optimize conjunctive use	$1,400	24
	10	Automate canal structures	$894,900	900
	11	Customer pump testing	$9,100	8
	12	Mapping	$0	0
		Total	$1,377,900	1,426

Table 3-17. Projected Budget Summary for Implementing BMPs in Fifth Year (2027).

BMP	#	BMP Name	Budgeted Expenditure (not including staff time)	Staff Hours
A	1	Measurement	$209,000	100
	2	Conservation staff	$3,700	40
	3a	On-farm evaluations/water delivery info	$6,200	2
	3b	Irrigation Scheduling	$200	1
	3c	Water quality	$1,200	8
	3d	Agricultural Education Program	$800	25
	4	Quantity pricing	$0	0
	5	Contractor's pumps	$0	0
B	1	Alternative land use	$0	0
	2	Urban recycled water use	$0	0
	3	Financing of on-farm improvements	$1,100	8
	4	Incentive pricing	$0	0
	5	Line or pipe canals/install reservoirs	$0	0
	6	Increase delivery flexibility	$0	40
	7	District spill/tailwater recovery systems	$0	0
	8	Measure outflow	$7,400	0
	9	Optimize conjunctive use	$1,400	24
	10	Automate canal structures	$0	0
	11	Customer pump testing	$2,200	8
	12	Mapping	$0	0
		Total	$240,200	256

SECTION 4 BEST MANAGEMENT PRACTICES FOR URBAN CONTRACTORS

SEWD is under contract to supply wholesale treated surface water from DJW WTP to Cal Water, the City of Stockton, and San Joaquin County. Drinking water is retailed to Stockton area customers by these three urban contractors. SEWD does not own or operate an urban distribution system.

SEWD implements programs to accomplish all urban BMPs applicable to its role as a wholesale supplier of treated surface water. These applicable BMPs and all remaining non-applicable BMPs are described below. A list of the previously exempted urban BMPs verified by Reclamation is provided is **Attachment V.** These exempted BMPs align with the urban BMPs listed as non-applicable in the sections below.

4.A. URBAN BMPS

As an urban water wholesaler, SEWD engages in activities to accomplish the Foundational BMPs, which are considered by Reclamation to be essential water conservation activities that should be conducted, as applicable, by any utility at any level of distribution as part of ongoing practices. SEWD does not supply water directly to urban customers, but SEWD supports the urban contractors in their efforts to achieve the remaining Programmatic BMPs related to residential, commercial, industrial, institutional, and landscape water use.

Foundational BMPs

4.A.1. Operations Programs

SEWD collaborates with its urban contractors to maintain utility operations programs that support water conservation, water waste prevention, and water loss control through operational effort and practices.

SEWD, the City of Stockton, Cal Water, and San Joaquin County are all members of the Stockton Area Water Suppliers (SAWS). This group meets on a regular basis to discuss water related matters, including water supply, use, conservation and the development of water shortage contingency planning. The District supports all of the urban contractors in their conservation plans.

The specific BMP activities implemented by SEWD and SAWS are described below.

4.A.1.1. Operations Practices

4.A.1.1.a. Conservation Coordinator

STATUS: IMPLEMENTING

In 2004, SEWD created a position for a full time Water Conservation Coordinator with the responsibility to develop and implement a comprehensive public outreach and water conservation education program. The District has designated Kristin Coon of Kristin Coon Consulting as the District's water conservation coordinator to manage conservation and outreach activities, prepare five-year Reclamation WMPs, and implement the Plans. Kristin Coon is a contractor employed jointly by SEWD and the three urban contractors. Each urban contractor has its own Water Conservation Coordinator in addition to Kristin Coon. The job description and minimum qualifications of this position are provided in **Attachment R**. SEWD will maintain an appropriate and responsible staff person in the position of water conservation coordinator.

Name: Kristin Coon
Title: Water Conservation Coordinator
Address: 6767 East Main Street, Stockton, CA 95207
Telephone: (209) 444-3126
E-mail: kcoon@sewd.net

4.A.1.1.b. Water Waste Prevention

STATUS: IMPLEMENTING

SEWD does not distribute urban water directly to customers and has therefore not established its own procedures for preventing water waste after water has been delivered to the urban contractors. As a member of SAWS, SEWD supports all of its urban contractors in implementing water waste prevention practices and policies.

The City of Stockton's municipal code Chapter 13.28 outlines the City's water conservation policies and restrictions on wasteful uses of water. A description is provided in Section 8.1 of its 2020 Urban Water Management Plan. The City also provides its residents with a website (www.stocktongov.com/savewater) containing water conservation tips and a phone number (1-866-STOKWTR) they can call to report water wasters as well as request information.

Cal Water's water waste prevention ordinances are summarized in its 2020 Urban Water Management Plan Section 9.2.1. In 2016, Cal Water filed its current Schedule 14.1 with the California Public Utilities Commission (CPUC) that extended measures to prohibit water waste with regard to commercial water use, landscape irrigation, decorative water features, and other water uses. Cal Water customers are also subject to restrictions regulated by ordinances of applicable local governments. Under its Water Shortage Contingency Plan, Cal Water also reduces water waste by deploying and increasing water waste patrols under conditions of increasing water shortage.

4.A.1.1.c. Wholesale Agency Assistance Programs

STATUS: IMPLEMENTING

SEWD supplies wholesale treated drinking water that is retailed to Stockton area customers by the City of Stockton, Cal Water, and San Joaquin County. The District's participation in SAWS and its implementation and support of public information programs and outreach efforts described in Section 4.A.2 helps its urban contractors achieve their SBX7-7 water use reduction targets. The District will continue to participate in SAWS and outreach efforts to support the urban contractors in meeting their established targets.

4.A.1.2. Water Loss Control

STATUS: IMPLEMENTING

SEWD conducts monthly water audits for the DJW WTP. As part of these audits, SEWD measures the total monthly volume of all diversions to the WTP, the total monthly volume treated at the DJW WTP, and the total monthly volume delivered to each of its urban customers. Any discrepancies are immediately investigated, and repairs made as necessary. The locations and measurement devices used to monitor these diversions and deliveries are summarized in Sections 1.B.1 and 1.G.2, respectively. District staff spend about 120 hours annually creating monthly reports that include water loss assessment. No direct funding is required.

4.A.1.3. Metering with Commodity Rates for All New Connections and Retrofit of Existing Connections

STATUS: IMPLEMENTING

SEWD meters the connections to its urban contractors, as described in Section 1.G.2. Deliveries are recorded by three meters. Two pipelines (24-inch and 42-inch) deliver water to south City of Stockton, as measured by one meter, and a third pipeline (48-inch) delivers water to north City of Stockton, as measured by a second meter. A 42-inch pipeline delivers water to Cal Water and is measured by a third meter. The City of Stockton wheels water to San Joaquin County. The accuracy of these meters is within six percent, and is verified and calibrated annually by an outside testing company (**Table 1-19**).

4.A.1.4. Retail Conservation Pricing

STATUS: IMPLEMENTING

The District bills the urban contractors per the Second Amended Contract based on the volume of water produced. **Attachment D.2** provides a copy of the 2023 and 2024 rate ordinances (Ordinance No. 49 and 50, respectively). Each year's ordinance establishes a base cost (calculated by contract and water usage) and the municipal groundwater rate equalization set per contract between the District, Cal Water, City of Stockton, and San Joaquin County. The 2023 Water Fee Schedule was adopted April 11, 2023. The 2024 Water Fee Schedule was adopted April 2, 2019.

4.A.2. Education Programs

SEWD, City of Stockton, Cal Water, and San Joaquin County are all members of SAWS. This group meets on a regular basis to discuss water related matters and to plan or support joint education programs. SEWD administers and funds public outreach and education programs for SAWS with an annual budget of $252,000. These public information and school education programs are described below. The 2022-2023 SAWS Water Education Program Annual Report is provided in **Attachment X**.

4.A.2.1. Public Information Programs

STATUS: IMPLEMENTING

SEWD participates in the SAWS, which jointly funds the Water Conservation Education Program in the Stockton urban area. The SAWS Water Education Program participates in and supplies hand-outs and outreach materials for numerous community gatherings and other special activities and events in Stockton.

Specific programs that SAWS Water Education Program staff participated in during 2022 and 2023 include:

- **Rotary Read In (February 2023):** The SAWS Program participates annually in the Stockton Rotary Read-In event.
- **Stockton's Earth Day Festival (April 2023):** SAWS is a principal sponsor of this popular annual festival at Victory Park in Stockton. The Coordinator staffed a booth at the event on April 24, 2023. (**Figure 4-1**)
- **Water Treatment Plant Tours:** The SAWS Water Education Program and SEWD staff host tours of the Dr. Joe Waidhofer Drinking Water Treatment Plant for Grade 5 and above.
- **San Joaquin County AgVenture Events:** The Coordinator participates annually in the San Joaquin County AgVenture event.
- **Community Based Programs:** Upon request, SAWS supplies water conservation materials for Special Day and science classrooms at local middle and high schools, as well as for programs for

developmentally disabled adults, regional pre-school programs and other community programs requesting materials and resources

- **DWR Water Education Committee:** The coordinator attends both virtual and in-person DWR Water Education Committee meetings, joining water educators from all over California to share resources and ideas for water conservation education and outreach.

Other school education programs and highlights from 2022 and 2023 are described below. SAWS plans to continue sponsoring and participating in these events in the coming years.



Figure 4-1. The SAWS Booth at the Stockton Earth Day Festival.

4.A.2.2. School Education Programs

STATUS: IMPLEMENTING

The SAWS, a partnership between SEWD, Cal Water, the City of Stockton, and San Joaquin County, are dedicated to providing quality water education programs for our youth. To this end, the SAWS partners offer stimulating, age-appropriate water education presentations for public and private school classrooms within the Stockton Metropolitan Area. Special event presentations are also available. The SAWS water education programs align with the California Content Standards and are designed to coordinate with teachers' lesson plans.

Through these programs, the SAWS partners are seeking to reach out to our youth to promote an understanding of the scientific and social principles related to water resource conservation. It is SEWD's goal that this outreach effort will build a progressive knowledge base within the community that will promote sound water resource decisions in the future. SAWS plans to continue sponsoring and participating in these outreach efforts in the coming years.

Highlights from the 2022-2023 school year are provided below:

- The SAWS Water Education Program visited 54 Stockton area schools/event venues, presenting or staffing a booth in 347 classrooms/events for 20,604 students and citizens.
- The SAWS Water Education Program participated in a variety of local, youth-oriented special events and promotional programs, including:
    - San Joaquin County AgVenture Events (Three venues: South County, Stockton & Lodi)
    - Manteca Unified School District's "Planet Party Day"
    - Manteca Unified School District's Farm Days
    - Stockton's Earth Day Festival at Victory Park (SAWS was a principal sponsor)
- Special presentations and/or materials were provided for a variety of organizations and groups, including:
    - Lincoln High School's "Window on Your Future" career path development event
    - Stockton Rotary Read-In
    - Water Conservation Workshops and H2Olympics
- The coordinator continues to attend DWR Water Education Committee Meetings, which are held both in-person and virtually throughout the year. This group usually meets in person bi-annually to share outreach methods and strategies intended to promote collaborative and coordinated water education outreach throughout the State of California.

Specific programs in which SAWS Water Education Program staff participated include:

- **San Joaquin County AgVentures (South County, Stockton & Lodi):** The SAWS Water Education Program has participated in AgVenture since 2005. SAWS staffs a booth featuring a hands-on activity and prize wheel. Our participation in AgVenture allows us to promote SAWS sponsored in-class, after school and assembly programs while sharing our message of water/drought awareness and conservation with thousands of third grade students and their teachers. Each AgVenture event hosts approximately 3,500 third graders. Besides staffing a booth at each event, SAWS/SEWD supports AgVentrue with a $1,000 annual donation. The SAWS Water Education Program participated in all three AgVenture in the 2022/2023 school year. In previous years, the coordinator submitted a water science/conservation video that was used during virtual AgVenture and posted on-line for future viewing.
- **Rotary Read-**In: the SAWS Water Education Program participates in this annual event.
- **Lincoln Unified School District "Window on Your Future" :** The coordinator participates in this event annually, wherein mock job interviews designed to prepare Lincoln High School students for entry into the job market are conducted by members of the business community. This event presents an opportunity for staff to share career path outreach with potential job seekers.
- **Manteca Unified School District (MUSD) "Planet Party Day" (April 2023):** SAWS is a principal sponsor of this popular festival at Victory Park in Stockton
- **MUSD's Farm Days (Spring 2023):** SAWS sponsored H2Olympics booths at the MUSD Farm Day events.

Programmatic BMPs

As a wholesale supplier of treated drinking water, SEWD does not deliver water directly to urban customers and therefore does not play a direct role in managing residential, commercial, industrial, institutional, and landscape water use. However, SEWD continues to support the urban contractors in their efforts and policies to achieve the Programmatic BMPs.

4.A.3 Residential

SEWD supports the urban contractors in their efforts and policies to achieve the Residential BMPs described below.

4.A.3.1. Residential Assistance Program

STATUS: NOT APPLICABLE (SUPPORTING CONTRACTOR IMPLEMENTATION)
SEWD supports the urban contractors in their efforts and policies to achieve the Residential Assistance Program BMP. See **Attachment W** for more information provided in the contractors' Urban Water Management Plans.

4.A.3.2. Landscape Water Survey

STATUS: NOT APPLICABLE (SUPPORTING CONTRACTOR IMPLEMENTATION)

SEWD supports the urban contractors in their efforts and policies to achieve the Landscape Water Survey BMP. See **Attachment W** for more information provided in the contractors' Urban Water Management Plans.

4.A.3.3. High-Efficiency Clothes Washers (HECWs)

STATUS: NOT APPLICABLE (SUPPORTING CONTRACTOR IMPLEMENTATION)

SEWD supports the urban contractors in their efforts and policies to achieve the High-Efficiency Clothes Washers (HECWs) BMP. See **Attachment W** for more information provided in the contractors' Urban Water Management Plans.

4.A.3.4. WaterSense Specification (WSS) Toilets

STATUS: NOT APPLICABLE (SUPPORTING CONTRACTOR IMPLEMENTATION)

SEWD supports the urban contractors in their efforts and policies to achieve the WaterSense Specification Toilets BMP. See **Attachment W** for more information provided in the contractors' Urban Water Management Plans.

4.A.3.5. WaterSense Specifications for Residential Development

STATUS: NOT APPLICABLE (SUPPORTING CONTRACTOR IMPLEMENTATION)

SEWD supports the urban contractors in their efforts and policies to achieve the WaterSense Specification for Residential Development BMP. See **Attachment W** for more information provided in the contractors' Urban Water Management Plans.

4.A.4. Commercial, Industrial, and Institutional (CII)

STATUS: NOT APPLICABLE (SUPPORTING CONTRACTOR IMPLEMENTATION)

SEWD supports the urban contractors in their efforts and policies to achieve the Commercial, Industrial, and Institutional (CII) BMP. See **Attachment W** for more information provided in the contractors' Urban Water Management Plans.

4.A.5. Landscape

STATUS: NOT APPLICABLE (SUPPORTING CONTRACTOR IMPLEMENTATION)

SEWD supports the urban contractors in their efforts and policies to achieve the Landscape BMP. See **Attachment W** for more information provided in the contractors' Urban Water Management Plans.

4.B. PROVIDE A 5-YEAR BUDGET FOR EXPENDITURES AND STAFF EFFORT FOR BMPS

SEWD is a wholesale agency and does not implement urban BMPs at a retail level. SEWD supports all efforts implemented by the District's contracted retailers and assists in activities described in previous sections with their respective budgets. Through the SAWS program, SEWD will continue to engage and support BMP implementations at the retail level. **Tables 4-1 through 4-5** summarize the total planned spending for all BMP implementation activities over the next five years (2023 through 2027).

Table 4-1. Amount Actually Spent for Implementing BMPs in Current Year (2023).

BMP #		BMP Name	Projected Expenditures (not including staff hours)	Staff Hours
1		Utilities Operations		
	1.1	Operations Practices	$0[a]	0
	1.2	Water Loss Control	$0	120
	1.3	Metering	$18,200	20
	1.4	Retail Conservation Pricing	$0	0
2		Education Programs		
	2.1	Public Information Programs	$49,500[b]	250
	2.2	School Education Programs	$205,700	1,830
3		Residential	$0	0
4		CII	$0	0
5		Landscape	$0	0
		Total	$273,400	2,220

[a] Expenditures in support of the SAWS program (BMP 2.1 and 2.2) do include funding for a conservation coordinator and Wholesale Agency Assistance Programs.
[b] Expenditures in support of School Education Programs (BMP 2.2) may include some costs of public handouts and materials.

Table 4-2. Projected Budget for Summary Implementing BMPs in Second Year (2024).

BMP #	BMP Name	Projected Expenditures (not including staff hours)	Staff Hours
1	Utilities Operations		
1.1	Operations Practices	$0[a]	0
1.2	Water Loss Control	$0	120
1.3	Metering	$19,000	20
1.4	Retail Conservation Pricing	$0	0
2	Education Programs		
2.1	Public Information Programs	$49,500[b]	250
2.2	School Education Programs	$205,700	1,830
3	Residential	$0	0
4	CII	$0	0
5	Landscape	$0	0
	Total	$274,200	2,220

[a] Expenditures in support of the SAWS program (BMP 2.1 and 2.2) do include funding for a conservation coordinator and Wholesale Agency Assistance Programs.
[b] Expenditures in support of School Education Programs (BMP 2.2) may include some costs of public handouts and materials.

Table 4-3. Projected Budget for Summary Implementing BMPs in Third Year (2025).

BMP #	BMP Name	Projected Expenditures (not including staff hours)	Staff Hours
1	Utilities Operations		
1.1	Operations Practices	$0[a]	0
1.2	Water Loss Control	$0	120
1.3	Metering	$19,400	20
1.4	Retail Conservation Pricing	$0	0
2	Education Programs		
2.1	Public Information Programs	$50,500[b]	250
2.2	School Education Programs	$209,700	1,830
3	Residential	$0	0
4	CII	$0	0
5	Landscape	$0	0
	Total	$279,600	2,220

[a] Expenditures in support of the SAWS program (BMP 2.1 and 2.2) do include funding for a conservation coordinator and Wholesale Agency Assistance Programs.
[b] Expenditures in support of School Education Programs (BMP 2.2) may include some costs of public handouts and materials.

Table 4-4. Projected Budget for Summary Implementing BMPs in Fourth Year (2026).

BMP #	BMP Name	Projected Expenditures (not including staff hours)	Staff Hours
1	Utilities Operations		
1.1	Operations Practices	$0[a]	0
1.2	Water Loss Control	$0	120
1.3	Metering	$19,700	20
1.4	Retail Conservation Pricing	$0	0
2	Education Programs		
2.1	Public Information Programs	$51,500[b]	250
2.2	School Education Programs	$213,700	1,830
3	Residential	$0	0
4	CII	$0	0
5	Landscape	$0	0
	Total	$284,900	2,220

[a] Expenditures in support of the SAWS program (BMP 2.1 and 2.2) do include funding for a conservation coordinator and Wholesale Agency Assistance Programs.
[b] Expenditures in support of School Education Programs (BMP 2.2) may include some costs of public handouts and materials.

Table 4-5. Projected Budget for Summary Implementing BMPs in Fifth Year (2027).

BMP #	BMP Name	Projected Expenditures (not including staff hours)	Staff Hours
1	Utilities Operations		
1.1	Operations Practices	$0[a]	0
1.2	Water Loss Control	$0	120
1.3	Metering	$20,000	20
1.4	Retail Conservation Pricing	$0	0
2	Education Programs		
2.1	Public Information Programs	$52,500[b]	250
2.2	School Education Programs	$217,900	1,830
3	Residential	$0	0
4	CII	$0	0
5	Landscape	$0	0
	Total	$290,400	2,220

[a] Expenditures in support of the SAWS program (BMP 2.1 and 2.2) do include funding for a conservation coordinator and Wholesale Agency Assistance Programs.
[b] Expenditures in support of School Education Programs (BMP 2.2) may include some costs of public handouts and materials.

SECTION 5 DISTRICT WATER INVENTORY TABLES

The Water Inventory Tables are presented on the following pages. These include all Agricultural Water Inventory Tables and all Urban Water Inventory Tables.

Table 5-1. Surface Water Supply.

Year of Data	2023

Surface Water Supply

2023 Month	Federal Ag Water[a] (acre-feet)	Federal non-Ag Water[a] (acre-feet)	State Water (acre-feet)	Local Water (acre-feet)	Other Water (transfers) (acre-feet)	Transfers into District (acre-feet)	Upslope Drain Water (acre-feet)	Total (acre-feet)
Method	C1	C1	-	-	-	-	-	C1
January	0	2,128	0	0	0	0	0	2,128
February	0	2,864	0	0	0	0	0	2,864
March	0	2,812	0	0	0	0	0	2,812
April	685	5,006	0	0	0	0	0	5,691
May	10,648	4,762	0	0	0	550	0	15,960
June	14,762	5,434	0	0	0	550	0	20,746
July	17,066	8,609	0	0	0	550	0	26,225
August	15,736	7,716	0	0	0	550	0	24,002
September	11,276	6,718	0	0	0	0	0	17,994
October	545	6,086	0	0	0	0	0	6,631
November	0	5,009	0	0	0	0	0	5,009
December	0	5,024	0	0	0	0	0	5,024
TOTAL	70,719	62,168	0	0	0	2,200	0	135,086

[a] Includes both New Melones and New Hogan Supply in 2023.

Table 5-2. Groundwater Supply (2023).

Ground Water Supply

2023 Month	District Groundwater (acre-feet)	Private Urban Groundwater[a] (acre-feet)	Private Agric Groundwater[b] (acre-feet)
Method	M1	E1	E1
January	559	300	0
February	26	700	2,522
March	2	400	8,593
April	0	700	12,828
May	9	1,000	12,703
June	5	1,100	19,647
July	131	1,300	23,321
August	0	1,300	21,795
September	6	1,200	14,883
October	252	700	10,835
November	220	400	3,269
December	3	300	3,176
TOTAL	1,211	9,400	133,572

[a] Estimated based on typical rural residential irrigation and domestic usage (0.25 ac of irrigated landscape per pump and 170 gallons per day per capita, with 3.45 persons per pump) (City of Stockton 2015 Urban Water Management Plan; no similar value was provided in 2020 UWMP).

[b] Sum of metered agricultural groundwater (+/- 6% accuracy) and estimated agricultural groundwater, based on 127,595 ac-ft groundwater assessment volume and 85% consumptive use fraction.

Table 5-3. Total Water Supply (2023).

Total Water Supply

2023 Month	Surface Water Total (acre-feet)	District Groundwater (acre-feet)	Recycled M&I Wastewater[a] (acre-feet)	Total District Water Supply (acre-feet)
Method	C1	M1	-	C1
January	2,128	559	0	2,687
February	2,864	26	0	2,890
March	2,812	2	0	2,814
April	5,691	0	0	5,691
May	15,960	9	0	15,969
June	20,746	5	0	20,751
July	26,225	131	0	26,356
August	24,002	0	0	24,002
September	17,994	6	0	18,000
October	6,631	252	0	6,883
November	5,009	220	0	5,229
December	5,024	3	0	5,027
TOTAL	135,086	1,211	0	136,297

[a] Recycled M&I Wastewater is treated urban wastewater that is used for agriculture.

Table 5-4. Agricultural Conveyance System Precipitation and Evaporation Worksheets (2023).

	Precipitation Worksheet				Evaporation Worksheet				
	2023 inches precip[a]	ft precip	acres	AF/MONTH		2023 inches evap[b]	ft evap	acres	AF/MONTH
Jan	5.76	0.48	849	408	**Jan**	1.43	0.12	849	101
Feb	2.00	0.17	849	141	**Feb**	1.89	0.16	849	134
Mar	5.23	0.44	849	370	**Mar**	2.75	0.23	849	195
Apr	0.14	0.01	849	10	**Apr**	5.57	0.46	849	394
May	0.34	0.03	849	24	**May**	6.13	0.51	849	434
Jun	0.00	0.00	849	0	**Jun**	7.15	0.60	849	506
Jul	0.00	0.00	849	0	**Jul**	8.30	0.69	849	587
Aug	0.00	0.00	849	0	**Aug**	6.90	0.58	849	488
Sept	0.02	0.00	849	1	**Sept**	4.90	0.41	849	347
Oct	0.19	0.02	849	13	**Oct**	3.65	0.30	849	258
Nov	0.45	0.19	849	32	**Nov**	2.01	0.17	849	142
Dec	2.80	0.45	849	198	**Dec**	1.15	0.10	849	81
TOTAL	**16.93**	**1.41**			**TOTAL**	**51.83**	**4.32**		

[a] Source: Stockton Metro Airport (WBAN:23237), NOAA-NCEI.

[b] Source: Manteca (#70), CIMIS station; free water surface evaporation coefficient, Ke = 1.05 (ASCE, 2016).

Table 5-5. Agricultural Conveyance System Net Losses (2023).

Agricultural Distribution System

2023 Canal, Pipeline, Lateral, Reservoir	Length (feet)	Width (feet)	Surface Area (square feet)	Precipitation (acre-feet)	Evaporation (acre-feet)	Spillage (acre-feet)	Seepage[a] (acre-feet)	Total (acre-feet)
Calaveras River	168,960	85	14,361,600	465	1,424	0	12,803	(13,762)
Mormon Slough	102,960	85	8,751,600	283	868	0	24,626	(25,211)
Potter Creek	70,752	35	2,476,320	80	246	0	6,968	(7,134)
Mosher Creek	101,904	35	3,566,640	116	354	0	10,036	(10,274)
New Melones Conveyance System	150,480	52	7,824,960	253	776	0	6,976	(7,498)
			0					
			0					
TOTAL	595,056		36,981,120	1,197.8	3,666.8	0	61,409	(63,878)

[a] Seepage along Mormon Slough, Potter Creek, and Mosher Creek calculated during agricultural deliveries. Seepage along Calaveras River and the New Melones Conveyance System calculated during agricultural and M&I deliveries.

Table 5-6. Urban Distribution System Net Losses (2023).

Urban Distribution System Losses[a]

2018 Area or Line	Length (feet)	Leaks (acre-feet)	Breaks (acre-feet)	Flushing/Fire (acre-feet)	Total District Water Supply (acre-feet)
None	0	0	0	0	0
	0	0	0	0	0
TOTAL	0	0	0	0	0

[a] SEWD is an urban wholesaler and thus does not have an urban distribution system.

Table 5-7. Agricultural Crop Water Needs (2023).

Crop Water Needs

2023 Crop Name	Area (crop acres)	Crop ET[a] (AF/Ac)	Leaching Requirement (AF/Ac)	Cultural Practices (AF/Ac)	Effective Precipitation[b] (AF/Ac)	Appl. Crop Water Use (acre-feet)
Walnuts	31,975	3.36	0.1	0.0	1.05	75,302
Cherries	11,984	3.12	0.1	0.0	1.05	25,347
Other Orchards	7,369	3.08	0.0	0.0	1.05	14,945
Grapes/Vineyards	5,573	2.40	0.0	0.0	1.05	7,496
Misc. Field Crops	2,362	1.97	0.0	0.0	1.07	2,117
Pasture/Alfalfa	2,115	3.34	0.0	0.0	1.07	4,796
Other	41	3.03	0.0	0.0	1.06	81
Other Grains	14	3.30	0.0	0.0	1.07	31
Crop Acres	61,433					130,114

Total Irrig. Acres 61,433

[a] Source: Manteca CIMIS Station (#70) ETo; crop coefficients from Mapping EvapoTranspiration at high Resolution with Internalized Calibration (METRIC) analysis, Irrigation Training & Research Center (ITRC), California Polytechnic State University – San Luis Obispo.

[b] Source: Stockton Metro Airport Station (WBAN:23237) precipitation; USDA-SCS R_e method (USDA-SCS, 1993).

Table 5-8. District Water Inventory (2023).

2023 District Water Inventory

Water Supply	Table 5-3		136,297
Environmental Consumptive Use	(Distribution, Drain, etc.)	minus	1,000
Groundwater recharge	(intentional - ponds, injection)	minus	11,163
Seepage	Table 5-5	minus	61,409
Evaporation - Precipitation	Table 5-5	minus	2,469
Spillage	Table 5-5	minus	0
Leaks, Breaks, Flushing / Fire	Table 5-6	minus	0
Transfers out of District[a]		minus	0
Water Available for sale to customers			60,255
Actual Agricultural Water Sales	2023	From District Sales Records	25,499
Private Groundwater	Table 5-2	plus	133,572
Crop Water Needs	Table 5-7	minus	130,114
Drainwater outflow	(tail and tile not recycled)	minus	0
Percolation from Agricultural Land	(calculated)		28,957
M&I Actual Water Sales	2023	From District Records	32,440
Inside Use	Feb urban use x 12		18,504
Landscape / Outside Use	(calculated)		13,936
Unaccounted for Water	(calculated)		2,316

[a] SEWD no longer provides surface water sales to out-of-district customers. Any out-of-district customers receiving water from SEWD as of 2019 are receiving water from OID that is wheeled by SEWD.

Table 5-9. District Influence on Groundwater and Saline Sink (2023).

Influence on Groundwater and Saline Sink

2023

Agric Land Deep Perc + Seepage[a] + Recharge - Groundwater Pumping = District Influence on Groundwater Storage	71,362
Estimated actual change in ground water storage, including natural recharge)	(71,611)
Irrigated Acres (from Table 5-7)	61,433
Irrigated acres over a perched water table	0
Irrigated acres draining to a saline sink	0
Portion of percolation from agri seeping to a perched water table	0
Portion of percolation from agri seeping to a saline sink	0
Portion of On-Farm Drain water flowing to a perched water table/saline sink	0
Portion of Dist. Sys. seep/leaks/spills to perched water table/saline sink	0
Total (AF) flowing to a perched water table and saline sink	0

[a] Does not include seepage from the natural streams during the times that New Melones Reservoir and New Hogan Reservoir are not releasing irrigation or M&I water.

Table 5-10. District Annual Water Supply Delivered Under All Contracts (2014-2023).

Annual Water Quantities Delivered Under All Contracts

Year	Federal Ag Water	Federal Urban Water	State Water	Local Water (define)	Transfers into District	Other Water (transfers) *OID/SSJID M&I*	Total	Total
	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)
2014	70,320	39,381	0	0	0	0	0	109,701
2015	17,340	27,933	0	0	0	0	0	45,273
2016	47,521	30,416	0	0	0	7,498	0	85,435
2017	63,228	38,866	0	0	0	0	0	102,094
2018	74,587	42,393	0	0	0	0	0	116,980
2019	41,466	42,908	0	0	0	0	0	84,374
2020	50,151	49,949	0	0	0	0	0	100,100
2021	67,931	51,975	0	0	0	0	0	119,906
2022	53,797	55,929	0	0	0	13,783	0	123,509
2023	70,718	62,168	0	0	0	2,200	0	132,886
Total	557,059	441,918	0	0	0	23,481	0	1,022,458
Average	55,706	44,192	0	0	0	2,348	0	102,246

Table 5-11. District Annual Water Supply Delivered, New Hogan Contract (2014-2023).

Annual Water Quantities Delivered Under New Hogan Contract

Year	Federal Ag Water	Federal Urban Water	State Water	Local Water (define)	Transfers into District	Other Water (transfers) *OID/SSJID M&I*	Total	Total
	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)
2014	62,085	1,781	0	0	0	0	0	63,866
2015	17,197	25,420	0	0	0	0	0	42,617
2016	45,019	30,416	0	0	0	0	0	75,435
2017	59,209	14,684	0	0	0	0	0	73,893
2018	65,180	6,022	0	0	0	0	0	71,202
2019	37,558	9,287	0	0	0	0	0	46,845
2020	44,421	17,365	0	0	0	0	0	61,786
2021	61,116	14,495	0	0	0	0	0	75,611
2022	50,491	45,452	0	0	0	0	0	95,943
2023	62,742	25,637	0	0	0	0	0	88,379
Total	505,018	190,559	0	0	0	0	0	695,577
Average	50,502	19,056	0	0	0	0	0	69,558

Table 5-12. District Annual Water Supply Delivered, New Melones Contract and OID/SSJID Temporary Water Transfer Agreements (via New Melones) (2014-2023).

Annual Water Quantities Delivered Under New Melones Contract and OID/SSJID Temporary Water Transfer Agreements (via New Melones)

Year	Federal Ag Water	Federal Urban Water	State Water	Local Water (define)	Transfers into District	Other Water (transfers) *OID/SSJID M&I*	Total	Total
	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)
2014	8,235	37,600	0	0	0	0	0	45,835
2015	143	2,513	0	0	0	0	0	2,656
2016	2,502	0	0	0	0	0	0	2,502
2017	4,019	24,182	0	0	0	0	0	28,201
2018	9,407	36,371	0	0	0	0	0	45,778
2019	3,908	33,621	0	0	0	0	0	37,529
2020	5,730	32,584	0	0	0	0	0	38,314
2021	6,815	37,480	0	0	0	0	0	44,295
2022	3,036	0	0	0	0	0	0	3,036
2023	7,977	36,531	0	0	0	0	0	44,508
Total	51,772	240,882	0	0	0	0	0	292,654
Average	5,177	24,088	0	0	0	0	0	29,265

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https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

ATTACHMENTS

Attachment A District Maps

Attachment A.1. District Facilities Maps

Attachment A.2. District Soils Map

Attachment A.3. District Map of Groundwater Facilities

Attachment B District Rules and Regulations

Attachment C Measurement Device Documentation

Attachment C.1. Example of Factory Certification for Propeller Meters

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Attachment C.3. Rubicon BladeMeter Data Sheet

Attachment D District Sample Bills

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Attachment D.2. 2023 and 2024 Rate Ordinance, and Rate Equalization Groundwater Assessment and Base Monthly Payment

Attachment E District Water Shortage Plan

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Attachment F Groundwater Management Plan (if applicable)

Attachment G Groundwater Banking Plan (if applicable)

Attachment H Annual Water Quality Report

Attachment H.1. Annual Potable Water Quality Reports - Urban

Attachment H.2. Annual Irrigation Water Quality Reports - Agricultural

Attachment I Notices of District Education Programs Available to Customers

Attachment J District Agricultural Water Order Form (if Applicable)

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Attachment L SEWD/ USBR and SEWD/CCWD Contract for New Hogan Project Water Supply

Attachment M SEWD/ USBR and SEWD/CSJWCD Contract for Central Valley Project Water Supply(New Melones)

Attachment N Sample Owner's Water Use Statement

Attachment O Calaveras River Habitat Conservation Plan Project, Central California Traction Railroad Crossing Project Preliminary Design and Plan

Attachment O.1. Central California Traction Company Railroad Bridge Preliminary Design

Attachment O.2. CCTR Project Description

Attachment O.3. Project Site Vicinity Map

Attachment O.4. California Traction Railroad Wetland Determination Letter

Attachment O.5. Hosie Low-Water Crossing Design

Attachment O.6. Hosie Low-Water Crossing

Attachment P California Act Establishing the Stockton East Water District

Attachment Q Items to Address DWR Agricultural Water Management Plan Requirements

Attachment Q.1. Legal Certification and Apportionment Required for Water Measurement

Attachment Q.2. Engineer Certification and Apportionment Required for Water Measurement

Attachment Q.3. Water Measurement Best Professional Practices

Attachment Q.4. Description of Water Measurement Conversion to

Volume

Attachment Q.5. Device Corrective Action Plan Required for Water Measurement

Attachment Q.6. DWR Notice of AWMP Preparation

Attachment R Water Conservation Coordinator Position Description

Attachment S Irrigation Training & Research Center Draft Technical Memorandum: Crop Water Use for SEWD

Attachment T District Pump Efficiency Test Results, 2023

Attachment U Efficient Water Management Practices (EWMPs) Report

Attachment V USBR Exemption Letter

Attachment W Urban Water Management Plans, City of Stockton and California Water Service Company

Attachment W.1. California Water Company Urban Water Management Plan: Demand Management Measures

Attachment W.2. City of Stockton Urban Water Management Plan: Demand Management Measures

Attachment X SAWS Water Education Program Annual Report, 2022/2023 School Year

Attachment X.1. SAWS Annual Report

Attachment X.2. SAWS Ed Brochure

Attachment Y – Division of Water Rights Contract for Linden Irrigation District supply

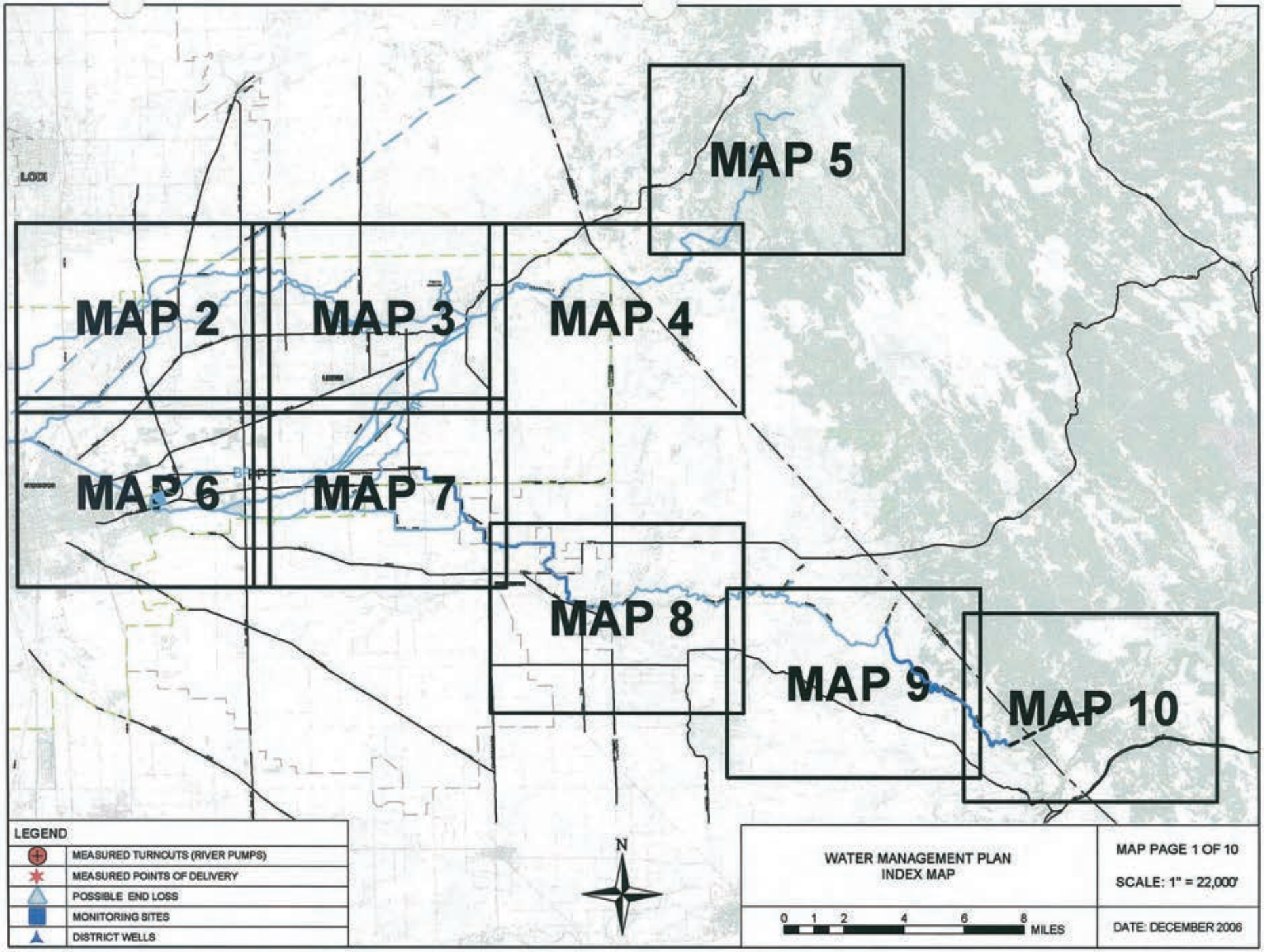
Attachment Z – Water Transfer Agreements with SSJID/OID and RCWD

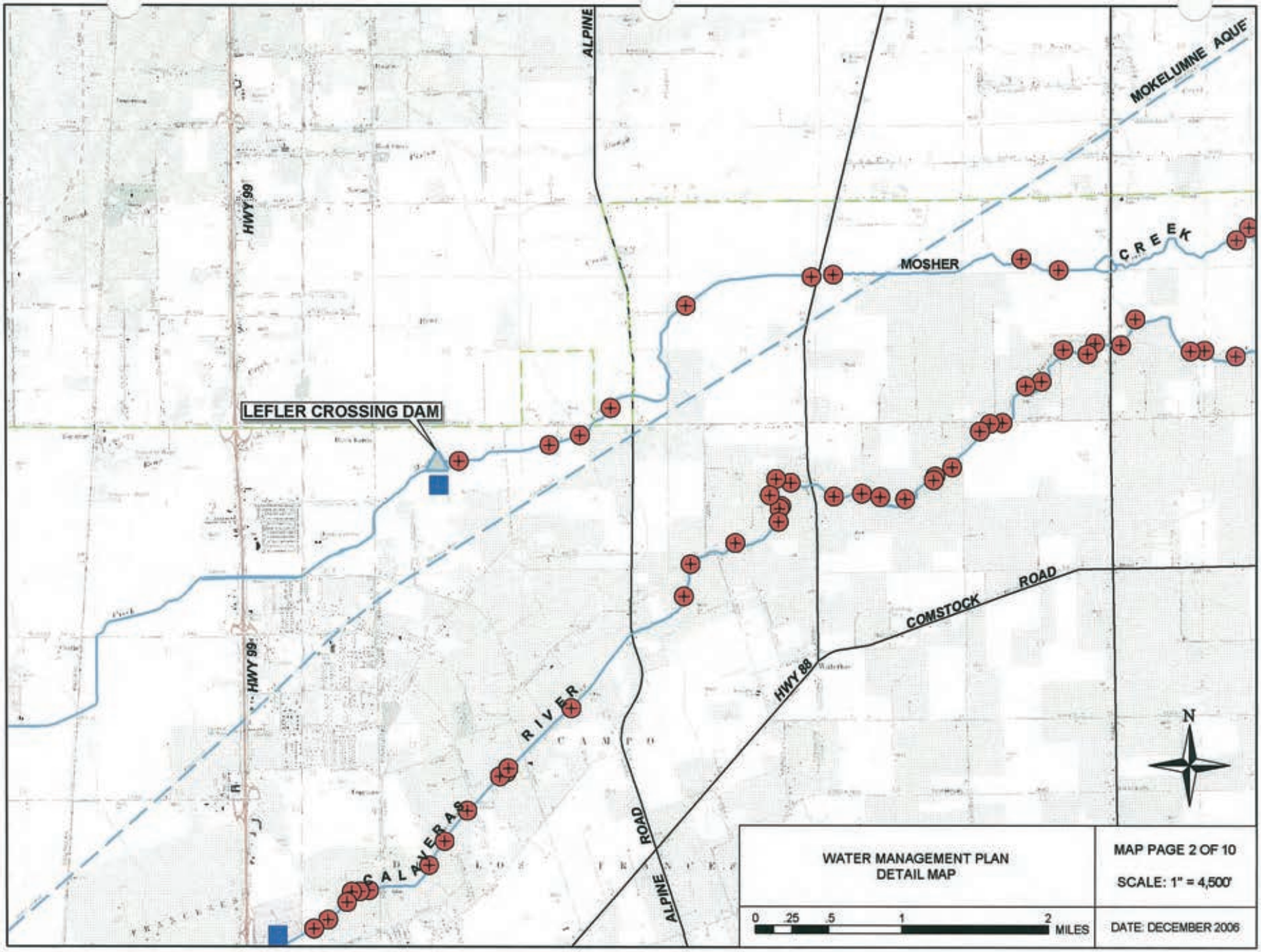
Attachment Z.1. Water Transfer Agreement Rock Creek WD

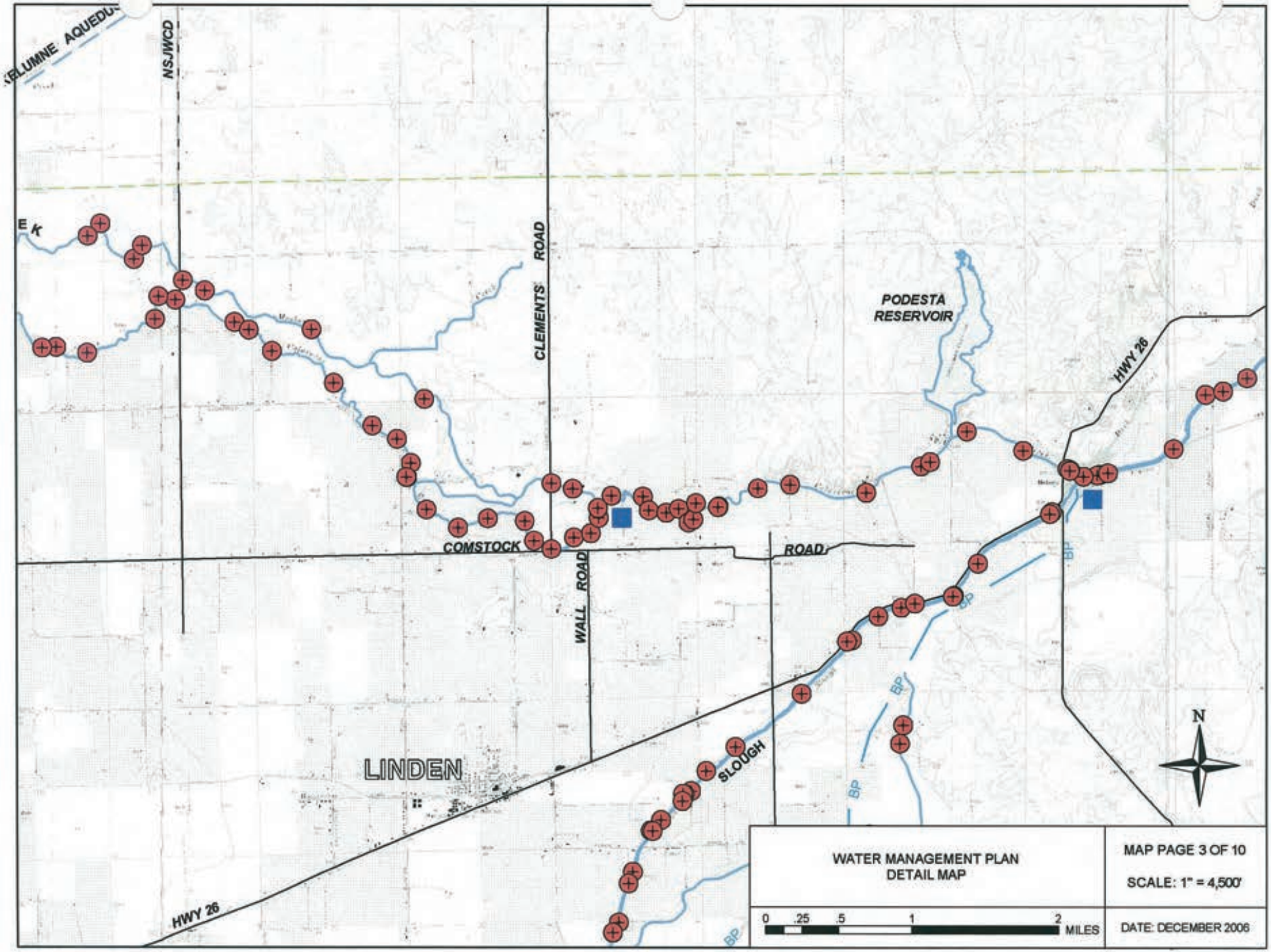
Attachment Z.2. Water Transfer Agreement SSJID OID

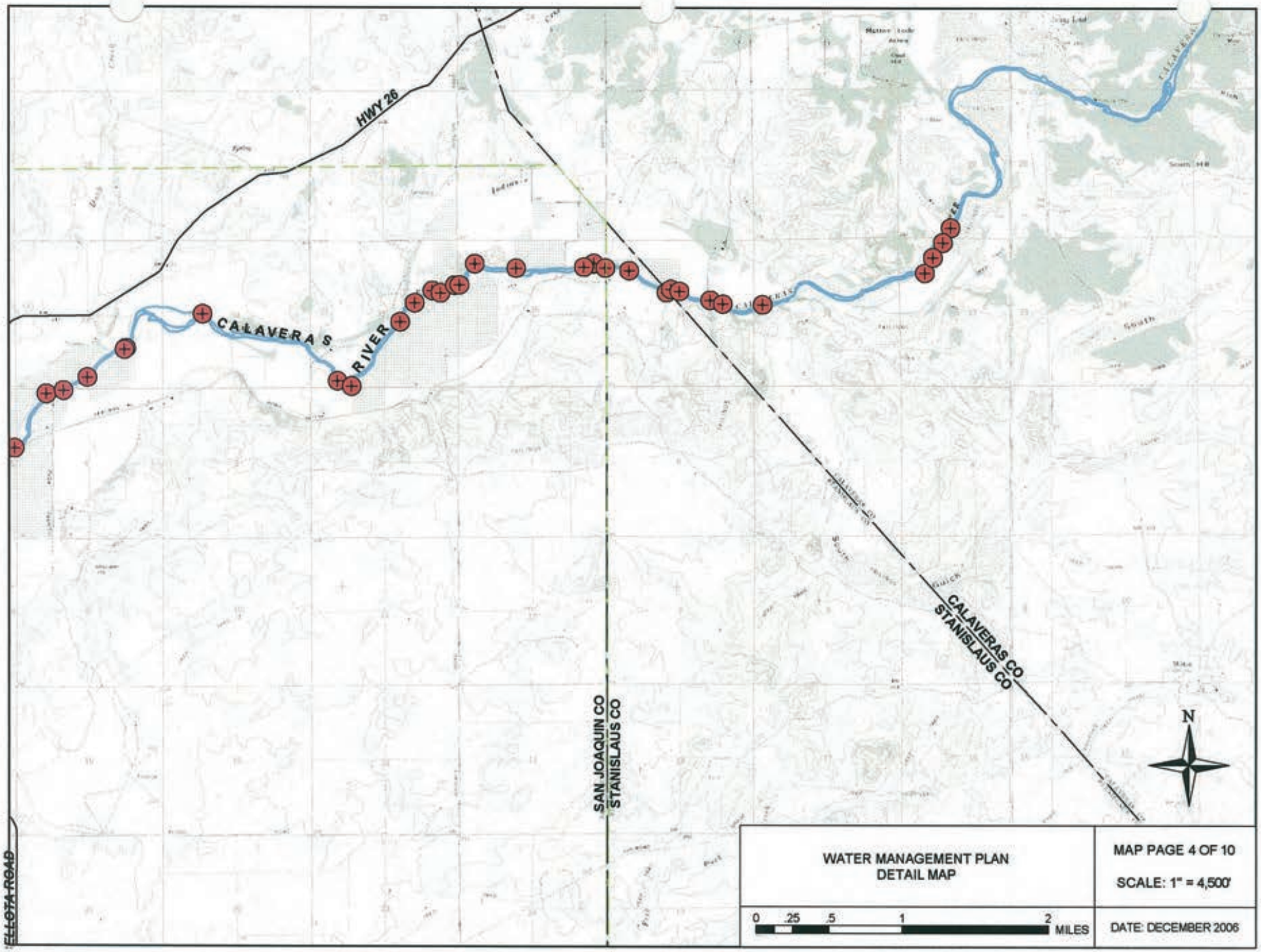
Attachment A District Maps

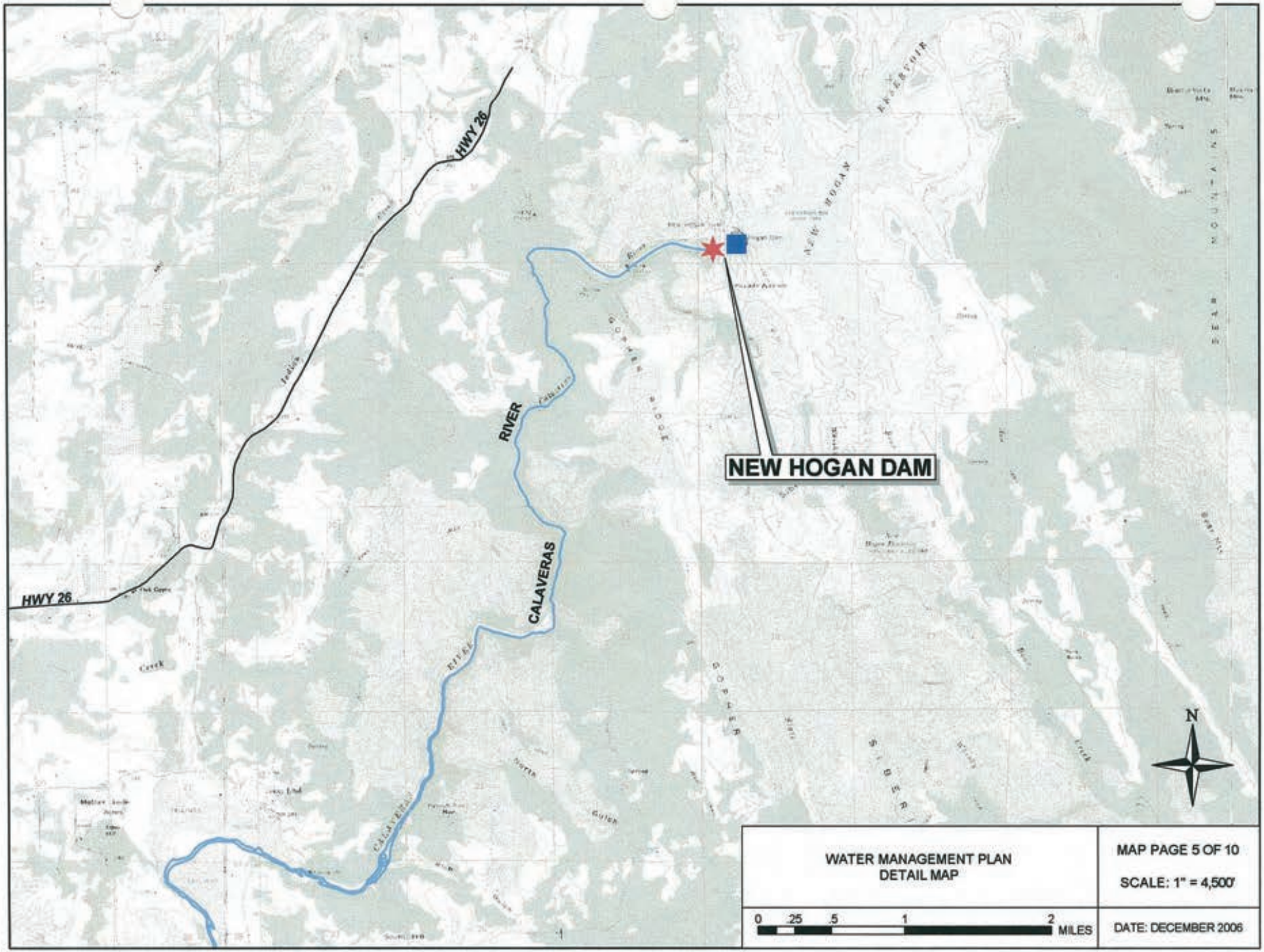
Attachment A.1. District Facilities Maps

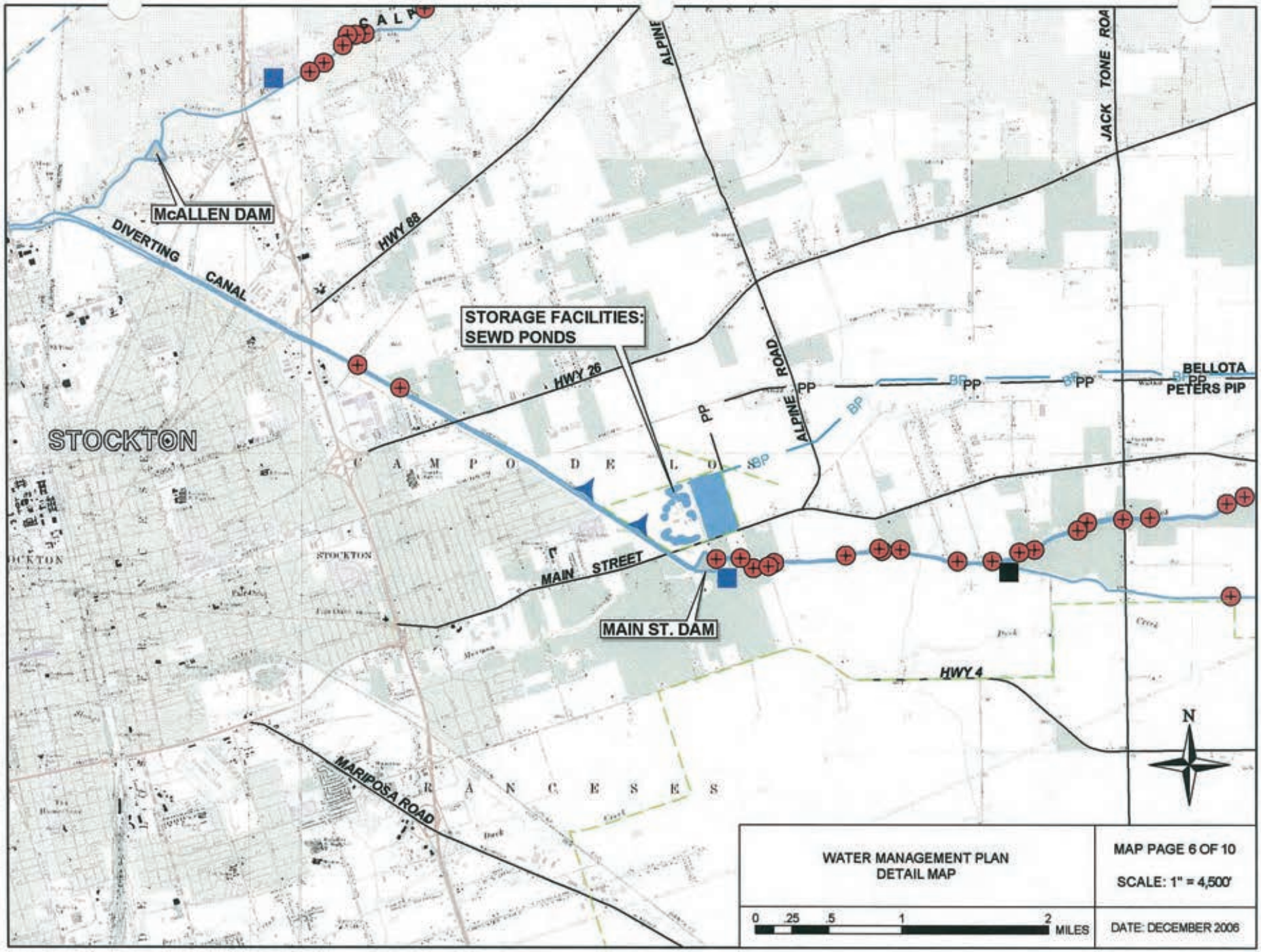

MAP 5
MAP 2
MAP 3
MAP 4
MAP 6
MAP 7
MAP 8
MAP 9
MAP 10
LEGEND
MEASURED TURNOUTS (RIVER PUMPS)
MEASURED POINTS OF DELIVERY
POSSIBLE END LOSS
MONITORING SITES
DISTRICT WELLS
N
WATER MANAGEMENT PLAN
INDEX MAP
0 1 2 4 6 8 MILES
MAP PAGE 1 OF 10
SCALE: 1" = 22,000'
DATE: DECEMBER 2006

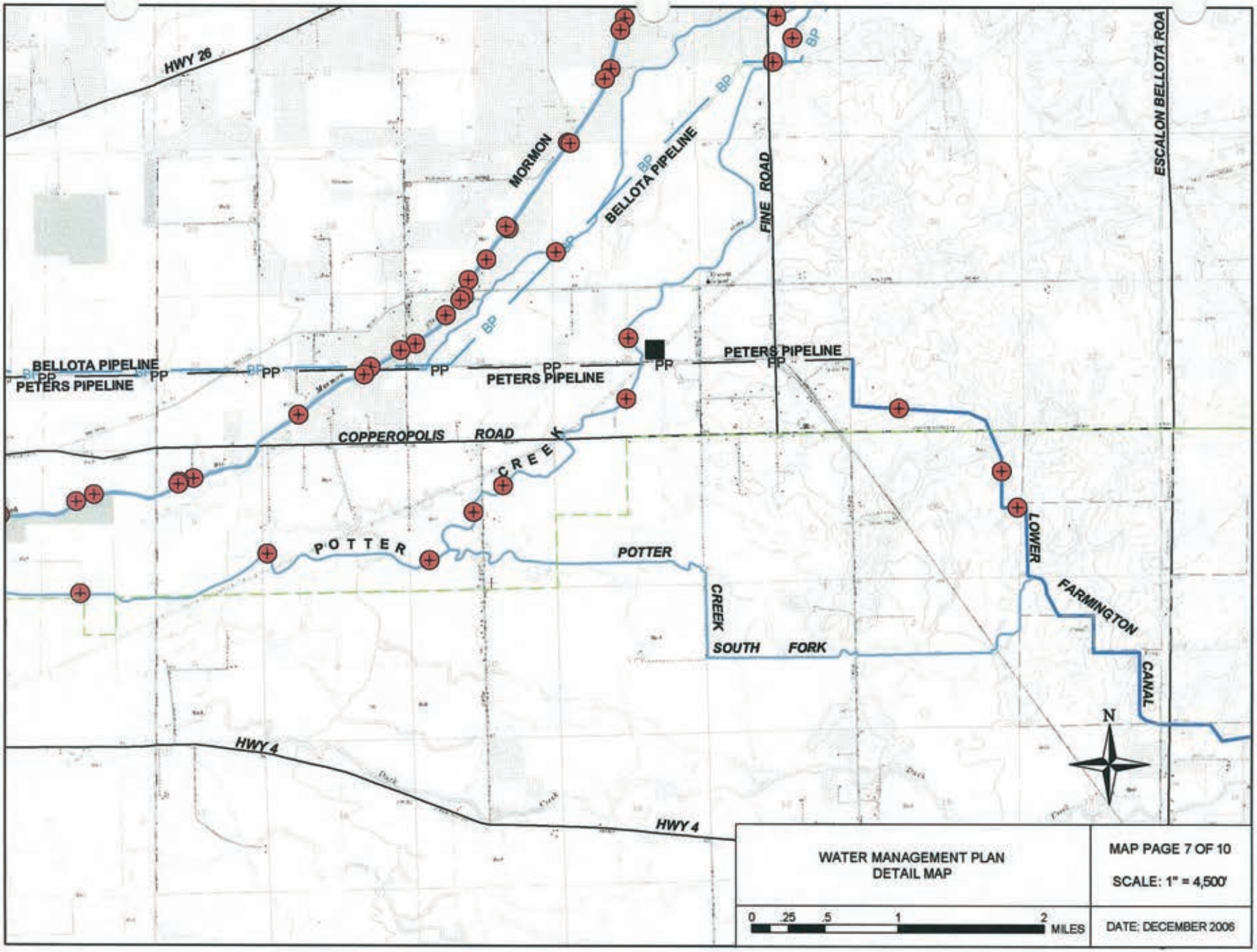

ALPINE
MOKELUMNE AQUE
HWY 99
MOSHER
CREEK
LEFLER CROSSING DAM
HWY 99
COMSTOCK
ROAD
HWY 88
CALAVERAS
RIVER
ALPINE
ROAD
N
WATER MANAGEMENT PLAN
DETAIL MAP
MAP PAGE 2 OF 10
SCALE: 1" = 4,500'
0 .25 .5 1 2 MILES
DATE: DECEMBER 2006

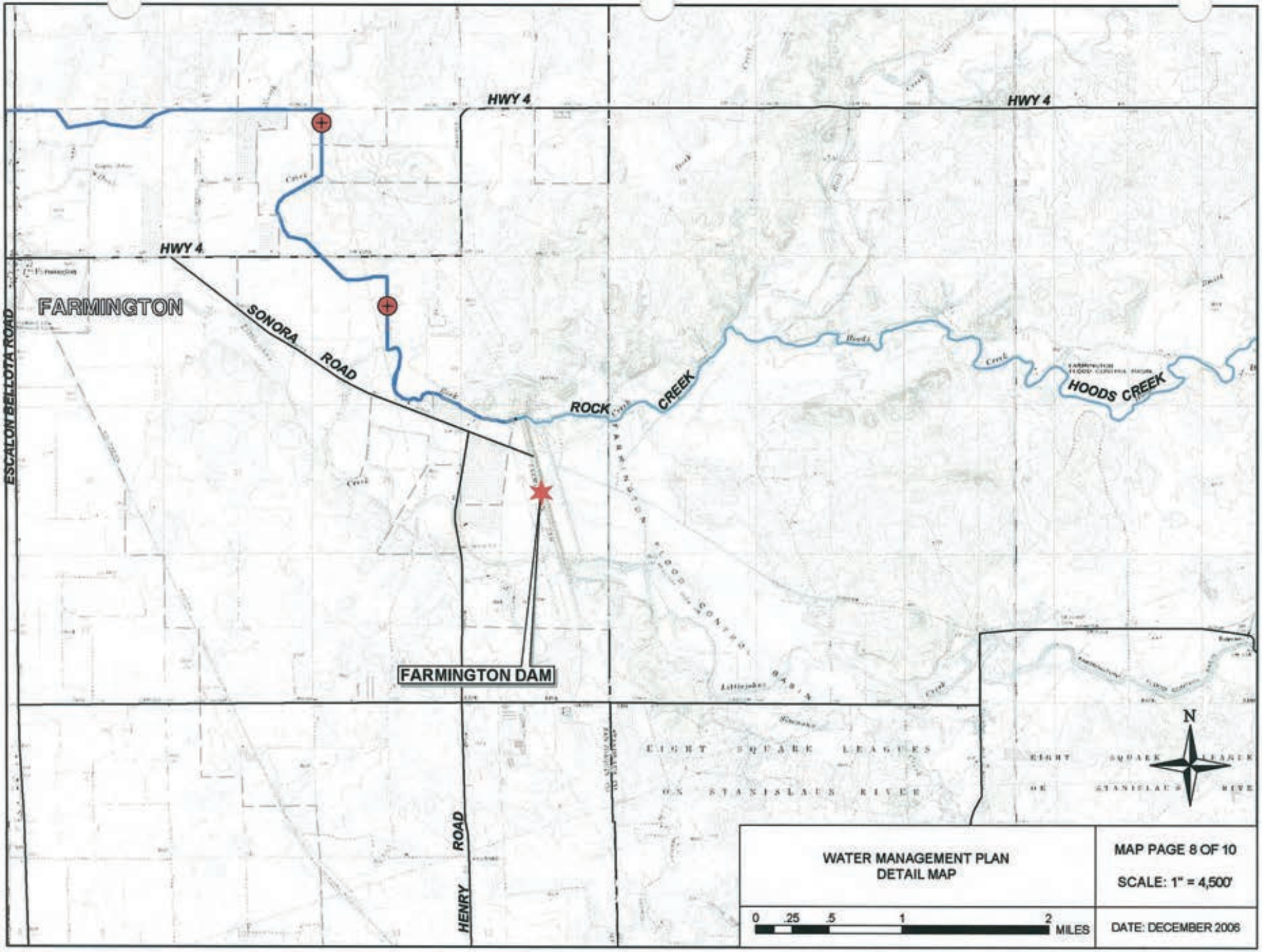

NSJWCD
CLEMENTS ROAD
PODESTA RESERVOIR
HWY 26
COMSTOCK ROAD
WALL ROAD
LINDEN
SLOUGH
HWY 26
BP
N
WATER MANAGEMENT PLAN
DETAIL MAP
MAP PAGE 3 OF 10
SCALE: 1" = 4,500'
0 .25 .5 1 2 MILES
DATE: DECEMBER 2006

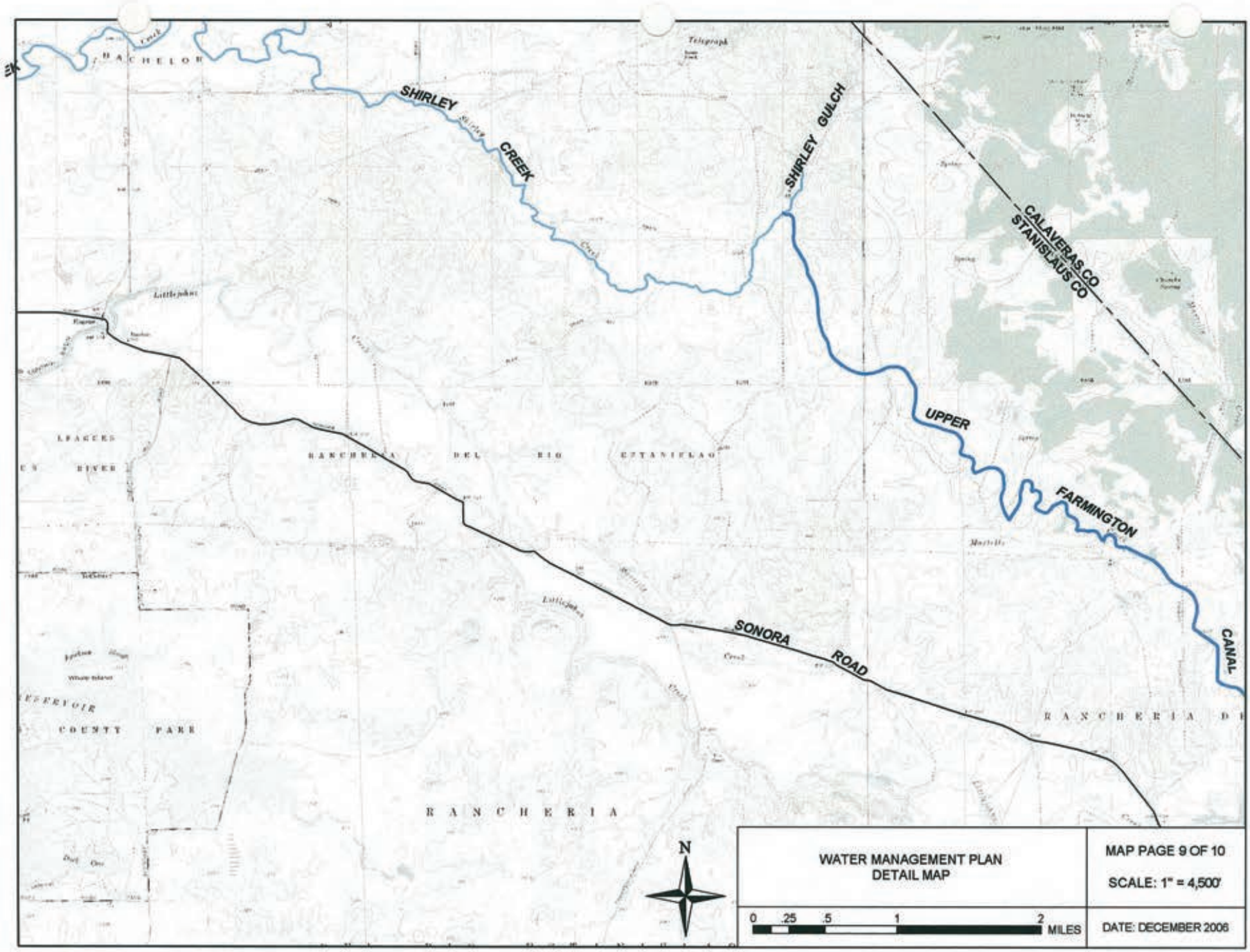

HWY 26
CALAVERAS RIVER
SAN JOAQUIN CO
STANISLAUS CO
CALAVERAS CO
STANISLAUS CO
ELLOTA ROAD
N
WATER MANAGEMENT PLAN
DETAIL MAP
MAP PAGE 4 OF 10
SCALE: 1" = 4,500'
0 .25 .5 1 2 MILES
DATE: DECEMBER 2006

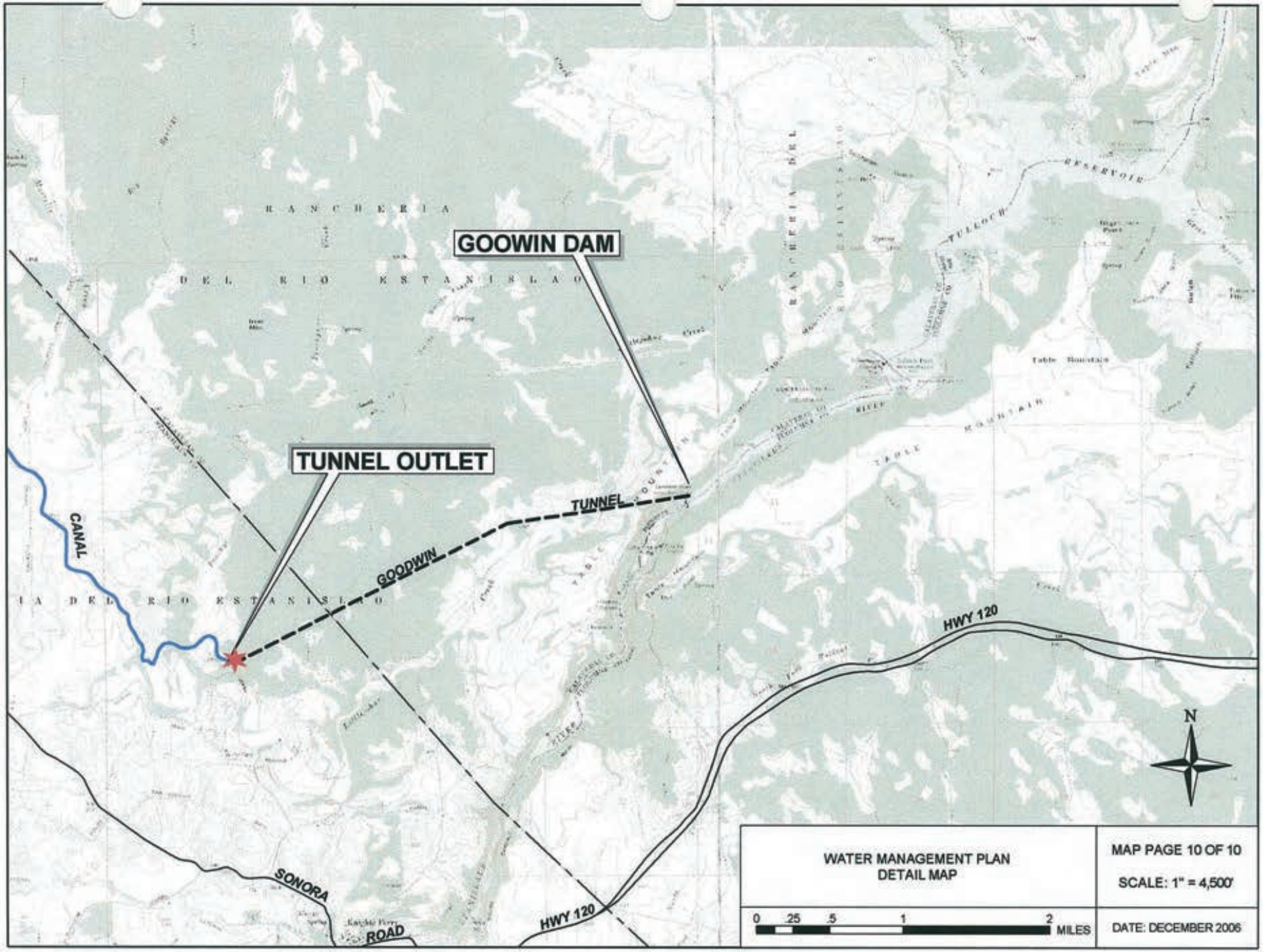

HWY 26
HWY 26
NEW HOGAN DAM
CALAVERAS
RIVER
N
WATER MANAGEMENT PLAN
DETAIL MAP
MAP PAGE 5 OF 10
SCALE: 1" = 4,500'
0 .25 .5 1 2 MILES
DATE: DECEMBER 2006

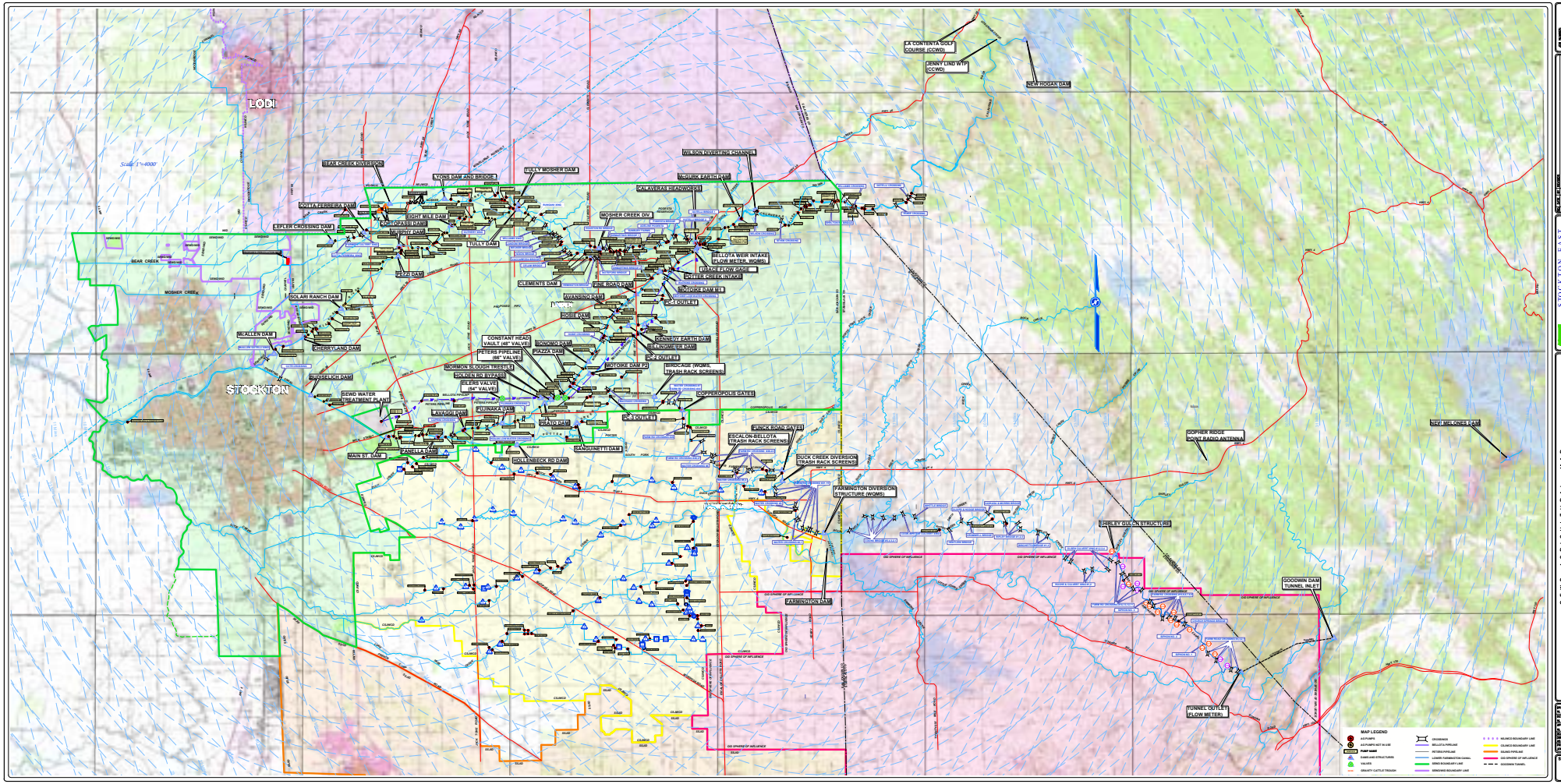

McALLEN DAM
DIVERTING CANAL
HWY 88
STORAGE FACILITIES:
SEWD PONDS
HWY 26
ALPINE ROAD
JACK TONE ROA
BELLOTA
PETERS PIP
STOCKTON
MAIN STREET
MAIN ST. DAM
HWY 4
MARIPOSA ROAD
N
WATER MANAGEMENT PLAN
DETAIL MAP
MAP PAGE 6 OF 10
SCALE: 1" = 4,500'
0 .25 .5 1 2 MILES
DATE: DECEMBER 2006

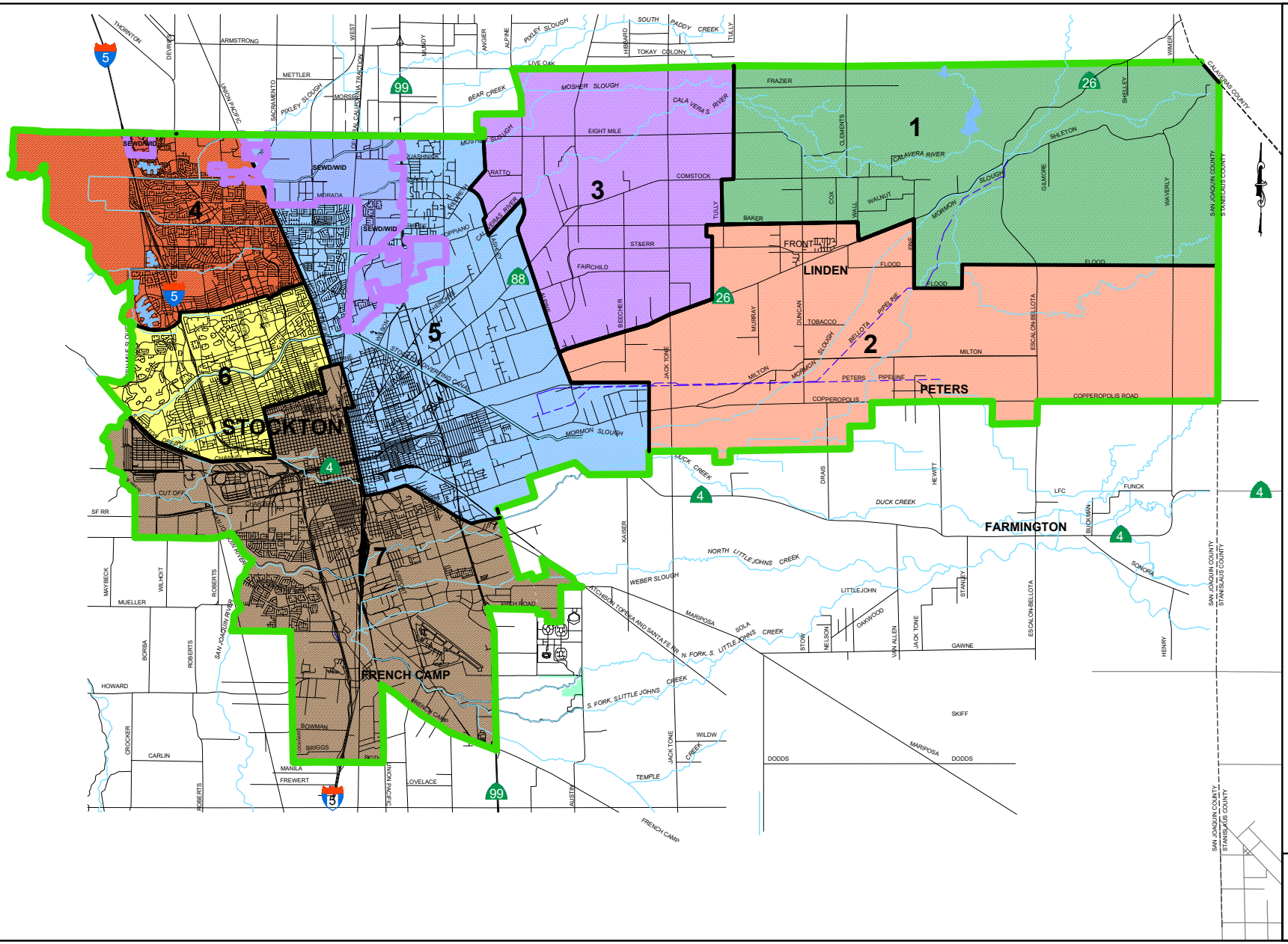

HWY 26
MORMON
BELLOTA PIPELINE
FINE ROAD
ESCALON BELLOTA ROA
BP
BELLOTA PIPELINE
PETERS PIPELINE
PP
PETERS PIPELINE
PETERS PIPELINE
COPPEROPOLIS ROAD
CREEK
POTTER
POTTER
CREEK
SOUTH FORK
LOWER FARMINGTON CANAL
N
HWY 4
HWY 4
WATER MANAGEMENT PLAN
DETAIL MAP
MAP PAGE 7 OF 10
SCALE: 1" = 4,500'
0 .25 .5 1 2 MILES
DATE: DECEMBER 2006


HWY 4
HWY 4
HWY 4
FARMINGTON
SONORA ROAD
ESCALON BELLOTA ROAD
ROCK CREEK
HOODS CREEK
FARMINGTON DAM
HENRY ROAD
EIGHT SQUARE LEAGUES
ON STANISLAUS RIVER
N
WATER MANAGEMENT PLAN
DETAIL MAP
MAP PAGE 8 OF 10
SCALE: 1" = 4,500'
0 .25 .5 1 2 MILES
DATE: DECEMBER 2006


SHIRLEY CREEK
SHIRLEY GULCH
CALAVERAS CO
STANISLAUS CO
UPPER FARMINGTON CANAL
SONORA ROAD
RANCHERIA
N
WATER MANAGEMENT PLAN
DETAIL MAP
MAP PAGE 9 OF 10
SCALE: 1" = 4,500'
0 .25 .5 1 2 MILES
DATE: DECEMBER 2006


GOOWIN DAM
TUNNEL OUTLET
TUNNEL
GOODWIN
CANAL
HWY 120
HWY 120
SONORA
ROAD
N
WATER MANAGEMENT PLAN
DETAIL MAP
MAP PAGE 10 OF 10
SCALE: 1" = 4,500'
0 .25 .5 1 2 MILES
DATE: DECEMBER 2006


LODI
STOCKTON
Scale 1"=4000'
BEAR CREEK DIVERSION
LYONS DAM AND BRIDGE
TULLY MOSHER DAM
WILSON DOYLE/TRENT CHANNEL
McQUIRK EARTH DAM
CALAVERAS HEADWORKS
COLLA FERREIRA DAM
EIGHT MILE DAM
MOSHER CREEK DIV.
EPLER CROSSING DAM
CHILPASARI DAM
MURPHY DAM
TULLY DAM
BELLOTA WEIR INTAKE (FLOW METER, WQMS)
PEZZI DAM
DRAKE FLOW GAGE
DUCKER CREEK INTAKE
CLEMENTS DAM
PINE ROAD DAM
MOTORE DAM M1
SOLARI RANCH DAM
AVANSINO DAM
M1 OUTLET
ROSIE DAM
McALLEN DAM
CONSTANT HEAD VAULT (48" VALVE)
BONOMO DAM
KENNEDY EARTH DAM
CHERRYLAND DAM
PETERS PIPELINE (66" VALVE)
PIAZZA DAM
M2 OUTLET
MOTORE DAM M2
MORMON SLOUGH TRESTLE
BRIDGEAGE (WQMS, TRASH RACK SCREENS)
HOLDEN RD BYPASS
SHUBERICH DAM
EILERS VALVE (54" VALVE)
COPPEROPOLIS GATES
SEWD WATER TREATMENT PLANT
LAVAGGI DAM
ELDORADO DAM
M3 OUTLET
PRATO DAM
KNUCK ROAD GATES
ESCALON-BELLOTA TRASH RACK SCREENS
PANELLA DAM
SANGUINETTI DAM
MAIN ST. DAM
DUCK CREEK DIVERSION TRASH RACK SCREENS
HOLLENBECK RD DAM
FARMINGTON DIVERSION STRUCTURE (WQMS)
SHIRLEY GULCH STRUCTURE
FARMINGTON DAM
GOODWIN DAM TUNNEL INLET
TUNNEL OUTLET (FLOW METER)
LA CONTENTA GOLF COURSE (CCWD)
JENNY LIND WTP (CCWD)
NEW HOGAN DAM
WOPHER RIDGE POINT RADIO ANTENNA
NEW MELONES DAM
MAP LEGEND
AG PUMPS
AG PUMPS NOT IN USE
PUMP NAME
DAMS AND STRUCTURES
VALVES
GRAVITY CATTLE TROUGH
CROSSINGS
BELLOTA PIPELINE
PETERS PIPELINE
LOWER FARMINGTON CANAL
SEWD BOUNDARY LINE
MERCED MID BOUNDARY LINE
MERCED BOUNDARY LINE
CALAVERAS BOUNDARY LINE
CCID BOUNDARY LINE
SOLARI PIPELINE
CCID SPHERE OF INFLUENCE
GOODWIN TUNNEL
STOCKTON EAST WATER DISTRICT
SEWD AGRICULTURAL MAP
GENERAL MAP
SHEET
1



STOCKTON EAST WATER DISTRICT

Stockton East Water District Boundary

Richard Atkins
Division 1

Andrew Watkins
Division 2

Alvin Cortopassi
Division 3

Melvin Panizza
Division 4

Paul Sanguinetti
Division 5

Paul Nakaue
Division 6

Thomas McGurk
Division 7

Figure 4

3/12/2024

Attachment A.2. District Soils Map



SOIL LEGEND*

NEARLY LEVEL SOILS ON DELTAS AND FLOOD PLAINS

1 — RINDGE–KINGILE–RYDE: Very poorly drained, organic soils and very poorly drained, highly organic, moderately fine textured, mineral soils, all of which are very deep and have been partially drained; on deltas and flood plains

2 — FOLSOM–EGBERT: Poorly drained, highly organic, moderately fine textured soils that are very deep and have been partially drained; on deltas and flood plains

3 — MERRITT–GRANGEVILLE–COLUMBIA: Poorly drained and somewhat poorly drained, moderately coarse textured and moderately fine textured soils that are very deep and have been partially drained or drained; on flood plains

4 — COLUMBIA–VIGA–COYOTECREEK: Somewhat poorly drained and well drained, moderately coarse textured and medium textured soils that are very deep and are subject to flooding or protected by levees; on flood plains

NEARLY LEVEL SOILS IN BASINS AND ON BASIN RIMS

5 — WILLOWS–PESCADERO: Poorly drained, moderately fine textured and fine textured, saline–sodic soils that are very deep and have been partially drained; in basins

6 — JACKTOWN–HOLLENBECK–STOCKTON: Somewhat poorly drained and moderately well drained, fine textured soils that are moderately deep and deep to a cemented hardpan and that have been drained in some areas; on basin rims and in basins

7 — KIMRY–DEVRIES–RIOBRANCHO: Poorly drained and somewhat poorly drained, moderately coarse textured and moderately fine textured soils that are moderately deep to a cemented hardpan or are very deep and that have been drained in most areas; on basin rims

NEARLY LEVEL SOILS IN INTERFAN BASINS AND ON ALLUVIAL FANS, LOW FAN TERRACES, STREAM TERRACES, AND DUNES

8 — CAPAY: Moderately well drained, fine textured soils that are very deep and have been subject to artificial wetness; mainly in interfan basins

9 — CAPAY–STOMAR–ZACHARIAS: Moderately well drained and well drained, moderately fine textured, gravelly moderately fine textured, and fine textured soils that are very deep; on interfan basins and on alluvial fans and stream terraces

10 — DELHI–VERSAH–ORIOM: Moderately well drained to somewhat excessively drained, coarse textured and moderately coarse textured soils that are deep to a cemented hardpan or are very deep; on dunes, alluvial fans and low fan terraces

11 — ARCHERDALE–COGNA–ZINROD: Moderately well drained and well drained, medium textured and moderately fine textured soils that are deep to a cemented hardpan or are very deep; on alluvial fans and low fan terraces

12 — TOKAY–ACAMPO: Moderately well drained and well drained, moderately coarse textured soils that are deep to a cemented hardpan or are very deep; on low fan terraces

NEARLY LEVEL TO UNDULATING SOILS ON LOW TERRACES

13 — MADDEN: Moderately well drained, moderately coarse textured soils that are moderately deep to a cemented hardpan; on low terraces

14 — SAN JOAQUIN–GRUELLA: Moderately well drained and well drained, moderately coarse textured and medium textured soils that are moderately deep to a cemented hardpan or are very deep; on low terraces

NEARLY LEVEL TO STEEP SOILS ON DISSECTED TERRACES, FAN TERRACES, HIGH TERRACES, AND HILLS

15 — CARBONA–PLEITO: Well drained, moderately fine textured soils that are very deep; on dissected terraces

16 — COMETA–SAN JOAQUIN–ROCKLIN: Moderately well drained, moderately coarse textured soils that are moderately deep to weakly cemented sediments or a cemented hardpan; on dissected terraces

17 — PENTZ–PARDEE–REYES: Moderately well drained and well drained, moderately coarse textured and gravelly medium textured soils that are shallow to sandstone, conglomerate, or a cemented hardpan; on hills and high terraces

18 — REDDING–YELLOWJARR: Moderately well drained, gravelly medium textured soils that are moderately deep and deep to a cemented hardpan; mainly on fan terraces and high terraces

ROLLING TO VERY STEEP SOILS ON UPLIFTED, DISSECTED TERRACES AND MOUNTAINS

19 — CALLA–CARBONA–WESTLAKE: Well drained, moderately coarse textured and moderately fine textured soils that are very shallow, shallow, deep, and very deep; on uplifted, dissected terraces and mountains

20 — GONZAGA–HONKER–VALLECITOS: Well drained, medium textured and gravelly medium textured soils that are shallow and moderately deep; on mountains

* Texture terms in the descriptive headings refer to the surface layer of the major soils in the map units.

Compiled 1980

Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning

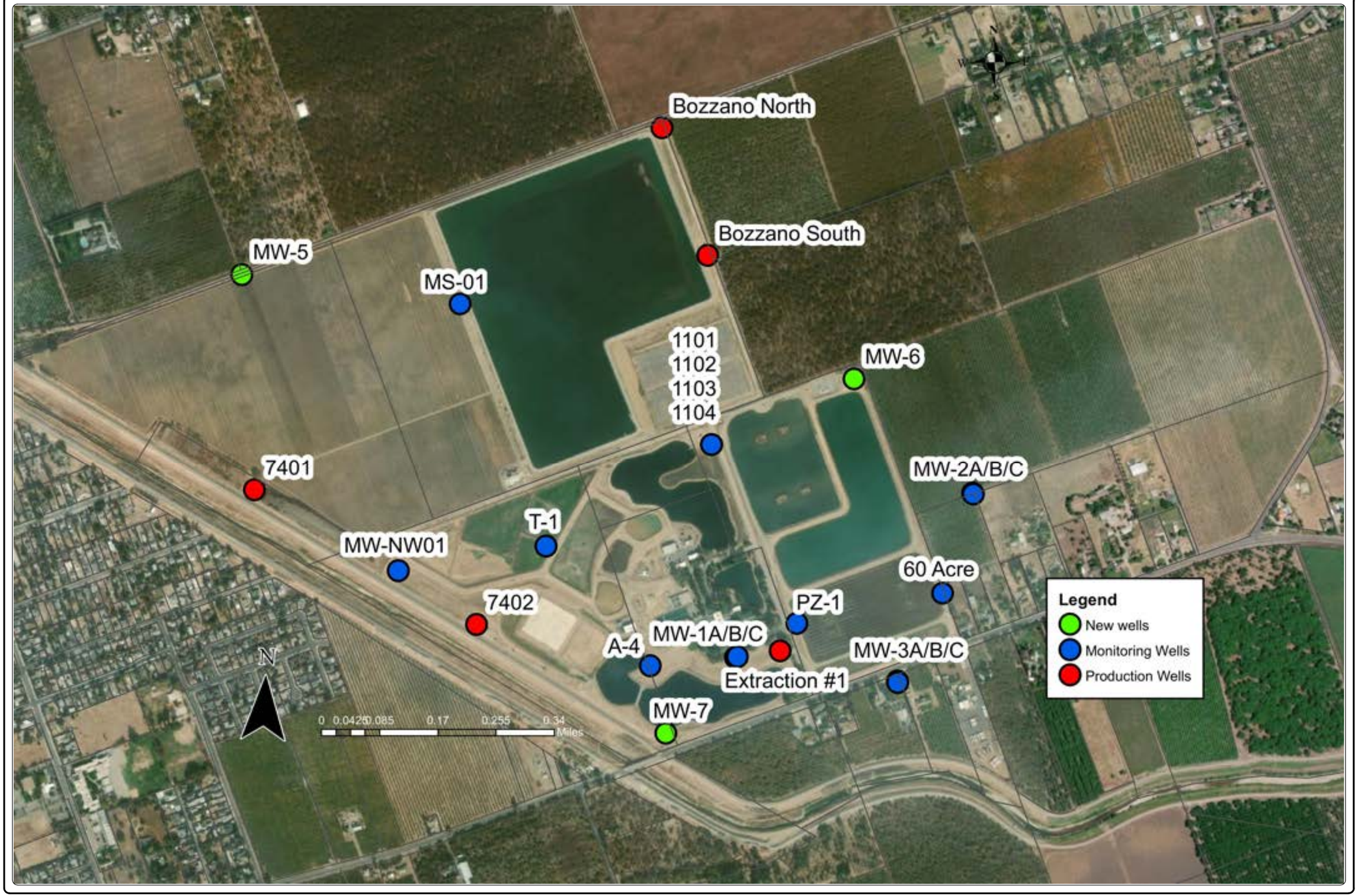
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
REGENTS OF THE UNIVERSITY OF CALIFORNIA
(AGRICULTURAL EXPERIMENT STATION)
CALIFORNIA DEPARTMENT OF CONSERVATION

GENERAL SOIL MAP
SAN JÓAQUIN COUNTY, CALIFORNIA

Scale 1:250,000

0 2 4 6 8 10

Attachment A.3. District Map of Groundwater Facilities



NO	DATE	BY	REVISION

STOCKTON EAST WATER DISTRICT
6767 EAST MAIN ST.
STOCKTON CA

Stockton East Water District
Monitoring Well Locations

DRAWN BY:	D. VILCHERREZ
DESIGNED BY:	D. VILCHERREZ
APPROVED BY:	D. EVENSEN
SCALE:	
DWG. CURRENT AS OF:	12/16/20
PROJECT NO.	PROJECT NO.

SHEET
1
OF

Attachment B District Rules and Regulations

Attachment C Measurement Device Documentation

RULES OF THE DISTRICT

	RULE #	ADOPTED/ PROPOSED
• Water Producing Facilities Within District Registration	Rule 1	9/23/64
• Determining Amount of Water Produced by a Water Producing Facility	Rule 2	10/15/63
• Construction and Interpretation of All Subsequent Rules Adopted by the Board	Rule 3	03/30/64
• Operating Policies	Rule 4	03/30/64
• Rates, 1964 Calendar Year ***(Repealed See Rules 8 & 8a)***	Rule 5	03/30/64
• Installation of Time Meters by District Water Diverters ***(Repealed See Rule 17)***	Rule 6	06/23/64
• Flat Rate Reporting, Billing and Payment Requirements ***(Repealed See Rule 12)***	Rule 7	12/01/64
• Rates, 1965 Calendar Year ***(Repeals Rule 5) (Amended by Rules 8a & 8b) (Repealed See Rule 16)***	Rule 8	03/29/65
• Rates, 1965 Revised ***(Repeals Rule 5) (Amends Rule 8) (Repealed See Rule 16)***	Rule 8a	05/10/65
• Rates, 1965 Revised ***(Repeals Rule 5) (Amends Rule 8) (Repealed See Rule 16)***	Rule 8b	05/10/65
• Water Diversion Compliance Requirements **(Resolution 65-66-3)** ***(Modified by Rule 14)***	Rule 9	08/03/65
• Surface Water Diverter Requirements ***(Repealed See Rule 15)***	Rule 10	10/05/65
• District Terms, Statutes of 1963 Amended By Chapter 1748 of Statues of 1965	Rule 11	10/05/65
• Flat Rate Reporting, Billing and Payment Requirement ***(Repeals Rule 7)***	Rule 12	Proposed
• Operating A Water-Producing Facility	Rule 13	11/02/65 *missing Pages
• Secretary-Manager Determines Safe Operating Water Levels, Lists & Limits for District Flash Board Dams ***(Modification to Rule 9)***	Rule 14	03/01/66
• Surface Water Diverter Requirements & Allowance ***(Repeals Rule 10)***	Rule 15	02/01/66
• Rates, 1966 Calendar Year ***(Repeals Rules 8, 8a, 8b)***	Rule 16	03/01/66
• Installation of Meters by District Water Diverters ***(Repeals Rule 6)***	Rule 17	08/02/66
• Rates, 1967 Calendar Year **(Resolution 66-67-18)**	Rule 18	03/28/67
• Water User Semi-Annual Statement Amount Due Equal to 50% of Total Subject Water Use	Rule 19	04/18/67

(Resolution 66-67-25)

• Determination of Water User Charges on parcels of 5 Acres or Less **(Resolution 66-67-32)**	Rule 20	06/13/67
• Replacement/Change of Rule 15 **(Resolution 67-68-12)** ***(Repealed See Rule 109)***	Rule 21	12/19/67
• Rates, 1968 Calendar Year	Rule 22	03/19/68
• Surface Water Diverter & Riparian Allowances Based Upon "Water Rights Studies" **(Study Adopted by Resolution 68-69-19 on 02/18/69)** ***(Repealed See Rule 26)***	Rule 23	03/18/69
• Rates, 1969 Calendar Year	Rule 24	03/18/69
• Rates, 1970 Calendar Year	Rule 25	03/17/70
• Modification of Surface Water Diverters & Riparian Allowances ***(Repeals Rule 23)*** ***(Repealed See Rule 109)***	Rule 26	04/20/71
• Rates, 1971 Calendar Year	Rule 27	03/23/71
• Definitions And Rules Of Interpretation	Rule 100	06/20/72
• New Water Producing Facilities in the Stockton Metropolitan Area	Rule 101	Proposed
• ~~Notice of Diversion of Stream Delivered Water~~ ***(Repealed See Rule 120)*** ***(Repealed See Rule 120 – Revised: 06/24/14)***	~~Rule 102~~	~~Proposed~~
• Flash Board Dams	Rule 103	06/20/72
• The Measurement Of Water Produced From Both Ground And Surface Sources And Used On One Parcel Of Land	Rule 104	06/20/72
• Reserve Fund and Commingling of Funds	Rule 105	Proposed
• Rates, 1972 Calendar Year	Rule 106	Proposed
• The Measurement Of Water Produced By Water Producing Facilities Without Approved Water Measurement Devices	Rule 107	06/20/72
• Water Use Statements and Progress Payments Not Required for Domestic Water Producing Facilities	Rule 108	Proposed
• Water Rights Claims ***(Repeals Rules 21, 26)***	Rule 109	06/20/72
• Alternate Procedures, Water Producing Facilities Equipped With Water Measurement Devices	Rule 110	06/20/72
• Refunds Of Overpayments	Rule 111	06/20/72
• Relief From Payment Of Ad Valorem Taxes in Planning Area	Rule 112	Proposed
• Maintenance Of Live Stream	Rule 113	06/20/72
• Rates, 1973 Calendar Year	Rule 114	Proposed
• Rates, 1973 Calendar Year	Rule 115	Proposed
• Rates, 1974 Calendar Year	Rule 116	Proposed
• Rates, 1975 Calendar Year	Rule 117	Proposed
• Rates, 1976 Calendar Year	Rule 118	Proposed

- Rates for Use of Agriculture Water Produced by District Operated Deep Well Pumping Plants ***(Repealed See Rule 128)*** — Rule 119 — 01/18/77
- ~~Required Notice To District By Owner Of Diversion Of Stream Delivered Water~~ — ~~Rule 120~~ — ~~02/15/77~~
- ~~Mandatory Required Notice to District by Owner of Diversion of Stream Delivered Water~~ — ~~Rule 120~~ — ~~Rev: 06/24/14~~
- Mandatory Required Notice to District by Owner of Diversion of Stream Delivered Water ***(Repeals Rule 102)*** — Rule 120 — Rev: 04/02/19
- Rates, 1977 Calendar Year — Rule 121 — Proposed
- Rates, 1978 Calendar Year — Rule 122 — Proposed
- Meters ***(Revised See Rule 142)*** — Rule 123 — 05/01/79
- Rates, 1979 Calendar Year — Rule 124 — Proposed
- Unit Values for Flat Rate Domestic Ground Water (***Rule 124, Schedule II, Section VII Revision)*** — Rule 125 — 02/19/80
- Procedure For Enacting Ordinances — Rule 126 — 04/01/80
- Flat Rate, 1980 Calendar Year ***(Ordinance No. 1)*** — Rule 127 — Proposed
- Rates For Use Of Agricultural Water Produced By Districted Operation Deep Well Pumping Plants ***(Repeals Rule 119)*** — Rule 128 — 11/18/80
- Procedures and Regulations for Establishing Flat Rate and Special Class Water Production — Rule 129 — Proposed
- Policy For The Purchase Of Services, Supplies, And Equipment; And For The Surplusing Of Supplies, And Equipment — Rule 130 — 09/07/82
- Procedures And Regulation For Establishing Flat Rate And Special Class Water Production Well Exemptions — Rule 131 — 09/07/82
- Stream Diversion Call-In Rule ***(Repealed by Rule 120 – Revised: 06/24/14)*** — Rule 132 — 04/07/86
- Stream Diversion Access Rule — Rule 133 — 04/07/87
- Regulating Waste Of Surface Water (3/88) — Rule 134 — 03/01/88
- Rate Equalization -- Calendar Year 1990 — Rule 135 — 04/10/90
- Rate Equalization -- Calendar Year 1991 — Rule 136 — 04/02/91
- ~~Allocation Of New Hogan Water, May-Oct.1991~~ — ~~Rule 137~~ — ~~04/30/91~~
- Allocation Of New Hogan Water, May-Oct.1991 — Rule 137 — Rev: 05/01/91
- Rate Equalization -- Calendar Year 1992 — Rule 138 — 03/17/92
- Regulation Waste Of Surface Water ***(Repealed by Rule 120 – Revised: 06/24/14)*** — Rule 139 — 04/21/92
- Allocation Of New Hogan Water -- 1992 — Rule 140 — 04/21/92
- Revised Rule For Rate Equalization -- Calendar Year 1992 — Rule 141 — 06/17/92
- Revised Rule For Meters ***(Revised See Rule 148)*** — Rule 142 — 06/17/92
- Rate Equalization -- Calendar Year 1993 — Rule 143 — 04/06/93
- Rate Equalization -- Calendar Year 1994 — Rule 144 — 04/05/94
- Rate Equalization -- Calendar Year 1995 — Rule 145 — 04/04/95
- Rate Equalization -- Calendar Year 1996 — Rule 146 — 04/09/96
- Rate Equalization -- Calendar Year 1997 — Rule 147 — 04/22/97

- Revision To Rule 142 -- Ordinance 21/Rule For Meters Rule 148 01/13/98
- Rate Equalization -- Calendar Year 1998 Rule 148a 04/14/98
- Rate Equalization -- Calendar Year 1999 Rule 149 04/13/99
- Rate Equalization -- Calendar Year 2000 Rule 150 04/11/00
- Rate Equalization -- Calendar Year 2001 Rule 151 04/11/01
- Rate Equalization – Calendar Year 2002 Rule 152 03/26/02
- Rate Equalization – Calendar Year 2003 Rule 153 03/25/03
- Rate Equalization – Calendar Year 2004 Rule 154 04/06/04
- Rate Equalization – Calendar Year 2005 Rule 155 03/29/05
- Rate Equalization – Calendar Year 2006 Rule 156 04/11/06
- Rate Equalization – Calendar Year 2007 Rule 157 04/10/07
- Rate Equalization – Calendar Year 2008 Rule 158 04/15/08
- Establishing a Policy to Encourage the Use Of Surface Water Instead of Pumping Groundwater Rule 159 10/07/08
- Rate Equalization – Calendar Year 2009 Rule 160 04/14/09
- Rate Equalization – Calendar Year 2010 Rule 161 04/13/10
- Rate Equalization – Calendar Year 2011 Rule 162 04/12/11
- Rate Equalization – Calendar Year 2012 Rule 163 04/10/12
- Rate Equalization – Calendar Year 2013 Rule 164 04/09/13
- Rate Equalization – Calendar Year 2014 Rule 165 04/01/14
- Allocation of New Hogan Water – 2015 Rule 166 03/31/15
- Rule For Rate Equalization – Calendar Year 2015 Rule 167 04/14/15
- Rule for Rate Equalization – Calendar Year 2016 Rule 168 04/12/16
- Rule for Rate Equalization – Calendar Year 2017 Rule 169 04/04/17
- Rule for Rate Equalization – Calendar Year 2018 Rule 170 04/03/18
- Rule for Rate Equalization – Calendar Year 2019 Rule 171 04/09/19
- Rule for Rate Equalization – Calendar Year 2020 Rule 172 04/14/20
- Rule for Rate Equalization – Calendar Year 2021 Rule 173 04/06/21
- Rule for Rate Equalization – Calendar Year 2022 Rule 174 04/05/22
- Rule for Rate Equalization – Calendar Year 2023 Rule 175 04/11/23

ADOPTED June 20, 1972

RULE 100. DEFINITIONS AND RULES OF INTERPRETATION.

WHEREAS, the Act authorizes the Board to make, such rules and regulations as it deems necessary and proper for carrying out the provisions of the Act;

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE STOCKTON-EAST WATER DISTRICT HEREBY ENACTS AND ESTABLISHES THE FOLLOWING RULE:

For the purposes of construction and interpretation of all subsequent rules adopted by the Board, the following rules of construction and interpretation are adopted:

A. Definitions in Act. Unless otherwise provided, any word defined by Chapter 819 of the Statutes of 1971 shall have the meaning set forth in Chapter 819 of the Statutes of 1971.

B. Act» "Act" means Chapter 819 of the Statutes of 1971.

C. Domestic Water Producing Facility. "Domestic Water producing facility" means a water producing facility which produces water used solely upon a phrcel of two (2) acres or less.

D. Continuation of Prior Rules. The provisions of any rule adopted by the Board, insofar as they are substantially the same as provisions contained in a prior or existing rule, are restatements and continuations of such existing rule or rules and not new enactments.

Adopted 6/20/72

ADOPTED June 20, 1972

RULE 103. FLASH BOARD DAMS.

WHEREAS, the Act authorizes the Board to make such rules and regulations as it deems necessary and proper for carrying out the provisions of that Act;

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE STOCKTON-EAST WATER DISTRICT HEREBY ENACTS AND ESTABLISHES THE FOLLOWING RULE:

A. Operating Levels. The Secretary-Manager shall determine the safe operating water level at each of the flash board dams under the District's jurisdiction. The selected safe operating water levels shall be at levels which will reduce any danger of property damage to a reasonable minimum and to allow the efficient operation of the District's distribution system with a maximum conservation of water. As circumstances require in the opinion of the Secretary-Manager, the safe operating water levels so established may be changed from time to time without notice.

B. Gravity Diversions Permitted if Within Safe Operating Levels. The taking of irrigation water by means of gravity diversion shall be permitted only if such diversion can be accomplished within the limits of such safe operating water levels established pursuant to this rule.

C. Intake Levels of Pumps. The intake level of all pumping units within the District shall be approved by the Secretary-Manager.

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ADOPTED June ZU, iy/z ;

RULE 104. THE MEASUREMENT OF WATER PRODUCED FROM BOTH GROUND AND SURFACE SOURCES AND USED ON ONE PARCEL OF LAND.

"WHEREAS, the Act authorizes the Board to make such rules and regulations as it deems necessary and proper for carrying out the provisions of that Act;

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE STOCKTON-EAST WATER DISTRICT HEREBY ENACTS AND ESTABLISHES THE FOLLOWING RULE:

A. Volumetric Water Meter. In any case in which a diverter diverts surface water from the Calaveras River or one of its distributaries and also diverts ground water for use on a single parcel, the Collector may require that there be installed upon the'water producing facility or facilities diverting surface water a volumetric water meter.

B. When Required. The Collector shall only require the installation provided for in Paragraph A in cases in which in his judgment it is impossible to determine the quantities of surface water diverted without the installation of such a volumetric water meter.

C. Ownership and Maintenance. All volumetric water meters required by this rule shall be purchased, installed, and owned by the District. The District shall maintain such meters and may read them from time to time. nJ..

D. Action if Meter Refused.' In any case in which a diverter refuses to allow the installation of a.volumetric water

meter as provided in this rule, and after the Collector has given thirty (30) days written notice to such diverter of the provisions of this rule, the Collector rnay compute the charge for all water used thereafter on such a parcel entirely at the surface water rate.

E. Parcel. As used in this rule, "parcel" means any San Joaquin County assessor's parcel or any two or more San Joaquin County assessor's parcels which are contiguous and in identical ownership.

ADOPTED June *20,* 1972

RULE 107. THE MEASUREMENT OF WATER PRODUCED BY WATER PRODUCING FACILITIES WITHOUT APPROVED WATER MEASURING DEVICES.

WHEREAS, the Act authorizes the Board to make such rules and regulations as it deems necessary and proper for carrying out the provisions of the Act;

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE STOCKTON-EAST WATER DISTRICT HEREBY ENACTS AND ESTABLISHES THE FOLLOWING RULE:

The calculation of the amount of water produced from a water producing facility, other than a domestic water producing facility, which is not measured by a water measuring device approved by the Collector, shall be based upon the following factors:

A. " Actual. Efficiency of Water Producing Facility. The actual efficiency of the water producing facility as determined by the Collector.

B. • Energy Consumed. The total energy consumed in pumping based upon meter kilowatt energy consumed in pumping as measured by meter, or if another source of energy is utilized, based upon metered or volumetric fuel consumption records maintained in a manner approved by the Board of Directors.

C. Acres Irrigated and Crops Produced. The actual number of acres irrigated and the crops produced.

D. Elapsed Time Meter. Information furbished by an elaxsed time meter installed and maintained by the District and metering the Collector's current requirements for such meters.

RULE 109. WATER RIGHTS CLAIMS.

WHEREAS, the Act authorizes the Board to make such rules and regulations as it deems necessary and proper for carrying out the provisions of the Act; and

WHEREAS, various diverters of surface water from the Calaveras River and its distributaries claim that a portion of the water that is so diverted by them represents natural flow water and is diverted by them under a claim of right; and

WHEREAS, the Board of Directors of this District has recognized that in some instances such claims may have validity when made by surface water diverters from the Calaveras River upstream from the divergence of the Calaveras River and the Mormon Slough, and from the Mormon Slough downstream from said point, to the beginning of the Stockton Diverting Canal; and

WHEREAS, the Board of Directors of this District has had prepared by Murray, Burns & Kienlen, Consulting civil Engineers, a study of water use and water rights on the Calaveras River which is dated February 7, 1969, which study is hereinafter referred to as "Water Rights Study"; and

WHEREAS, that study sets forth for each surface diverter as of the date of the report a percentage of that diverter's water demand that can be considered to be taken from the natural flow of the river under a valid claim of right;

Adopted 6/20/72

that such computations are based on the findings of the report that based on the use of water during the year 1965, riparian lands are entitled to 30% of the surface water used on them under a claim of right, "use''(as defined on page 14 of said study) lands are entitled to 16% of the surface water used on them under a claim of right and appropriators are entitled to the percentage of water used on them as set out for each individual appropriator on page 31, Water Rights Study; that the irrigation of riparian land that is not-now irrigated will lower the percentages of water that can be used by all classes of land under a valid claim of right and that these decreases in percentages can be.calculated from the data contained in the Water Rights Study; .and that if there is in the future surface irrigation of land not included in said study the percentage of water that can be used by such land under a.valid claim of right, if any, can be calculated from data contained in said study which was adopted by Resolution 68-69-19 of the Board of Directors of this District on February 18, 1969; and

WHEREAS, subsequent to the completion and adoption of the aforementioned Water Rights Study,,additional evidence was presented to the Board, at its invitation, showing that in that part of the Calaveras River east of Bellota and west of the San Joaquin-Stanislaus county line, that the riparian entitlement may be somewhat greater than set forth in said Water Rights Study, and that accordingly some landowners in that reeich may have a claim to additional rights; and

'WHEREAS, this Board considered said evidence and concluded that the riparian entitlement of those landowners, east of Bellota and west of the San Joaquin-Stanislaus county line was greater than that contained in the said Study and therefore modified the riparian allowance provided to such landowners under the Study;

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE STOCKTON-EAST WATER DISTRICT HEREBY ENACTS AND ESTABLISHES THE FOLLOWING RULE:

A. (1) All assessments and charges levied for the period subsequent to January 1, 1972 shall contain allowances for the water rights of each surface water diverter from the Calaveras River as shown by the findings of the Water Rights Study, modified as follows:

(a) The entitlement of riparian diverters between the east line of the Escalon-Bellota Road Bridge and the west line of Section 4, Township 2 North, Range 9 East, M.D.B.& M. is 35%;

(b) The entitlement of riparian diverters between the west line of Section 4, Township 2 North, Range 9 East, M.D.B.& M. and the west line of Section 35, Township 3 North, Range 9 East, M.D.B.& M. is 40%;

(c) The entitlement of riparian diverters between the west line of Section 35, Township 3 North, Range 9 East, M.D.B.& M. to the San Joaquin-Stanislaus county line is 45%;

(d) The entitlement of a diverter in the areas described in subparagraphs A(l) (a), (b), and (c), may be increased by resolution of the Board of Directors on a finding based on reasonable evidence in the judgment of the Board of Directors that such diverter is entitled to additional rights, whether prescriptive, riparian, appropriative, or "use", not taken into account in the Water Rights Study.

Any reference hereinafer to said Water Rights Study is to said Water Rights Study as adjudged in the manner set forth in this subparagraph (1) of Paragraph A as to said three areas east of Bellota. Payment made to this District in conformity with these assessments shall be considered payment in full to this District.

(2) Since the percentage allowance assigned to each surface water diverter in the Water Rights Study, Table 7, is based upon water use at the time of said Study, and is subject to correction if there is additional surface water irrigation of riparian land, and since there is land which is potentially surface irrigated that may have valid water rights, that is not included in the Water Rights Study, the Secretary-Manager of this District is authorized and directed to recalculate the percentage of allowance due to each individual surface diverter based on the date contained in the Water Rights Study and changes in the use of surface water along the Calaveras River System and to calculate the percentage of allowance due to diverters of water for use on lands not covered by the Water Rights Study, which such calculations become

necessary/ in the opinion of the Secretary-Manager or when directed to do so by this Board. In the event of such calculation the Secretary-Manager shall recognize the ratios established by the adjustments made in the allowances granted to riparian diverters in the three areas above Bellota.

(3) Any water right allowance granted to a diverter pursuant to this Rule and pursuant to the provisions of earlier Rules adopted by this District may be modifed or abolished by a Rule adopted by this District and is granted solely for the purpose of levying a charge for surface water use and is not a determination binding either upon the District or the diverter for any other purpose.

B. Any landowner who has a water rights allowance recognized by this District may take water after October 30th and prior to the following April 1st of any consecutive years without payment and without having such taking applied in satisfaction of such a landowners water right-allowance recognized by the District, provided that any such landowner shall provide such report necessary to substantiate the actual time of water use as are satisfactory to the Collector.

C. This rule succeeds former Rules 10, 15, 21, 23, and 25 of this District, and any question or dispute between an owner and the District over charges or assessments made prior to the effective date of this Rule shall be governed by the appropriate former Rule to the extent that it would have applied prior to the adoption of this Rule.

adopted June zu, iy/2 .

RULE 110. ALTERNATE PROCEDURES, WATER PRODUCING FACILITIES EQUIPPED WITH WATER MEASURING DEVICES.

WHEREAS, subdivision (c) of Section 11 of the Act authorizes the Board, by rule, to establish alternate procedures for the computation and payment of progress bills in the case of water producing .facilities within the District, the water production of which is measured by a water measuring device approved by the Collector;

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE STOCKTON-EAST WATER DISTRICT ENACTS AND ESTABLISHES THE FOLLOWING RULE:

A. Approved Water Measuring Devices to be Read by Owner. All owners of water producing facilities within the District, the water production of which is measured by a water producing device approved by the Collector, and who elect to report their water production based on the record maintained by such water measuring device shall on June 30 and December 31 of each calendar year, record the then current reading of such approved measuring device.

B. Readings to be Reported to Collector. The readings taken pursuant to the provisions of Paragraph A above shall be reported under penalty of perjury by the owner of the water producing facility, and shall be transmitted by the owner to the Collector within one month following the taking of such readings.

C. Progress Billing. At the time next designated for the mailing of progress bills in the Act, the Collector shall mail to the owner of a facility equipped with an approved water

Adopted 6/20/92

measuring device, a bill stating the exact amount owed by the owner based upon the current reported reading of his measurement device.

D. Payment of Progress Bill. The owner must pay the amount indicated on this bill within the same time period applicable to the payment of progress bills for non-volumetric water producing facilities under the provisions of Section 11 of the Act, and a failure to do so will subject him to penalties identical to those enumerated in said Section 11 of the Act.

E. Annual Bill. Submission and payment of the annual bill in the case of water producing facilities equipped with a water measuring device approved by the Collector shall be as provided in Section 13 of the Act.

F. Water Measuring Devices to be Read by District. The District may read all water measuring devices from time to time whether such water measuring devices were originally installed by the District or by the owner of a water producing facility.

G. Maintenance and Inspection. No water measuring device shall be deemed to be a "water --produg4-ng device, approved by the Collector" unless the owner of the water producing facility on which such water measuring device is installed permits periodic inspection and maintenance of such water measuring device by the District.

RULE 111. REFUNDS OF OVERPAYMENTS.

WHEREAS, Section 19 of the Act requires that the Board establish rules providing for the making of refunds in the event of the overpayment of any ground water assessment or stream delivered water charges;

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE STOCKTON-EAST WATER DISTRICT ENACTS AND ESTABLISHES THE FOLLOWING RULE:

A. Application for Refund. The owner of any water producing facility within the District who believes he has overpaid any ground water assessment or stream delivered water charge may apply to the Secretary-Manager of the District on forms prescribed by the Secretary-Manager of the District for a refund of the amount of such overpayment. Such application must be filed within three (3) years of the making of the overpayment in question.

B. Review by Secretary-Manager. Upon receipt of an application for refund, the Secretary-Manager shall review the same and then place the matter on the agenda of the Board and shall submit to the Board the application for refund and the recommendation of the Secretary-Manager.

C. Notice of Consideration. A notice of time at which the Board will consider an application for refund shall be mailed to the person making such application at least ten (10) days before

Adopted 6/20/72

the date of the time of such consideration. After the Board has acted upon the application the Secretary-Manager shall mail a notice of the action to the person filing such application.

RULE 113. MAINTENANCE OF LIVE STREAM.

WHEREAS, the Act authorizes the Board to make such rules and regulations as it deems necessary and proper for carrying out the provisions of the Act;

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE STOCKTON-EAST WATER DISTRICT ENACTS AND ESTABLISHES THE FOLLOWING RULE:

In its operation of the Calaveras River and its distributaries, to the extent of its jurisdiction and control, the District shall observe the following policies:

A. No water shall be diverted to storage in New Hogan Reservoir at any time when a live stream does not exist in Mormon Slough from Bellota to the Stockton Diverting Canal.

B. Diversions of water into the Old Calaveras River Channel at Bellota shall be limited to times when a live stream exists in Mormon Slough from Bellota to the Stockton Diverting Canal.

C. The application of Paragraphs A and B above shall be subject to modification when necessary for purposes of repairs, maintenance, and construction.

RULE NO. 120
ADOPTED: 02/15/1977
REVISED: 06/24/2014
REVISED: 04/02/2019

MANDATORY REQUIRED NOTICE TO DISTRICT BY OWNER OF DIVERSION OF STREAM DELIVERED WATER

Whereas, the Board of Directors hereby finds the necessity to revise Rule No. 120 by incorporating Rule No. 132 (Stream Diversion Call-In Rule; adopted 04/07/1986) and Rule No. 139 (Regulating Waste of Surface Water; adopted 04/21/1992) for the purpose of correcting contact information and outlining consequences for failure to follow mandatory notification procedures for the diversion of stream delivered water; and

Whereas, the Act authorizes the Board to make such Rules and Regulations as it deems necessary and proper for carrying out the provisions of the Act; and

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE STOCKTON EAST WATER DISTRICT HEREBY REVISES RULE NO. 120 AS FOLLOWS:

A. Mandatory Notification Required. Any person desiring to divert surface water provided by the District shall first inform the District at its office (6767 East Main Street, Stockton, California), at least forty-eight (48) hours prior to the start of such diversion. The District will receive such notice 7 days a week at the following numbers: Monday through Friday (8:00 a.m. to 5:00 p.m.) 209-948-0333; all other times, 209-469-3335 or online at www.sewd.net. The following information must be provided: name, phone number, pump ID number, diversion rate, beginning date/time, end date/time and run time.

B. The objective of Paragraph A is to avoid waste of water, which will cause loss of a valuable resource in limited supply, affecting the District and all other agricultural irrigators in the District. The District may send a warning notification and/or send a notification failure & impose a fine in the amount anywhere between $100.00 to $500.00 and possible lock-off water service, as determined by the Board of Directors in their sole discretion.

C. For the first such notification failure by any person, such person will be charged $100, and such amount will be added to such person's account with the District.

D. For the second such notification failure by any person, that person will be charged $200, and such amount will be added to such person's account with the District.

E. The Board may, at its discretion, lock off customer's water service upon 3rd and any subsequent violation. Water service will not be restored until forty-eight (48) hours after the order is placed, that person will be charged a $500 fine applicable for staff time to lock/unlock service, and such amount will be added to such person's account with the District.

F. Upon determination of any notification failure, the District shall notify the person who failed to follow this Rule.

G. The amount added to such person's account shall be collected as part of such person's account in the manner provided in the Act.

H. Any person charged under this Rule may appeal to the District's Board of Directors which may waive any charge imposed by this Rule, which would be inequitable under the circumstances the Board of Directors determines.

I. Diverters upon request of District shall provide District with a monthly irrigation plan to permit District to forecast irrigation demand. Diverters shall follow the plan as closely as possible.

J. Rule Nos. 102, 132 and 139 of this District are hereby repealed.

RULE 123. METERS.

WHEREAS, the Act authorizes the Board to make such rules and regulations as it deems necessary and proper for carrying out the provisions of the Act; and

WHEREAS, Section 5 of the Act allows the Board to require such measuring devices as may be necessary;

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE STOCKTON-EAST WATER DISTRICT HEREBY ENACTS AND ESTABLISHES THE FOLLOWING RULE:

A. The staff of Stockton-East Water District shall recommend to the Board installation of a meter or water-measuring device on any agricultural water-producing facility, except as noted in Paragraph G herein, where such meter or device is necessary to carry out the purposes of the Act, in the discretion of the District. This recommendation shall be accompanied by a plan for physically installing the meter and necessary engineering drawings for such installation. Prior to making such recommendations to the Board the staff shall notify the owner of the water-producing facility of the proposed recommendations so that the owner may apuear and comment at the meeting in which the Board will hear that recommendation.

B. The Board shall consider the recommendations of the staff, the comments of the owner of the agricultural.

Rule 123
Adopted 5/1/79

water-producing facility, and shall by resolution direct the staff to proceed with installation of its meter or water-measuring device, if in the judgment of the Board such installation is necessary to carry out the purposes of the Act.

C. .Such installation, if directed by the Board, shall take place in two steps:

1. The District shall provide to the owner of the agricultural water-producing facility a meter containment tube which shall be complete with a pre-cut hole for installation of the meter or water-measuring device and shall have straightening vanes installed. Within thirty (30) days after provision of such meter containment tube (unless such time is extended by the Board) the owner shall install it in accordance with the engineering drawing and plan submitted by the staff.

2. As soon as possible thereafter the staff of the District shall install the meter or water-measuring device.

D. In the event such a meter or water-measuring device is placed on any agricultural water-producing facility, an annual charge for the installation, so lon as such meter or water-measuring device is in place and operable, shall be charged to the owner as a separate charge on his annual water bill. Said charges shall be in accordance wx$_u$h the

following schedule. For meters or water-measuring devices which are of sizes different from those shown on the schedule, the staff shall recommend an annual charge consistent with the schedule:

Size of Meter	Annual Charge
4″ Meter	$37.00
6" Meter	$38.00
8" Meter	$40.00
10″ Meter	$43.00
12" Meter	$45.00
14″ Meter	$47.00
16″ Meter	$51.00
18″ Meter	$63.00
20" Meter	$67.00
22" Meter	$70.00
24" Meter	$73.00
30" Meter	$80.00

E. The meter shall remain the property of the District and shall be maintained and inspected by the District thereafter. Any person who injures, alters, removes, resets, adjusts, manipulates, obstructs or in any manner interferes or tampers with or procures, or causes or directs any person to injure, alter, remove, reset, adjust, manipulate, obstruct or in any manner interfere or tamper with any meter or water-measuring device, so as to cause such meter or water-measuring device to improperly or inaccurately measure and record water production, ..shall be subject to the penalties set forth in the Act.

F. If the Board determines that it is necessary in order to secure compliance with this rule by any owner,

the Board shall then direct the Secretary-Manager of the District to seek appropriate remedies with the assistance of the attorneys for the District so as to obtain full enforcement of this rule. In accordance with Section 22 of the Act, it is hereby provided that the District shall not deliver or make available water to any.owner who shall fail to install the meter containment tube in accordance with the engineering drawing within thirty (30) days of the time of provision of such meter containment tube to the owner (unless such time is extended by the Board), or who shall interfere with the subsequent installation of the meter or water-measuring device.

G. Paragraphs A and B of this rule shall not apply to agricultural surface water-producing facilities installed after May 1, 1979, and the installation of meters or water-measuring devices on such facilities shall be deemed to have been judged necessary, and installation of meters or water-measuring devices on such facilities shall take place in accordance with Paragraphs C, D, E and F of this Rule.

VIC SOLARI. JR.
JOSEPH L DONOERO
JACK H TONE
JACK LAVEN
RICHARD L. BOZZANO
BETTY L MacNEAP
ROGER M. HUCKINS

EDY,ARD M STEFrANI
GENERAL MANAGER

JOHN W STOVALL
general counsel

STOCKTON EAST WATER DiSTRiCT

6767 EAST MAIN STREET P.O. BOX 5157 STOCKTON, CA 95205-0157 209/948-0333

AUTHORIZATION TO INSTALL AND MAINTAIN A VOLUMETRIC WATER METER ON RIVER PUMP

Date _____

District Account No. _____

River Pump No. _____

Name _____

I hereby authorize Stockton East Water District to install and maintain a volumetric water meter on my river pump in accordance with District Rule 123, adopted May 1, 1979. This Rule provides for an annual charge consistent with the following schedule:

Meter Size	Annual Charge
4 inch	$37
6 inch	$38
8 inch	$40
10 inch	$43
12 inch	$45
14 inch	$47
16 inch	$51
18 inch	$63
20 inch	$67
22 inch	$70
24 inch	$73
30 inch	$80

Signature _____

Address _____

_____

Phone _____

ADOPTED April 1, 1980

RULE 126 . PROCEDURE FOR ENACTING ORDINANCES.

WHEREAS, Chapter 819 of the Statutes of 1971, as amended (hereinafter ''Act"), gives the District the power to enact ordinances to establish water rates but provides no standard procedure for enacting ordinances; and

WHEREAS, said Chapter 819 authorizes the Board to make such rules and regulations as it deems necessary and proper for carrying out the provisions of the Act;

■ "NOW, THEREFORE, THE BOARD OF DIRECTORS OF STOCKTON-EAST WATER DISTRICT DOES HEREBY ENACT AND ESTABLISH THE FOLLOWING RULE:

A. The enacting clause of ordinances shall be: "The Board of Directors of Stockton-East Water District does ordain as follows:".

B. Ordinances shall be signed by the President of the Board of Directors and attested by the Secretary of the Board of Directors. •* "

C. Ordinances shall require a vote of the majority of the voting members present for passage.

Rule 126

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D. Ordinances shall be introduced only at a regular or adjourned regular meeting of the District. On introduction, ordinances shall be read in full, except when, after reading the title, further reading is waived by regular motion adopted by unanimous vote of the voting members of the Board present. The Board may direct such changes in the introduced ordinance as it deems necessary. The Board shall set a time and place of public hearing on the ordinance, which shall be no less than 10 days from the date of introduction of the ordinance, and the Secretary of the Board shall publish notice of the public hearing in the same manner as for a public hearing on the adoption of a rule of the District,' except that such notice shall include the text of the proposed ordinance, unless at the time of introduction, the Board shall determine that a summary of the proposed ordinance may be published. If such determination is made, the full text of the proposed ordinance shall be posted in the District office and shall be available for inspection during normal working hours.

E. Within 15 days after its passage, the Secretary of the Board shall cause each ordinance to be published at least once in a newspaper of general circulation published and circulated in the District.

F. The ordinance establishing water rates shall take effect 30 days after its final passage, and shall set rates for the calendar year in which it is passed, in accordance with the Act.

G. The ordinance setting water rates shall be subject to referendum, provided, however, that no referendum shall modify or affect the terms of any bond resolution issuing bonds approved by the voters.

H. If a petition, signed by a number of voters residing within the District which is equal to or greater in number than 10 percent of the entire vote cast within the District for all candidates for Governor at the last gubernatorial election, protesting the adoption of the ordinance setting water rates, is presented to the Board of Directors prior to the effective date of the ordinance, the ordinance shall be suspended and the Board of Directors shall reconsider the ordinance. If the Board of Directors does not entirely repeal the ordinance, the Board of Directors shall submit the ordinance to the voters of the District either at a regular election or a special election called for the purpose. The ordinance shall not become effective unless and until a majority of the voters vote in favor of it.

I. If the ordinance is repealed by the Board of Directors, or is not approved by the voters, the water rates for the previous year shall be in effect.

J. The petition shall be preserved until eight months after the certification of the result of the election for which the petition qualified or attempted to qualify for placement on the ballot. Public access to any such petition shall be restricted in accordance with the provisions of Section 6253.5 of the Government Code. At the end of the eight-month period, the petition shall be destroyed as soon as practicable unless it is in evidence in some action or proceeding then pending, or unless the Secretary of the Board of Directors of the District. has received a written request from the Attorney General, the Secretary of State, the Fair Political Practices Commission, a district attorney, a grand jury, the Board of Supervisors of San Joaquin County, or the Board of Directors, that the petition be preserved for use in a pending or ongoing investigation into election irregularities, or in a pending or ongoing investigation into a violation of the Political Reform Act of 1974 as set forth in Title 9 (.commencing with Section 81000). of the Government Code.

K. All elections shall be conducted in accordance with the California Elections Code.

adopted 1-01-90

RULE NO. 128

HATES FOR USE GF AGRICULTURAL WATER PRODUCED BY DISTRICT O?ER<ATED DEI? WELL PUMPING, PL-ANTS

THE BOARD OF DIRECTORS Or THE STOCKTON—EAST WATER DISTRICT FINDS AND DETERMINES THAT:

1. The Act authorizes the Board to make such rules and regulations as it deems necessary and proper for carrying out the provisions of that Act; and

-.2. Rule No. 119, establishing rates for charging agricultural well water produced from District operated well pumping plants is no longer equitable, since it has failed to offset District paid energy costs for said water produced as .follows:

(8 ink)

	1977	1978	1979	1980
Revenue	$2,974	$2,234	$1,519	Sir 154.,
Energy Cost	$4,624	$4,014	$2,633	$2,599
Difference	($1,650)	($1,780)	($1,114);	C$1,445)

3. The lease agreements with owner provide for a modification of rates, from time to time, by the Board of Directors; and

4. The owners have been notified by instil of the change in rates established by this Rule in accordance with the leases.

NOW, THEREFORE, the Board of Directors of the Stockton-East VJater District repeals Rule No. 119 and enacts and establishes the following rule:

•RULE NO. 128
(coh t.)

A. District Well Water. As used in this Rule No. 128, "District Well Water" means water produced from wells leased by the District which wells are equipped with District owned and operated pumps and motors.

B. User. As used in this Rule No. 128, "User" means the owner of a parcel of land on which District vzell wat£r is being applied under the terms of a District well lease.

C. Charges. . For District well water, user shall pay the following charges:

1. All.p.G. & E., energy charges incurred by the District on -account 'for water produced for owners* use, plus a charge of $0,002 per K.X?.!!., of energy used for production of Water for owners use to cover maintenance.

2. The current pump Tax charged for all well water production.

D. payment.

1. Energy charges incurred by the District shall be billed to the owner on a quarterly basis.

2. pump Tax charges shall.be billed on the regular District billing cycle.

Adopted by B/D 11-18-80

STOCKTON-EAST WATER DISTRICT

Comparative Cost of Water Supply
(Using P. G. & E. statistics for average pump size, plant efficiency and Rate Schedule PA-1, effective •2/13/80)

GIVEN A 10 H.P. river pump supplying 112 acre feet of water per year by using 57 KWH to pump an acre foot of water. COMPARED TO a 42 H.P. pump supplying 112 acre feet of water per year by using 236 KWH to pump an.acre foot of water.

FIND The comparative cost per acre foot to operate the river pump and deep well pump.

	River Pump	Deep Well Pump
Service Charge	$ .91	$ 2.97
Energy Charge	2.53	10.46
Total Power Cost	3.44	13.43
Water Charge	7.60	1.16
Total Power & Water CoSts per Acre Foot	$11 .04	$14.59*

*32% more than River Pump Costs

ADOPTED SEPTEMBER 7, 1982

RULE NO. 130

STOCKTON-EAST WATER DISTRICT
POLICY FOR THE PURCHASE OF SERVICES,
SUPPLIES AND EQUIPMENT; AND FOR THE
SURPLUS ING OF SUPPLIES AND EQUIPMENT

WHEREAS, Stockton-East Water District has no formal policy for the purchase of services, supplies, and equipment; or for the surplusing of supplies and equipment; and

WHEREAS, Sections 54201 through 54204 of the Government Code of the State of California requires a purchasing policy.

NOW, THEREFORE, the Board of Directors of the Stockton-East Water District, acting in compliance with Sections 54201 through 54204 of the Government Code of the State of California enacts and establishes the following rule;

1. The following procedures shall be followed for purchases .made within the approved annual Fiscal Year Budget:
   A. Contracts for purchase of professional services in excess of $7,500 shall be awarded by the Board of Directors. Competitive bids shall be solicited when appropriate;
   B. Purchase of supplies and equipment in excess of $7,500 per item shall be awarded by the Board of Directors after solicitation of competitive bids; and
   C. Major chemical purchases shall be solicited by the competitive bid process and shall be awarded annually by the Board of Directors.
2. Except for emergency and urgent necessity, all purchases outside the approved annual Fiscal Year Budget shall be approved by the Board of Directors. Emergency and urgent necessity mean interruptions in the service or operations of the District which require immediate action before Board approval can be obtained.

OVER

Rule 130
Adopted
9/7/82

3. The following procedures shall be followed for surplusing supplies and equipment:

   A. An item shall be declared surplus by the General Manager when the District has no present or future use for such item;

   B. A surplus value shall be established as an appropriate percentage of new replacement cost, scrap value, public bid or auction where appropriate, or other generally accepted methods for establishing surplus value; and

   C. The General Manager shall use methods and procedures for disposing of surplus items which in his judgment will return the greatest value to the District.

RULE NO. -131

STOCKTON-EAST WATER DISTRICT
PROCEDURES AND REGULATIONS FOR ESTABLISHING
FLAT RATE AND SPECIAL CLASS WATER PRODUCTION

'WHEREAS, the Act authorizes the Board to make such rules and regulations •as it deems necessary and proper for carrying out the provision's of the Act; and

WHEREAS, Section 9.4 of the Act requires that the Board, at a Regular, Special, or Continued Meeting between March 15 and April 15 of each year, after giving public notice, shall hold a public hearing to consider the necessity, amount, and rates of a municipal/ground water assessment, an agricultural ground water assessment, and a domestic ground water assessment, if any, to be levied for the then current calendar year and charges to be made for stream-delivered water to the extent that such charges ' for stream-delivered water are not controlled by contract or agreement, and that water rates shall be established by Ordinance; and

WHEREAS, Section 9.4(d) of the Act also provides for establishment; by Rule, one or more methods to be used in computing the amount of water production from water-producing facilities which are not measured by a water-measuring device approved by the Collector.

NOW, THEREFORE, the Board of Directors of the Stockton— East Water District hereby enacts and establishes Rule No. 131 wliich provides procedures and regulations for computing the amount of water production from water-producing facilities which are rot measured by a water-measuring device approved by the Collector, and other special classes of water. Rule No. 131 repeals Rule No. 129.

5r w

A. Agricultural Classification. • "Agricultural classification" means water produced and used for the commercial production of agricultural crops or livestock on parcels of land operated in units of more than two (2) acres, and shall not ■include water used for agricultural product processing purposes, nor water used for household and landscaping purposes .

B. Domestic Classif ication. "Domestic classification [11] means water produced by a water producing facility located upon a parcel and used entirely upon sai'd parcel for household and landscaping purposes.

C. ..Municipal and Industrial Classification. "Municipal and Industrial classification" means water-produced and used for any purpose other than use classified as AGRICULTURAL in paragraph A' above* and use classified as DOMESTIC in paragraph B_ above, and 'includes all water used for agricultural product processing .purposes. .>

D. Rates Established. Effective for each calendar year, all water produced within the District is subject, to assessment at the rates adopted by Ordinance for the current calendar year.

SCHEDULE I

SECTION I: AGRICULTURAL CLASSIFICATION - GROUND WATER (WELL WATER)

Flat Rates

1. Rice	5.3	acre feet per acre per year
2. Grain	1.0	acre.feet per acre per year
3. All other crops	2.8	acre feet per acre per year

SECTION II: AGRICULTURAL CLASSIFICATION - STREAM DELIVERED WATER (RIVER WATER)

Flat Rates

1. Rice	5.3	acre feet per acre per year
2. Grain	1.0	acre feet per acre per year
3. All other crops	2.8	acre feet per acre per year

SECTION III: AGRICULTURAL CLASSIFICATION - STREAM DELIVERED WATER (RIVER WATER) SPECIAL CLASS - POTTER CREEK

Potter Creek*channels now carry water during the irrigation season provided by diversion of Calaveras River water. The District heretofore claimed, and does now claim, all water , in Potter Creek channels. All water diverted from Potter Creek within the District shall be metered in accordance with Order of the Board of Directors issued March 13, 1979, and District Rule No.-123, adopted May 01, 1979. No allowance or consider-ation shall be granted for claims of prior diversion of drainage water not originating upon claimants property. The diversion of water into Potter Creek by the District is subject to complete termination or reduction if it becomes necessary to adopt priority schedules for water use in the event demand exceeds available supply or in the event dry year conditions limit District water supply.

SECTION IV: EXEMPTIONS FROM PUMP ASSESSMENTS

In recognition of the fact that full beneficial use of certain wells within certain portions of the District may be adversely affected by ground water conditions not under the control of the well owner or the District, exemptions to the current pump tax assessments which would otherwise be applicable to the use of an individual well may be granted by the District, on a case by casebasis, under the provision of this Rule, as follows:

A. Wells otherwise subject to Municipal or Domestic pump tax assessments which produce water with specific conductivity greater than 600 micromhos per centimeter are exempted from the applicable pump tax assessment.

B. Wells otherwise subject to Agricultural pump tax assessments which produce water with specific conductivity greater than 1,300 micromhos per centimeter are exempted from the applicable pump tax assessment.

C. Wells which provide water for both Municipal or Domestic and Agricultural uses are exempted from that portion of the total pump tax assessments that would otherwise be applicable due to its use for Municipal or Domestic purposes if such well produces water with specific conductivity greater than 600 micromhos per centimeter but less than 1,300 micromhos per centimeter.

D. Determination of the specific conductivity of water produced by a well will be made by the District at no charge to the owner, except as provided in (E)(3), upon receipt from the owner of a written request for such determination, not later than June 20, of the year for which the request is being made, to permit testing during the month of July and August. Wells which supply water to a public water system, as defined in Section 64411, Title 22, California Administrative Code, may be exempted from applicable pump tax assessments based on the results of tests for specific conductivity performed by an approved water laboratory, as defined in the same Section 64411, provided to the District by the owner.

E. A well that has been tested and has been classified as either exempt or not exempt from the applicable pump tax assessment will normally retain that classification for a period of four (4) years, and not be retested during that period, except that:

(1) The District may at its sole expense, test wells more frequently than every four (4) years if more frequent testing is necessary to reflect changing conditions in local ground water quality;

(2). The District may extend to more than four (4) years the exemption status wells located in areas for which no evidence'-of sufficient improvement in local ground water quality exists as would indicate a change in classification to be likely;

(3) An owner may request, in writing, that water from a'well be reanalyzed at an interval of less than four (4) years provided that the owner agrees, prior to the requested analysis being performed, to reimburse the District for its actual expenses for the analysis if no change in the status of the well is appropriate based on the results of the reanalysis.

F. This rule shall apply only to those wells located in the following areas of the District:

(1) That portion of the Metropolitan Stockton Area located west of Highway 99;

(2) That portion of the District designated as the South Planning Area; and

(3) That portion of the District designated as the North Planning Area.

■.SECTION.V: UNIT VALUES FOR FLAT RATE DOMESTIC AND MUNICIPAL GROUND WATER

A. Single Family Residence; Commercial Building; First Unit of a Multiple Commercial Building, Motels, Trailer Parks, or Multiple Family Residences, including landscaping on sites two (2) acres or less	1 Unit
B. Each additional housing unit of Motels, Multiple Commercial Buildings, Multiple Family Residences, or Trailers ''in Trailer Parks	1/3 Unit

RULE NO. 139

ADOPTED 4/21/92

RULE REGULATING WASTE OF SURFACE WATER

The Board of Directors of the Stockton East Water District finds and determines that:

1. The Act authorizes the Board to make such rules and regulations as it deems necessary and proper for carrying out the provisions of that Act.

2. The District finds and determines that proper notice of the need for, and regulation of, provision of surface water provided to agricultural irrigators is a means of conserving water, and therefore of benefit to all water users within the District.

3. The District therefore establishes the following procedures:

(a) Any person desiring to use surface water provided by the District shall first inform the District by telephone of the desired place, time, and amount of use.

(b) The information must be received at least 24 hours before the intended use.

(c) Any person desiring to cease use of such surface water shall inform the District of the time of intended cessation of use.

(d) The information must be received at least 24 hours before the intended cessation.

(e) The District will receive such calls 7 days a week at the following numbers: Monday through Friday (8:00 a.m. to 5:00 p.m.) 948-0333; all other times, 948-0337 .

4. Failure to follow the above procedure is, and will be conclusively presumed to cause a waste of water, which will cause loss of a valuable resource in limited supply, affecting the District and all other water users in the District, in an amount which cannot be accurately determined but shall be conclusively presumed to cause the loss of $500.00 worth of water.

5. For the first such failure by any person, such person will be charged for $100 worth of water, and such amount will be added to such person's account with the District .

6. For the second such failure by any person, that person will be charged for $200 worth of water, and such amount will be added to such person's account with the District .

7. For the third and any subsequent such failure by any person, that person will be charged for the full $500 worth of water, conclusively presumed to be wasted, and such amount will be added to such person's account with the District .

8. Upon the determination of any failure, the District shall notify the person who failed to follow this rule of the failure.

9. The amount added to such person's account shall be collected as part of such person's account in the manner provided in the Act.

10. Notwithstanding the above, the minimum time required for notice to the District when the surface water taken or used is used for frost protection purposes shall be upon the commencement of such use, or as soon thereafter as possible, rather than 24 hours ahead of time.

11. In the event any person who has been deemed to have wasted water under this rule shall request water, and it shall not be provided, that person shall inform the District of the facts and circumstances, and all such facts and circumstances shall be reviewed, with the possible application of a credit to such person's account at the end of the irrigation season.

12. Any person charged under this rule may appeal to the District's Agricultural Committee which committee may waive any charge imposed by this rule which would be inequitable under the circumstances the committee determines .

RULE NO. 140

ADOPTED 4/21/92

ALLOCATION OF NEW HOGAN WATER - 1992

WHEREAS, the District Act authorizes the Board to adopt rules and regulations as it deems necessary and proper for carrying out the provisions of the Act; and

WHEREAS, the current six-year drought has caused groundwater levels to fall, and has decreased the amount of New Hogan Reservoir water available for treatment plant and irrigation purposes; and

WHEREAS, approximately 25,240 acre feet (AF) of New Hogan water (17,000 acre feet net after percolation losses) are available for irrigation use, and 22,700 AF will be required for the treatment plant; and

WHEREAS, delivery of these amounts of water can be made efficiently with minimum conveyance losses if irrigation releases are made during ten-day periods each month during the months of May through August, and if treatment plant releases are made continuously during the months of May through October; and

WHEREAS, controls are necessary, to assure no irrigation use of water released for the treatment plant;

NOW, THEREFORE, THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT HEREBY ENACTS AND ESTABLISHES THE FOLLOWING RULES TO ASSURE NO IRRIGATION USE OF WATER RELEASED FROM NEW HOGAN RESERVOIR FOR THE TREATMENT PLANT DURING THE PERIOD OF MAY 1, 1992 - OCTOBER 31, 1992:

1. Diversion of water from the Calaveras River above Bellota for agricultural irrigation shall be prohibited except during ten-day periods designated by the District each month, during the months of May through August.

2. The District, through it's Board of Directors, General Manager and General Counsel, may take such legal actions as may be necessary to enjoin the taking of water contrary to this rule.

RULE NO. 142

ADOPTED 6/17/92

REVISED RULE FOR METERS

WHEREAS, the District Act authorizes the Board to make such rules and regulations as it deems necessary and proper for carrying out the provisions of the Act; and

WHEREAS, Section 5 of the Act allows the Board to require such measuring devices as may be necessary:

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE STOCKTON EAST WATER DISTRICT HEREBY ENACTS AND ESTABLISHES THE FOLLOWING RULE:

A. The staff of Stockton East Water District shall recommend to the Board installation of a meter or water-measuring device on any agricultural water-producing facility, except as noted in Paragraph G herein, where such meter or device is necessary to carry out the purposes of the Act, in the discretion of the District. This recommendation shall be accompanied by a plan for physically installing the meter and necessary engineering drawings for such installation. Prior to making such recommendations to the Board, the staff shall notify the owner of the water-producing facility of the proposed recommendations so that the owner may appear and comment at the meeting in which the Board will hear that recommendation.

B. The Board shall consider the recommendations of the staff, the comments of the owner of the agricultural water-producing facility, and shall by resolution direct the staff to proceed with installation of its meter or water-measuring device, if in the judgment of the Board such installation is necessary to carry out the purposes of the Act.

C. Such installation, if directed by the Board, shall take place in two steps:

    1. The District shall provide to the owner of the agricultural water-producing facility, a meter containment tube which shall be complete with a pre-cut hole for installation of the meter or water-measuring device and shall have straightening vanes installed. Within thirty (30) days after provision of such meter containment tube (unless such time is extended by the Board) the owner shall install it in accordance with the engineering drawing and plan submitted by the staff.

2. As soon as possible thereafter, the staff of the District shall install the meter or water-measuring device.

D. In the event such a meter or water-measuring device is placed on any agricultural water-producing facility, the meter or device shall remain on the facility as long as the water-producing facility is in place. An annual charge for the installation, so long as such meter or water-measuring device is in place, is operable and is used, shall be charged to the owner as a separate charge on his annual water bill. Said charges shall be in accordance with the following schedule. For meters of water-measuring devices which are of sizes different from those shown on the schedule, the staff shall recommend an annual charge consistent with the schedule:

Size of Meter	Annual Charge
4" Meter	$37.00
6" Meter	$38.00
8" Meter	$40.00
10" Meter	$43.00
12" Meter	$45.00
14" Meter	$47.00
16" Meter	$51.00
18" Meter	$63.00
20" Meter	$67.00
22" Meter	$70.00
24" Meter	$73.00
30" Meter	$80.00

E. The meter shall remain the property of the District and shall be maintained and inspected by the District thereafter. Any person who injures, alters, removes, resets, adjusts, manipulates, obstructs or in any manner interferes or tampers with or procures, or causes or directs any person to injure, alter, remove, reset, adjust, manipulate, obstruct or in any manner interfere or tamper with any meter or water-measuring device, so as to cause such meter or water-measuring device to improperly or inaccurately measure and record water production, shall be subject to the penalties set forth in the Act.

F. If the Board determines that it is necessary in order to secure compliance with this rule by any owner, the Board shall then direct the Secretary-Manager of the District to seek appropriate remedies with the assistance of the attorneys for the District so as to obtain full enforcement of this rule. In accordance with Section 22 of the Act, it is hereby provided that the District shall not deliver or make available water to any owner who shall fail to install the meter containment tube in accordance with the engineering

drawing within thirty (30) days of the time of provision of such meter containment tube to the owner (unless such time is extended by the Board), or who shall interfere with the subsequent installation of the meter or water-measuring device.

G. Paragraphs A and B of this rule shall not apply to agricultural surface water-producing facilities installed after May 1, 1979, and the installation of meters or water-measuring devices on such facilities shall be deemed to have been judged necessary, and installation of meters or water-measuring devices on such facilities shall take place in accordance with paragraphs C, D, E and F of this Rule.

RULE NO. 143

ADOPTED 04/06/93

RULE FOR RATE EQUALIZATION - CALENDAR YEAR 1993

WHEREAS, the District Act authorizes the Board to adopt rules and regulations as it deems necessary and proper for carrying out the provisions of the Act; and

WHEREAS, paragraph 6D (3) of the Second Amended Contract among SEWD, City of 'Stockton, County of San Joaquin and California Water Service Company states that "Stockton East shall annually levy a municipal groundwater assessment, pursuant to its enabling legislation such that the cost of groundwater use is equivalent to the cost of surface water use"; and

WHEREAS, SEWD has conducted a survey with the municipal groundwater users to determine the cost of groundwater production;

NOW, THEREFORE, THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT HEREBY ENACTS AND ESTABLISHES THE FOLLOWING RULES TO LEVY A GROUND WATER ASSESSMENT TO EQUALIZE THE COST OF GROUNDWATER AND SURFACE WATER FOR 1993:

1. POWER COST - Use actual power costs submitted by owner to accomodate for differences in water depth, pumping efficiency, system pressure, etc. In the absence of actual power costs, the cost of $50 per acre foot will be assumed.

2. OPERATION AND MAINTENANCE COST - Includes labor, repairs, chemicals, treatment costs and the current $3.60 assessment. The cost of $30 per acre foot will be assumed.

3. AMORTIZATION AND DEPRECIATION COST - Includes well and equipment replacement. The cost of $10 per acre foot will be assumed.

4. FORMULA FOR RATE EQUALIZATION - Surface water costs plus Groundwater costs divided by total M & I water production equals cost per acre foot. The assumed costs and water production for 1993 are as follows :

Ground water	15,000	af X	$90.00	= $1,350,000
Surface water	40,000	af X	$165.00	= $6,599,971
Totals .	55,000	af		$7,949,971

The total cost of $7,949,971 divided by total use of 55,000 af equals $144.54 per acre foot. The assumed 1993 additional groundwater assessment is $144.54 less $90, or $54.54.

5. Any municipal groundwater user has the right to appeal the amount of this additional $54.54 per acre foot rate equalization assessment if it can be demonstrated that actual groundwater production costs are higher than the assumed $90 per acre foot. The appeal process will begin with the Water Policy Committee of the District Board and if necessary can be appealed to the full Board.

6. Any appeal which is granted shall entitle the appellant to a refund of the amount demonstrated to have been overcollected, less the actual cost to the District of processing the appeal and refund, provided that no overpayment shall be refunded unless the request for appeal has been filed with the Secretary of the District within three years of such overpayment

RULE NO. 155

ADOPTED 03/29/05

RULE FOR RATE EQUALIZATION - CALENDAR YEAR 2005

WHEREAS, the District Act authorizes the Board to adopt rules and regulations as it deems .necessary and proper for carrying out the provisions of the Act; and

WHEREAS, paragraph 6b (3) of the Second Amended Contract among SEWD; City of Stockton, County of San Joaquin and California Water Service Company states that "Stockton East shall annually levy a municipal groundwater assessment, pursuant to its enabling legislation such that the cost of groundwater use is equivalent to the cost of surface water use";

NOW, THEREFORE, THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT HEREBY ENACTS AND ESTABLISHES THE FOLLOWING RULES TO LEVY A GROUNDWATER ASSESSMENT TO EQUALIZE THE COST OF GROUNDWATER AND SURFACE WATER FOR 2005:

1. POWER COST — Use actual power costs submitted by owner to accommodate for differences .in water depth, pumping efficiency, system pressure, etc. In the absence of actual,power costs, the cost of $70 per acre foot will be assumed.

2. OPERATION AND &. MAINTENANCE COST — Includes labor, repairs, chemicals, treatment costs and the. current $3.60 assessment,. The cost of $30 per acre foot will be assumed.

3. AMORTIZATION AND DEPRECIATION COST — Includes well and equipment replacement. The cost of $10 per acre foot will be assumed.

4. FORMULA FOR RATE EQUALIZATION — Surface water costs plus Groundwater costs divided by total M & I water production equals cost per acre foot. The assumed costs and water production for 2005 are as follows:

Ground water	26,435 AF X $110.00 =	$2,907,850
Surface water	42, 000 AF X $293.73.-	$12,336,602
Totals	68,435 AF	$15,244,452

The total cost of $15,244,452 divided by total use of 68,435 AF equals $222.76 per acre foot. The assumed .2005 additional groundwater assessment is $222.76 less $110 (total of items 1-3 above), or $112.76.

5. Any municipal groundwater user has the right to appeal the amount of this additional $112.7 6 per acre foot rate equalization assessment if it can be demonstrated that actual groundwater production costs are higher than the assumed $110 .per acre foot. The appeal process will begin with the Administration Committee of the District Board and if necessary can be appealed to the full Board.

6. Any appeal which is granted shall entitle the appellant to a refund of the amount demonstrated to have been over-collected, less the actual costs to the District of processing the appeal and refund, provided that no overpayment shall be refunded unless the request for appeal has been filed with the Secretary of the District within three years of such overpayment.

RULE NO. 166
ADOPTED MARCH 31, 2015

ALLOCATION OF NEW HOGAN WATER - 2015

WHEREAS, the Special Act governing the Stockton East Water District (' **Stockton East**' [1]) authorizes the Board of Stockton East to adopt rules and regulations as it deems necessary and proper for carrying out the provisions of the Act; and

WHEREAS, the current four-year drought has caused groundwater levels to fall, and has decreased the amount of New Hogan Reservoir water available for municipal and irrigation purposes; and

WHEREAS, approximately 12,650 AF of New Hogan water (7,300 AF net after percolation losses) are available for irrigation use by holders of prior rights **("Prior Right Holders")** as determined by that Water Rights Study dated February 7, 1969 prepared by Murray, Bums & Kienlen **("Water Rights Study");** and

WHEREAS, there is water available on a case by case basis for emergency situations only, as determined by the Board of Directors; and

WHEREAS, approximately 20,000 AF will be required for delivery to the Dr Joe Waidhofer Water Treatment Plant **("Plant");** and

WHEREAS, delivery of these amounts of water can be made efficiently, and with minimum conveyance losses, only if irrigation releases are made during ten-day periods each month during the months of May through August, and if releases for delivery to the Plant are made continuously during the months of May through October, and

WHEREAS, controls are necessary to assure that water released for diversion by Prior Right Holders is not diverted by other surface water diverters; and

WHEREAS, controls are necessary to assure that water released for delivery to the Plant is not diverted for irrigation,

NOW, THEREFORE, THE BOARD OF DIRECTORS OF STOCKTON EAST HEREBY ENACTS AND ESTABLISHES THE FOLLOWING RLFLE TO BE EFFECTIVE MAY I, 2015 THROUGH OCTOBER 3 1, 2015;

L. Irrigation water released from New Hogan Reservoir during the 2015 irrigation season shall be available for diversion and use only by Prior Right Holders in accordance with their historical rights.

2. Irrigation water released from New Hogan Reservoir during the 2015 irrigation season shall be made during one (I) ten-day period each month from the I^{s}* to the 10th day of each month in May through August.

3. Prior Right Holders shall work cooperatively to insure that diversions are made on a correlative basis.

4. Water released from New Hogan Reservoir during 2015 for delivery to the Plant shall be available for diversion and use only by Stockton East Water District for delivery to the Plant releases are made continuously during the months of May through October

5. Surface water diverters diverting water to which they are not entitled shall be subject to citation by Stockton East and a fine of $500 per AF

6. Surface water diverters who continue to divert water to which they are not entitled after citation are subject to locks being installed on their surface water diversions for the remainder of the 2015 irrigation season

RULE NO. 170

ADOPTED 04/03/2018

RULE FOR RATE EQUALIZATION - CALENDAR YEAR 2018

WHEREAS, the District Act authorizes the Board to adopt rules and regulations as it deems necessary and proper for carrying out the provisions of the Act; and

WHEREAS, paragraph 6D (3) of the Second Amended Contract among SEWD; City of Stockton, County of San Joaquin and California Water Service Company states that "Stockton East shall annually levy a municipal groundwater assessment, pursuant to its enabling legislation such that the cost of groundwater use is equivalent to the cost of surface water use";

NOW, THEREFORE, THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT HEREBY ENACTS AND ESTABLISHES THE FOLLOWING RULES TO LEVY A GROUNDWATER ASSESSMENT TO EQUALIZE THE COST OF GROUNDWATER AND SURFACE WATER FOR 2018:

1. POWER COST -- Use actual power costs submitted by owner to accommodate for differences in water depth, pumping efficiency, system pressure, etc. In the absence of actual power costs, the cost of $70 per acre foot will be assumed.

2. OPERATION AND & MAINTENANCE COST -- Includes labor, repairs, chemicals, treatment costs and the current $3.60 assessment. The cost of $36 per acre foot will be assumed.

3. AMORTIZATION AND DEPRECIATION COST -- Includes well and equipment replacement. The cost of $10 per acre foot will be assumed.

4. FORMULA FOR RATE EQUALIZATION -- Surface water costs plus Groundwater costs divided by total M & I water production equals cost per acre foot. The assumed costs and water production for 2018 are as follows:

Ground water	14,100 AF X $116.0000	=	$ 1,635,600.00
Surface water	55,000 AF X $520.9493	=	$28,652,211.77
Totals	69,100 AF		$30,287,811.77

   The total cost of $30,287,811.77 divided by total use of 69,100 AF equals $438.32 per acre foot. The assumed 2018 additional groundwater assessment is $438.32 less $116 (total of items 1-3 above), or $322.32.

5. Any municipal groundwater user has the right to appeal the amount of this additional $322.32 per acre foot rate equalization assessment if it can be demonstrated that actual groundwater production costs are higher than the assumed $116 per acre foot. The appeal process will begin with the Administration Committee of the District Board and if necessary can be appealed to the full Board.

6. Any appeal which is granted shall entitle the appellant to a refund of the amount demonstrated to have been over-collected, less the actual costs to the District of processing the appeal and refund, provided that no overpayment shall be refunded unless the request for appeal has been filed with the Secretary of the District within three years of such overpayment.

RULE NO. 171

ADOPTED 04/09/2019

RULE FOR RATE EQUALIZATION - CALENDAR YEAR 2019

WHEREAS, the District Act authorizes the Board to adopt rules and regulations as it deems necessary and proper for carrying out the provisions of the Act; and

WHEREAS, paragraph 6D (3) of the Second Amended Contract among SEWD; City of Stockton, County of San Joaquin and California Water Service Company states that "Stockton East shall annually levy a municipal groundwater assessment, pursuant to its enabling legislation such that the cost of groundwater use is equivalent to the cost of surface water use";

NOW, THEREFORE, THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT HEREBY ENACTS AND ESTABLISHES THE FOLLOWING RULES TO LEVY A GROUNDWATER ASSESSMENT TO EQUALIZE THE COST OF GROUNDWATER AND SURFACE WATER FOR 2019:

1. POWER COST -- Use actual power costs submitted by owner to accommodate for differences in water depth, pumping efficiency, system pressure, etc. In the absence of actual power costs, the cost of $70 per acre-foot will be assumed.

2. OPERATION AND & MAINTENANCE COST -- Includes labor, repairs, chemicals, treatment costs and the current $3.60 assessment. The cost of $36 per acre-foot will be assumed.

3. AMORTIZATION AND DEPRECIATION COST -- Includes well and equipment replacement. The cost of $10 per acre-foot will be assumed.

4. FORMULA FOR RATE EQUALIZATION -- Surface water costs plus Groundwater costs divided by total M & I water production equals cost per acre-foot. The assumed costs and water production for 2019 are as follows:

Ground water	14,100 AF X $116.0000	=	$ 1,635,600.00
Surface water	55,000 AF X $532.3179	=	$29,277,486.55
Totals	69,100 AF		$30,913,086.55

   The total cost of $30,913,086.55 divided by total use of 69,100 AF equals $447.37 per acre-foot. The assumed 2019 additional groundwater assessment is $447.37 less $116 (total of items 1-3 above), or $331.37.

5. Any municipal groundwater user has the right to appeal the amount of this additional $331.37 per acre-foot rate equalization assessment if it can be demonstrated that actual groundwater production costs are higher than the assumed $116 per acre-foot. The appeal process will begin with the Administration Committee of the District Board and if necessary can be appealed to the full Board.

6. Any appeal which is granted shall entitle the appellant to a refund of the amount demonstrated to have been over-collected, less the actual costs to the District of processing the appeal and refund, provided that no overpayment shall be refunded unless the request for appeal has been filed with the Secretary of the District within three years of such overpayment.

RULE NO. 172

ADOPTED 04/14/2020

RULE FOR RATE EQUALIZATION - CALENDAR YEAR 2020

WHEREAS, the District Act authorizes the Board to adopt rules and regulations as it deems necessary and proper for carrying out the provisions of the Act; and

WHEREAS, paragraph 6D (3) of the Second Amended Contract among SEWD; City of Stockton, County of San Joaquin and California Water Service Company states that "Stockton East shall annually levy a municipal groundwater assessment, pursuant to its enabling legislation such that the cost of groundwater use is equivalent to the cost of surface water use";

NOW, THEREFORE, THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT HEREBY ENACTS AND ESTABLISHES THE FOLLOWING RULES TO LEVY A GROUNDWATER ASSESSMENT TO EQUALIZE THE COST OF GROUNDWATER AND SURFACE WATER FOR 2020:

1. POWER COST -- Use actual power costs submitted by owner to accommodate for differences in water depth, pumping efficiency, system pressure, etc. In the absence of actual power costs, the cost of $70 per acre-foot will be assumed.

2. OPERATION AND & MAINTENANCE COST -- Includes labor, repairs, chemicals, treatment costs and the current $3.60 assessment. The cost of $36 per acre-foot will be assumed.

3. AMORTIZATION AND DEPRECIATION COST -- Includes well and equipment replacement. The cost of $10 per acre-foot will be assumed.

4. FORMULA FOR RATE EQUALIZATION -- Surface water costs plus Groundwater costs divided by total M & I water production equals cost per acre-foot. The assumed costs and water production for 2020 are as follows:

Ground water	14,100 AF X $116.0000	=	$ 1,635,600.00
Surface water	55,000 AF X $519.91	=	$28,595,295.38
Totals	69,100 AF		$30,230,895.38

The total cost of $30,230,895.38 divided by total use of 69,100 AF equals $437.49 per acre-foot. The assumed 2020 additional groundwater assessment is $437.49 less $116 (total of items 1-3 above), or $321.49.

5. Any municipal groundwater user has the right to appeal the amount of this additional $321.49 per acre-foot rate equalization assessment if it can be demonstrated that actual groundwater production costs are higher than the assumed $116 per acre-foot. The appeal process will begin with the Administration Committee of the District Board and if necessary can be appealed to the full Board.

6. Any appeal which is granted shall entitle the appellant to a refund of the amount demonstrated to have been over-collected, less the actual costs to the District of processing the appeal and refund, provided that no overpayment shall be refunded unless the request for appeal has been filed with the Secretary of the District within three years of such overpayment.

RULE NO. 173

ADOPTED 04/06/2021

RULE FOR RATE EQUALIZATION - CALENDAR YEAR 2021

WHEREAS, the District Act authorizes the Board to adopt rules and regulations as it deems necessary and proper for carrying out the provisions of the Act; and

WHEREAS, paragraph 6D (3) of the Second Amended Contract among SEWD; City of Stockton, County of San Joaquin and California Water Service Company states that "Stockton East shall annually levy a municipal groundwater assessment, pursuant to its enabling legislation such that the cost of groundwater use is equivalent to the cost of surface water use";

NOW, THEREFORE, THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT HEREBY ENACTS AND ESTABLISHES THE FOLLOWING RULES TO LEVY A GROUNDWATER ASSESSMENT TO EQUALIZE THE COST OF GROUNDWATER AND SURFACE WATER FOR 2021:

1. POWER COST -- Use actual power costs submitted by owner to accommodate for differences in water depth, pumping efficiency, system pressure, etc. In the absence of actual power costs, the cost of $70 per acre-foot will be assumed.

2. OPERATION AND & MAINTENANCE COST -- Includes labor, repairs, chemicals, treatment costs and the current $3.60 assessment. The cost of $36 per acre-foot will be assumed.

3. AMORTIZATION AND DEPRECIATION COST -- Includes well and equipment replacement. The cost of $10 per acre-foot will be assumed.

4. FORMULA FOR RATE EQUALIZATION -- Surface water costs plus Groundwater costs divided by total M & I water production equals cost per acre-foot. The assumed costs and water production for 2021 are as follows:

Ground water	14,100 AF X $116.00	=	$ 1,635,600.00
Surface water	55,000 AF X $544.86	=	$29,967,075.97
Totals	69,100 AF		$31,602,675.97

   The total cost of $31,602,675.97 divided by total use of 69,100 AF equals $457.35 per acre-foot. The assumed 2021 additional groundwater assessment is $457.35 less $116.00 (total of items 1-3 above), or $341.35.

5. Any municipal groundwater user has the right to appeal the amount of this additional $341.45 per acre-foot rate equalization assessment if it can be demonstrated that actual groundwater production costs are higher than the assumed $116.00 per acre-foot. The appeal process will begin with the Administration Committee of the District Board and if necessary can be appealed to the full Board.

6. Any appeal which is granted shall entitle the appellant to a refund of the amount demonstrated to have been over-collected, less the actual costs to the District of processing the appeal and refund, provided that no overpayment shall be refunded unless the request for appeal has been filed with the Secretary of the District within three years of such overpayment.

RULE NO. 174

ADOPTED 04/05/2022

RULE FOR RATE EQUALIZATION - CALENDAR YEAR 2022

WHEREAS, the District Act authorizes the Board to adopt rules and regulations as it deems necessary and proper for carrying out the provisions of the Act; and

WHEREAS, paragraph 6D (3) of the Second Amended Contract among SEWD; City of Stockton, County of San Joaquin and California Water Service Company states that "Stockton East shall annually levy a municipal groundwater assessment, pursuant to its enabling legislation such that the cost of groundwater use is equivalent to the cost of surface water use";

NOW, THEREFORE, THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT HEREBY ENACTS AND ESTABLISHES THE FOLLOWING RULES TO LEVY A GROUNDWATER ASSESSMENT TO EQUALIZE THE COST OF GROUNDWATER AND SURFACE WATER FOR 2022:

1. POWER COST -- Use actual power costs submitted by owner to accommodate for differences in water depth, pumping efficiency, system pressure, etc. In the absence of actual power costs, the cost of $70 per acre-foot will be assumed.

2. OPERATION AND & MAINTENANCE COST -- Includes labor, repairs, chemicals, treatment costs and the current $3.60 assessment. The cost of $36 per acre-foot will be assumed.

3. AMORTIZATION AND DEPRECIATION COST -- Includes well and equipment replacement. The cost of $10 per acre-foot will be assumed.

4. FORMULA FOR RATE EQUALIZATION -- Surface water costs plus Groundwater costs divided by total M & I water production equals cost per acre-foot. The assumed costs and water production for 2022 are as follows:

Ground water	14,100 AF X $116.00	=	$ 1,635,600.00
Surface water	55,000 AF X $596.90	=	$32,829,445.06
Totals	69,100 AF		$34,465,045.06

   The total cost of $34,465,045.06 divided by total use of 69,100 AF equals $498.77 per acre-foot. The assumed 2022 additional groundwater assessment is $498.77 less $116.00 (total of items 1-3 above), or $382.77.

5. Any municipal groundwater user has the right to appeal the amount of this additional $382.77 per acre-foot rate equalization assessment if it can be demonstrated that actual groundwater production costs are higher than the assumed $116.00 per acre-foot. The appeal process will begin with the Administration Committee of the District Board and if necessary can be appealed to the full Board.

6. Any appeal which is granted shall entitle the appellant to a refund of the amount demonstrated to have been over-collected, less the actual costs to the District of processing the appeal and refund, provided that no overpayment shall be refunded unless the request for appeal has been filed with the Secretary of the District within three years of such overpayment.

RULE NO. 175

ADOPTED 04/11/2023

RULE FOR RATE EQUALIZATION - CALENDAR YEAR 2023

WHEREAS, the District Act authorizes the Board to adopt rules and regulations as it deems necessary and proper for carrying out the provisions of the Act; and

WHEREAS, paragraph 6D (3) of the Second Amended Contract among SEWD; City of Stockton, County of San Joaquin and California Water Service Company states that "Stockton East shall annually levy a municipal groundwater assessment, pursuant to its enabling legislation such that the cost of groundwater use is equivalent to the cost of surface water use";

NOW, THEREFORE, THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT HEREBY ENACTS AND ESTABLISHES THE FOLLOWING RULES TO LEVY A GROUNDWATER ASSESSMENT TO EQUALIZE THE COST OF GROUNDWATER AND SURFACE WATER FOR 2023:

1. POWER COST -- Use actual power costs submitted by owner to accommodate for differences in water depth, pumping efficiency, system pressure, etc. In the absence of actual power costs, the cost of $70 per acre-foot will be assumed.

2. OPERATION AND & MAINTENANCE COST -- Includes labor, repairs, chemicals, treatment costs and the current $3.60 assessment. The cost of $36 per acre-foot will be assumed.

3. AMORTIZATION AND DEPRECIATION COST -- Includes well and equipment replacement. The cost of $10 per acre-foot will be assumed.

4. FORMULA FOR RATE EQUALIZATION -- Surface water costs plus Groundwater costs divided by total M & I water production equals cost per acre-foot. The assumed costs and water production for 2023 are as follows:

Ground water	14,100 AF X $116.00	=	$ 1,635,600.00
Surface water	55,000 AF X $645.49	=	$35,502,077.27
Totals	69,100 AF		$37,137,677.27

The total cost of $37,137,677.27 divided by total use of 69,100 AF equals $537.45 per acre-foot. The assumed 2023 additional groundwater assessment is $537.45 less $116.00 (total of items 1-3 above), or $421.45.

5. Any municipal groundwater user has the right to appeal the amount of this additional $421.45 per acre-foot rate equalization assessment if it can be demonstrated that actual groundwater production costs are higher than the assumed $116.00 per acre-foot. The appeal process will begin with the Administration Committee of the District Board and if necessary can be appealed to the full Board.

6. Any appeal which is granted shall entitle the appellant to a refund of the amount demonstrated to have been over-collected, less the actual costs to the District of processing the appeal and refund, provided that no overpayment shall be refunded unless the request for appeal has been filed with the Secretary of the District within three years of such overpayment.

RULE NO. 176

ADOPTED March 19, 2024

SECURING RIGHT-OF-WAY FOR DISTRICT INTERESTS

WHEREAS, the California Legislature established the Stockton East Water District (district) in 1948 under the District Act (Act), which authorizes the Board of Directors (Board) to make such rules and regulations as it deems necessary and proper for carrying out the provisions of the Act; and,

WHEREAS, the district was established to ensure proper management of the underground water basin and provide supplemental surface water supplies, and is located within the critically overdrafted Eastern San Joaquin Groundwater Subbasin, which must achieve groundwater sustainability by 2040 through management actions to correct groundwater overdraft, as identified within the 2014 Sustainable Groundwater Management Act and the Eastern San Joaquin Groundwater Sustainability Plan; and,

WHEREAS, the district and district customers must construct new facilities from time to time to facilitate the increased use of surface water and other projects necessary to achieve groundwater sustainability; and,

WHEREAS, the Board of Directors desires to establish a formal policy to identify the means and methods for securing right-of-way; and,

WHEREAS, the purpose of this Rule is to state the district's policy for securing right-of-way for the installation of new or modified facilities, or to provide access to new and existing facilities, both public and private, that benefit the district's mission and interests.

NOW, THEREFORE, THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT HEREBY ENACTS AND ESTABLISHES RULE NO. 176:

1. All negotiated rights-of-way must be discussed with and approved by the Board prior to the district making a formal offer. Staff have no authority to finalize negotiations or bind the Board; any agreements, both written and verbal, between staff and other negotiating parties are invalid until authorized by the Board.

2. If a successful written agreement is reached, the district will bear all costs associated with preparing the right-of-way documents, including but not limited to agreements, district legal fees, real property owner legal fees up to 10% of the right-of-way value, appraisals, legal descriptions, exhibits, notary fees, and document recording costs.

3. The staff of Stockton East Water District shall negotiate in good faith with landowners to secure any new right-of-way reasonably needed for the construction, maintenance, operation, and/or reconstruction of new and existing facilities, or for private facilities that advance the district's interests. Staff shall work with landowners in an attempt to secure right-of-way through the most cost effective means available, which may include but is not limited to: in addition to or in lieu of

cash payments, on-site improvements, access or connection to facilities, district services, and/or monetary compensation.

4. To ensure just compensation to real property owners and prudent management of the public's money, any proposed right-of-way purchase amount may be accompanied by an appraisal from a third-party, qualified appraiser. Compensation shall be calculated at the appraised land value or other applicable methods per acre times the number of acres encompassed by the right-of-way, and subject to the following:
   a. Appraisals or comparable sales must be dated within six (6) months of approval of the agreement, unless the negotiating parties agree, in writing, to use an older appraisal.
   b. The district shall not pay more than the calculated land value for fee title right-of-way dedicated through a grant deed and not more than a reasonable, proportional amount for an exclusive easement.

5. Pursuant to the Brown Act (Gov. Code §54956.8), negotiations for real property may occur during closed session until the negotiating parties reach consensus. Upon consensus, district staff will recommend to the Board approval of a right-of-way agreement at a Board meeting. Staff will notify the real property owner of the proposed recommendation(s) so that the owner may appear and comment at the meeting in which the Board will hear that recommendation.

6. In the event that the negotiating parties are unable to reach a consensus, the district shall secure right-of-way through eminent domain, as authorized to do so under Section 5(h) of the Act.

7. The district reserves the right to allow private parties to access any district secured right-of-way in accordance with law, so long as the private parties' use of the right-of-way aligns with the district's interests and the use of such facilitates the construction and/or maintenance of private facilities that further the district's mission.

RULE NO. 177

ADOPTED March 19, 2024

ESTABLISHING A POLICY FOR ON-FARM RECHARGE OF SURFACE WATER

WHEREAS, the California legislature established the Stockton East Water District (district) in 1948 to insure proper management of the underground water basin and provide supplemental water supplies. The district provides surface water for both agricultural and urban uses, and encourages the continued expansion of surface water diversions instead of pumping groundwater for the benefit of the groundwater basin. By providing surface water for agricultural irrigation, the district supports a reliable water supply for a San Joaquin County's agricultural industry that is the area's leading economic activity; and,

WHEREAS, the district is located within the critically overdraft Eastern San Joaquin Groundwater Subbasin, which must achieve groundwater sustainability by 2040 through management actions to correct an average annual overdraft of 37,000 acre-feet, as identified with the 2014 Sustainable Groundwater Management Act and the Eastern San Joaquin Groundwater Sustainability Plan; and,

WHEREAS, the district has applied for multiple water rights on the Calaveras River and Littlejohns Creek to divert storm flows to underground storage between November 1 and April 30, and the district has identified a need to progress towards perfecting the water right applications, but lacks sufficient infrastructure to fully enjoy available supplies without development of additional diversion facilities; and,

WHEREAS, the district holds contracts for water on the Calaveras and Stanislaus Rivers and wishes to maximize use of those water rights for diversion to underground storage; and,

WHEREAS, the State of California allows the diversion of certain flood flows without a water right permit as detailed in Water Code Section 1242.1, and the district wishes to encourage the diversion of such water; and,

WHEREAS, the Board of Directors desires to establish a formal policy to encourage the diversion of available water to underground storage by adopting a Rule, as authorized by the District Act (Act), which allows the Board of Directors to adopt Rules and Regulations as it deems necessary and proper for carrying out provisions of the Act; and,

WHEREAS, the purpose of this Rule is to state the district's policy of encouraging the diversion of non-irrigation season flows described above (“Recharge Water”) to underground storage for offsetting pumping of groundwater.

NOW, THEREFORE, THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT HEREBY ENACTS AND ESTABLISHES RULE NO. 177:

1. Any landowner proposing to divert Recharge Water pursuant to this Rule shall only do so through a district approved, metered surface water diversion facility and all customer accounts must be in good standing with the district.

2. An intent to divert Recharge Water form must be submitted to the district annually to participate in the program, and the District will notify participants when Recharge Water is available pursuant to this Rule.

3. The district will cover all direct and indirect costs for flow modeling and forecasting,

California Environmental Quality Act (CEQA) compliance, water right permit fees, and any consultant support necessary to facilitate approval of Recharge Water diversion.

4. The landowner is responsible for all costs related to operation and maintenance of the surface water diversion facility. Related costs include, but are not limited to, power, equipment maintenance, operation personnel, repairs, land lease, and any other related cost incurred through the typical operation of a surface water diversion facility and irrigation system.

5. The district may require a field drain flow measurement device depending upon a property's topography, soil profile, and method of recharge. The device will be used to verify Recharge Water is not leaving the property and re-entering the drainage watercourse(s). Under this condition, the volume of water re-entering the drainage watercourse will be deducted from the volume of water diverted to the field for recharge, resulting in net Recharge Water.

6. Recharge Water may be applied for recharge by any acceptable means, including flood irrigation, above ground or subsurface irrigation, leach system, or dry well.

7. INCENTIVE PROGRAMS – Two programs are available for agricultural water users within the district to incentive the diversion of Recharge Water. The two programs each provide the landowner compensation for on-farm recharge of surface water annually between November 1 and April 30 or the beginning of the irrigation season; whichever occurs first.

   a) Lifted Diversions. Landowners will receive payment of $80 per acre-foot of measured net recharge and a groundwater credit equal to 50% of the measured net recharged volume. For example, if 100 acre-feet are recharged, the landowner will receive compensation of $8,000 ($80/AF x 100AF) and a 50 acre-feet groundwater credit and the district will benefit by 50 acre-feet.

   b) Gravity Diversions. Landowners will receive payment of $25 per acre-foot of measured net recharge and a groundwater credit equal to 50% of the measured net recharged volume. For example, if 100 acre-feet are recharged, the landowner will receive compensation of $2,500 ($25/AF x 100AF) and a 50 acre-feet groundwater credit and the district will benefit by 50 acre-feet.

8. LIMITATIONS – Both programs are subject to the following limitations of use.

   a) Application of Recharge Compensation. Landowners will receive compensation as described in Section 7 in the form of a monetary payment from the District. The payment will be provided monthly for the net recharge volume totalized between the District's previous and current flow meter readings.

   b) Use of Recharge Credit. The landowner will receive a groundwater credit equal to the net recharged volume. The volumetric credit may be applied to any other parcel(s) owned or leased by the recharger and will apply as a volumetric credit to groundwater pumped for irrigation during the following irrigation season. Any applied credit balance remaining after Final Billing will be refunded to the landowner at the current groundwater rate.

   b.) Unauthorized Diversion. Diversion of Recharge Water to underground storage shall occur only after notice by the District, and in accordance with this Rule.

Any volume of water diverted without authorization shall be charged to the diverter at the current surface water rate and no recharge credit shall apply.

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RESOLUTIONS 2023-2024
Dates and Descriptions Index

RESOLUTION	ADOPTED	RESOLUTION TITLE
23-24-01	04/04/2023	Concurring In Nomination To The Executive Committee of ACWA/JPIA
23-24-02	06/06/2023	75th Anniversary
23-24-03	06/06/2023	WaterSMART Aquatic Ecosystem Restoration Grant
23-24-04	06/13/2023	Nominating Andrew Watkins as Member of ACWA for Region 4 Board
23-24-05	06/13/2023	The Disposal of Surplus Property
23-24-06	06/25/2023	Adopting Appropriation Limits for Fiscal Year 2023-2024
23-24-07	10/17/2023	Authorizing Resolution for Bellota Weir Project for $12.2M Grant
23-24-08	09/05/2023	Re-Authorizing Investment Policy No. 6020
23-24-09	09/26/2023	Preliminary Base Month Payment
23-24-10	09/26/2023	SWEEP Grant
23-24-11	10/03/2023	2023 Water Professionals Appreciation Week
23-24-12	11/14/2023	Water Smart Drought Response Program
23-24-13	11/21/2023	2024 One Voice Project
23-24-14	12/12/2023	Adopting Proposed Budget for Fiscal Year 2024-2025
23-24-15	12/26/2023	Setting Revised Base Monthly Payment For Period 4/1/2024 to 3/31/2025
23-24-16	02/20/2024	Watershed Resilience Pilot Program Grant CDWR
23-24-17	01/16/2024	Grant Application for USBR WaterSmart Small Scale Water Efficiency
23-24-18	02/13/2024	Grant Application for USBR WaterSmart Water and Energy Efficiency

RESOLUTION NO. 23-24-01

A RESOLUTION OF THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT CONCURRING IN NOMINATION TO THE EXECUTIVE COMMITTEE OF THE ASSOCIATION OF CALIFORNIA WATER AGENCIES JOINT POWERS INSURANCE AUTHORITY ("ACWA/JPIA")

WHEREAS, this district is a member district of the ACWA/JPIA; and

WHEREAS, the Bylaws of the ACWA/JPIA provide that in order for a nomination to be made to ACWA/JPIA's Executive Committee, three-member districts must concur with the nominating district; and

WHEREAS, another ACWA/JPIA member district, the Humboldt Bay Municipal Water District, has requested that this district concur in its nomination of its member of the ACWA/JPIA Board of Directors to the Executive Committee of the ACWA/JPIA.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Stockton East Water District that this district concurs with the nomination of John Bruce Rupp of Humboldt Bay Municipal Water District to the Executive Committee of the ACWA/JPIA.

BE IT FURTHER RESOLVED that the Secretary of the Board is hereby directed to transmit a certified copy of this resolution to the ACWA/JPIA at P.O. Box 619082, Roseville, CA 95661-9082, forthwith.

PASSED AND ADOPTED at a regular meeting by the Board of Directors of the Stockton East Water District on the 4th day of April 2023 by the following vote:

AYES: Atkins, Cortopassi, McGaughey, McGurk, Panizza, Sanguinetti, Watkins
NAYES: None
ABSENT: None
ABSTAIN: None

Richard Atkins, President
Board of Directors
Stockton East Water District

ATTEST:

Justin M. Hopkins
Secretary of the Board

RESOLUTION NO. 23-24-02

RESOLUTION OF THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT ON THE OCCASION OF ITS 75TH ANNIVERSARY

WHEREAS, the Stockton and East San Joaquin Water Conservation District was formed in 1948, as the successor agency to the Linden Irrigation District, under the 1931 Water Conservation Act of the State of California; and

WHEREAS, Directors-Elect John H. Burton, Raymond Camera, William E. Donnolly, C. Francis Grupe, Simpson H. Hornage, Wilber Leffler and Steve Solari first met on June 8, 1948 in the Directors Room on the second floor of the Bank of America, Stockton, California to begin the important work of organizing the first Board of Directors for the district; and

WHEREAS, this first Board of Directors distinguished itself by immediately filing for unappropriated water rights on the Calaveras River and construction of the Bellota Weir; and

WHEREAS, the work which was begun by these original seven Directors has been continued with equal motivation and enthusiasm over the past seventy-five years; and

WHEREAS, as a result of intensive efforts on the part of the district and other local agencies, New Hogan Reservoir was completed in 1964 and a permanent contract for water stored in the 317,000 AF reservoir was executed with the United States Bureau of Reclamation (USBR); and

WHEREAS, in 1971 the State Legislature expanded the powers of the District due to the declining supply of water in the region's groundwater basin, and the district was charged with developing additional water resources for the area in order to reduce and control the critical overdraft of the basin; and

WHEREAS, in 1976 the district constructed a state-of-the-art drinking water treatment facility which currently provides approximately 52,000 AF of treated surface water annually to its urban contractors – City of Stockton, County of San Joaquin and the California Water Service Company; and

WHEREAS, in 1983 the district and its neighbor, Central San Joaquin Water Conservation District (CSJWCD) contracted with the USBR for 155,000 AF of interim water from New Melones Reservoir, which contracts required completion of conveyance facilities within five years of notification by the USBR that water is available; and

WHEREAS, in 1988 the USBR formally notified SEWD and CSJWCD that water is available from New Melones Reservoir and acting upon this notification the district constructed conveyance facilities and an expansion of the water treatment plant to accommodate the new supply; and

WHEREAS, the district completed construction of the New Melones water conveyance facilities, each district requested delivery of water under terms of their contracts with the USBR, however, the USBR initially refused to honor the requests; and

WHEREAS, through intense lobbying and negotiation efforts the districts have received at least minimal water from this contract since 1995; and

WHEREAS, in recognition of his efforts in assuring the original construction of the drinking water treatment facility, it was dedicated in honor of Dr. Joe Waidhofer in August 1996; and,

WHEREAS, in April 2003 the district began operation of Farmington Groundwater Recharge and Seasonal Habitat Program Pilot Project, which was authorized by Congress in 1999, and funded by Congress, the State of California, and SEWD urban contractors; and

WHEREAS, to ensure participation in a solution to its groundwater management challenges by all effected properties not within the boundary of another active water district, in 2004 the district expanded its boundaries by 27,000 acres to now encompass approximately 143,000 acres; and

WHEREAS, in October 2006 the Farmington Groundwater Recharge and Seasonal Habitat Program – Phase 1 Peters Pipeline Project was completed and funded by Congress, the State of California, and SEWD urban contractors; and

WHEREAS, on April 17, 2007 and October 9, 2007, the Efficiency Enhancement Flocculation-Sedimentation Basin Project and the Finished Water Pump Station Modification Project were respectively completed allowing the rated capacity of the drinking water treatment facility to be 50 million gallons per day; and

WHEREAS, in June 2008 a team of district staff and contractors constructed a new Maintenance building in recognition of the district's increased need for staff and workspace to meet growing maintenance demands; and

WHEREAS, in September 2008 the district lined the first phase of the original Peters Pipeline to address failing infrastructure, the first rehabilitation project on the New Melones conveyance system; and

WHEREAS, between June through September 2010 the district completed water treatment studies, submitted a petition to the State of California Water Resources Control Board to increase water treatment capacity, resulting in the rated capacity to be increased to 65 million gallons per day on May 19, 2011; and

WHEREAS, on October 13, 2011 the Budiselich Dam Fish Passage Improvement Project was completed, the first project improving fish passage for migrating salmonids between the Delta and the Calaveras River fishery, funded by the district and the State of California – Department of Water Resources; and

WHEREAS, on October 9, 2013 the Caprini Crossing Fish Passage Improvement Project was completed, the second project improving fish passage for migrating salmonids, funded by the district and the State of California – Department of Water Resources; and

WHEREAS, in October 2013 construction was completed on a new 10MG finished water reservoir, allowing for rehabilitation of the existing 35-year old 10MG finished water reservoir in 2014, with funding for both reservoir projects secured through 0% interest loans from the State Revolving Fund (SRF); and

WHEREAS, on February 18, 2014 the Board of Directors unanimously agreed to exercise the 2009 Option to Purchase Agreement to secure ownership of the 230 acre North Site Property, increasing the district's campus to more than 450 acres and providing needed land for future groundwater recharge and raw water enhancement improvements; and

WHEREAS, in September 2014 the district published the Administrative Draft Environmental Impact Report for the Water Supply Enhancement Project, an innovative plan to maximize storage of available surface water supplies to replenish depleted groundwater storage; and

WHEREAS, in May 2015 the district completed construction of Extraction Well #1, thereby increasing the district's stored groundwater recovery capacity to 12,000 acre-feet annually; and

WHEREAS, on January 30, 2019 the district commissioned a new two-megawatt photovoltaic power system, covering 11 acres of the North Site and constructed through a Power Purchase Agreement with Onyx Renewable Partners L.P.; and

WHEREAS, on April 9, 2019 the district received a 12-year Lake and Streambed Alteration Agreement from the California Department of Fish and Wildlife to allow for the continued operation and maintenance of the New Hogan conveyance system; and

WHEREAS, on August 20, 2019 the district and integration consultant began design and installation of a five-year project to implement a fully integrated SCADA system for the Dr. Joe Waidhoffer Water Treatment Plant; and

WHEREAS, on October 30, 2019 the Central California Traction Railroad Bridge Fish Passage Improvement Project was completed, the third project improving fish passage for migrating salmonids, funded by the district and the State of California – Department of Water Resources; and

WHEREAS, on April 21, 2020 the Raw Water Delivery Reliability and Improvement Project was completed, increasing operational flexibility, adding 73-acres for recharge and raw water storage, and funded by the U.S. Bureau of Reclamation, the district, and SEWD urban contractors; and

WHEREAS, on August 11, 2020 the district received approval of the Calaveras River Habitat Conservation Plan and a 50-year incidental take permit to allow for the continued operation and maintenance of facilities within the Calaveras River; and

WHEREAS, beginning in January 2022 the district and consultants implemented to use of processed satellite imagery and other data to quantify agricultural groundwater use within the district; and

WHEREAS, on May 5, 2022 the district, contractors, and consultants broke ground for the Sodium Hypochlorite Disinfection Facility Project, scheduled to complete construction in August 2023; and

WHEREAS, on June 30, 2022 the district and consultants completed design of the Bellota Fish Screen and Passage Improvement Project, the flagship project of the Calaveras River Habitat Conservation Plan; and

WHEREAS, on May 30, 2023 the district approved its first Strategic Plan, providing guidance for the district's future efforts through focus on six strategic area for at least the next five years; and

WHEREAS, in recognition of the all the accomplishments of the current Board of Directors who passed away while in office, the district desires to name the new sodium hypochlorite disinfection facility in their honor.

NOW THEREFORE, BE IT RESOLVED that in recognition of its 75th Anniversary, the Board of Directors of the Stockton East Water District affirms its new mission to ensure the high quality drinking water and supplemental surface water for agricultural use required by the region's dynamic and growing economy, and to eliminate the critical groundwater overdraft; and,

That the Board of Directors of the Stockton East Water District further resolve that in honor of the Board of Director's achievements, the new sodium hypochlorite facility be dedicated in their honor and said dedication memorialized through the permanent placement of a wall plaque.

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PASSED AND ADOPTED by the Board of Directors of the Stockton East Water District, County of San Joaquin, State of California, on the 6th day of June 2023, by the following vote of the members thereof:

AYES:	Atkins, Cortopassi, McGaughey, McGurk, Panizza, Sanguinetti, Watkins
NOES:	None
ABSENT:	None
ABSTAIN:	None

Richard Atkins, Board President

Justin M. Hopkins
Secretary of the Board

RESOLUTION NO. 23-24-04

A RESOLUTION OF THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT PLACING IN NOMINATION ANDREW WATKINS AS A MEMBER OF THE ASSOCIATION OF CALIFORNIA WATER AGENCIES FOR REGION 4 BOARD OF DIRECTORS

BE IT RESOLVED BY THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT AS FOLLOWS:

A. Recitals

The Board of Directors (Board) of the Stockton East Water District does encourage and support the participation of its members in the affairs of the Association of California Water Agencies (ACWA).

Thomas McGurk is currently serving as Director for ACWA Region 4 and has indicated a desire to resign the position at the end of the current term.

The Stockton East Water District Board has a continued interest of representation as a Director of ACWA Region 4.

B. Resolves

NOW, THEREFORE, BE IT RESOLVED THAT THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT:

Does place its full and unreserved support in the nomination of Andrew Watkins for the Director of ACWA Region 4.

Does hereby determine that the expenses attendant with the service of Andrew Watkins in ACWA Region 4 shall be borne by the Stockton East Water District.

PASSED AND ADOPTED at a regular meeting by the Board of Directors of the Stockton East Water District on the 13th day of June 2023 by the following vote thereof:

Ayes: Atkins, Cortopassi, McGaughey, McGurk, Panizza, Sanguinetti, Watkins
Noes: None
Absent: None
Abstain: None

Richard Atkins, President
Board of Directors

ATTEST:

Justin M. Hopkins,
Secretary of the Board

RESOLUTION NO. 23-24-05

A RESOLUTION OF THE BOARD OF DIRECTORS OF
STOCKTON EAST WATER DISTRICT
APPROVING THE DISPOSAL OF SURPLUS PROPERTY

WHEREAS, Stockton East Water District owns a wire recycling bin used to store wire and wire remnants from the District's electrical and SCADA projects which is no longer useful to the District; and

WHEREAS, Stockton East Water District owns an articulate mower which is no longer functioning or useful to the District; and

WHEREAS, Stockton East Water District owns conveyor belt which was replaced by new equipment at Duck Creek and which is no longer useful to the District; and

WHEREAS, Stockton East Water District owns an elevator which was replaced by new equipment at Duck Creek and which is no longer useful to the District; and

WHEREAS, Stockton East Water District owns two VFD cabinets which have been decommissioned and stripped of all useful parts and which are no longer useful to the District; and

WHEREAS, Stockton East Water District owns a generator which is not operational and which is no longer useful to the District; and

WHEREAS, the above listed items have been declared surplus by the General Manager; and

WHEREAS, the District's Surplus Property Disposal Guidelines adopted on June 4, 2013 states the General Manager shall use methods and procedures for disposing of surplus items, which in his judgment will return the greatest value at the least cost to the District;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Stockton East Water District that the General Manager shall be authorized to use the methods and procedures for disposing of surplus items, which in his judgment will return the greatest value to the District.

PASSED AND ADOPTED at a regular meeting by the Board of Directors of the Stockton East Water District on the 13th day of June, 2023 by the following vote of the members thereof:

Ayes: Atkins, Cortopassi, McGaughey, McGurk, Panizza, Sanguinetti, Watkins
Noes: None
Absent: None
Abstain: None

Richard Atkins, President
Board of Directors

ATTEST:

Justin M. Hopkins
Secretary of the Board

RESOLUTION OF THE BOARD OF DIRECTORS
OF STOCKTON EAST WATER DISTRICT

RESOLUTION NO. 23-24-06

ADOPTING APPROPRIATIONS LIMIT FOR FISCAL YEAR 2023-2024

WHEREAS, Article XIIIB of the California Constitution and Division 9, commencing with Section 7900, of Title 1 of the California Government Code require Stockton East Water District to adopt an Appropriations Limit for each Fiscal Year; and

WHEREAS, Stockton East Water District has determined that the appropriations limit for Fiscal Year 2023-2024 is $1,866,856 while for Fiscal Year 2022-2023 it was $1,779,823; and

WHEREAS, the documentation supporting such determination is set forth in Exhibit "A", Attachment "A", and Attachment "B" which are attached hereto and incorporated herein by reference, and have been available to the public for over 15 days; and

WHEREAS, the estimated property tax revenue for the District for Fiscal Year 2023-2024 is $490,000 which is substantially less than the Appropriations Limit and results in no impact on the budget;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of Stockton East Water District that the Appropriations Limit set for the District for Fiscal Year 2023-2024 is hereby set at $1,866,856.

PASSED AND ADOPTED by the Board of Directors of Stockton East Water District at a regular meeting thereof held on this 25th day of July, 2023, by the following vote:

AYES: Atkins, Cortopassi, McGaughey, McGurk, Sanguinetti, Watkins
NAYES: None
ABSENT: Panizza
ABSTAIN: None

Richard Atkins, President
Board of Directors

ATTEST:

Justin M. Hopkins, Secretary

Resolution No. 23-24-07

A RESOLUTION OF THE BOARD OF DIRECTORS OF
STOCKTON EAST WATER DISTRICT

AUTHORIZATION TO ACCEPT THE GRANT AWARD WITH THE CALIFORNIA DEPARTMENT OF WATER RESOURCES UNDER THE 2022 URBAN COMMUNITY DROUGHT RELIEF GRANT PROGRAM FOR THE BELLOTA WEIR MODIFICATIONS PROJECT, EXECUTE ANY REQUIRED DOCUMENTS AND PROVIDE DELEGATION OF AUTHORITY

WHEREAS, the Board of Directors of the Stockton East Water District (District) received a grant award from the California Department of Water Resources for the 2022 Urban Community Drought Relief Grant Program;

WHEREAS, the District intends to construct the Bellota Weir Modifications Project (Project) to improve fish passage in the Calaveras River and improve diversion of surface water for groundwater recharge;

WHEREAS, the District will budget $3,070,656 towards construction of the first phase of the Project;

WHEREAS, the District received award from the Urban Community Drought Relief Grant Program of the Department of Water Resources for improving the diversion of surface water for groundwater recharge at the Bellota Weir of the amount of $12,282,625.;

WHEREAS, the designated representative will be Justin M. Hopkins.

WHEREAS, the District does hereby agree to consenting to the use of DocuSign for all transactions by both us and DWR related to the Urban Community Drought Relief award including agreement execution, Amendments, invoices, and various other documents

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Stockton East Water District accept the grant award by the 2022 Urban Community Drought Relief Grant Program and the Budget Acts of 2023, 2024, and 2025 be made to the California Department of Water Resources, and to enter into an agreement to receive the grant;

PASSED AND ADOPTED at a regular meeting by the Board of Directors of the Stockton East Water District on the 11th day of July 2023 by the following vote of the members thereof:

AYES:	Atkins, Cortopassi, McGaughey, McGurk, Panizza, Sanguinetti, Watkins
NAYES:	None
ABSENT:	None
ABSTAIN:	None

Richard Atkins, President

ATTEST:

Justin M. Hopkins
Secretary of the Board

Resolution No. 23-24-07

AN AMENDED RESOLUTION OF THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT

AUTHORIZATION TO ACCEPT THE GRANT AWARD WITH THE CALIFORNIA DEPARTMENT OF WATER RESOURCES UNDER THE 2022 URBAN COMMUNITY DROUGHT RELIEF GRANT PROGRAM FOR THE BELLOTA WEIR MODIFICATIONS PROJECT, EXECUTE ANY REQUIRED DOCUMENTS AND PROVIDE DELEGATION OF AUTHORITY

WHEREAS, the Board of Directors of the Stockton East Water District (District) received a grant award from the California Department of Water Resources for the 2022 Urban Community Drought Relief Grant Program;

WHEREAS, the District intends to construct the Bellota Weir Modifications Project (Project) to improve fish passage in the Calaveras River and improve diversion of surface water for groundwater recharge;

WHEREAS, the District will budget $3,070,656 towards construction of the first phase of the Project;

WHEREAS, the District received award from the Urban Community Drought Relief Grant Program of the Department of Water Resources for improving the diversion of surface water for groundwater recharge at the Bellota Weir of the amount of $12,282,625;

WHEREAS, the Stockton East Water District proposes to implement the Bellota Weir Modifications Project;

WHEREAS, the Stockton East Water District has the legal authority and is authorized to enter into a funding agreement with the State of California; and

WHEREAS, the Stockton East Water District intends to apply for grant funding from the California Department of Water Resources for the Bellota Weir Modifications Project;

THEREFORE, BE IT RESOLVED by the Board of Directors of the Stockton East Water District as follows:

1. That pursuant and subject to all of the terms and provisions of Budget Act of 2021 (Stats. 2021, ch. 240, § 80), the Stockton East Water District's General Manager, or designee is hereby authorized and directed to prepare and file an application for funding with the Department of Water Resources, and take such other actions necessary or appropriate to obtain grant funding.

2. The Stockton East Water District's General Manager, or designee is hereby authorized and directed to execute the funding agreement with the Department of Water Resources and any amendments thereto.

3. The Stockton East Water District's General Manager, or designee is hereby authorized and directed to submit any required documents, invoices, and reports required to obtain grant funding.

CERTIFICATION I hereby certify that the foregoing Resolution was duly and regularly adopted by the Board of Directors of the Stockton East Water District at the meeting held on the 17th day of October 2023, motion by Director McGurk and seconded by Director Sanguinetti, motion passed by the following vote:

WHEREAS, the District does hereby agree to consenting to the use of DocuSign for all transactions by both us and DWR related to the Urban Community Drought Relief award including agreement execution, Amendments, invoices, and various other documents;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Stockton East Water District accept the grant award by the 2022 Urban Community Drought Relief Grant Program and the Budget Acts of 2023, 2024, and 2025 be made to the California Department of Water Resources, and to enter into an agreement to receive the grant;

PASSED AND ADOPTED at a regular meeting by the Board of Directors of the Stockton East Water District on the 17th day of October 2023 by the following vote of the members thereof:

AYES:	Atkins, McGurk, Sanguinetti, Watkins
NAYES:	None
ABSENT:	McGaughey, Panizza
ABSTAIN:	Cortopassi

Richard Atkins, President

ATTEST:

Justin M. Hopkins
Secretary of the Board

RESOLUTION NO. 23-24-09

RESOLUTION OF THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT

SETTING A PRELIMINARY BASE MONTHLY PAYMENT FOR THE PERIOD OF APRIL 1, 2024 TO MARCH 31, 2025, PURSUANT TO THE SECOND AMENDED CONTRACT AMONG THIS DISTRICT AND THE CALIFORNIA WATER SERVICE COMPANY, THE CITY OF STOCKTON, THE LINCOLN VILLAGE MAINTENANCE DISTRICT, AND THE COLONIAL HEIGHTS MAINTENANCE DISTRICT, PROVIDING FOR THE SALE OF TREATED WATER

WHEREAS, on September 25, 1987, the Stockton East Water District entered into a Second Amended Contract among the California Water Service Company, the City of Stockton, the Lincoln Village Maintenance District, and the Colonial Heights Maintenance District, providing for the sale of treated water; and

WHEREAS, the Stockton East Water District pursuant to Section 6D(1) of the Second Amended Contract shall announce an estimated new base monthly payment on or before the first day of October annually and this estimated base monthly payment is subject to revision upon the adoption of the Stockton East Water District Annual Budget prior to December 15 of each year under Sec. 9.2(d) of the District Act; and

WHEREAS, the Board of Directors of the Stockton East Water District has determined that the budgeted costs for the Contract period April 1, 2024 to March 31, 2025 should be as follows:

6A(1)	Debt Service	$ 1,717,309
6A(3)	Operation & Maintenance	32,755,612
6A(4)	Administration	6,105,581
6A(8)	Payment into the Water Treatment Facilities Reserve Fund	100,000
		$40,678,502; and

WHEREAS, paragraph 6D(3) of said Second Amended Contract states that Stockton East Water District shall annually levy a municipal groundwater assessment, pursuant to its enabling legislation such that the cost of groundwater use is equivalent to the cost of surface water use; and

WHEREAS, the preliminary 2024-2025 budget estimates the amount of $40,678,502 to be paid from base monthly payments, municipal groundwater assessments and other revenue as follows:

Base Monthly Payments ($2,183,480 X 12)	$26,201,756
Municipal Groundwater Assessments (14,100 AF X $496.36)	6,998,676
Prior Fiscal Year BMP adjustment	6,538,070
Other Revenue	940,000
Total	$40,678,502

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Stockton East Water District that pursuant to said Second Amended Contract, this Board hereby establishes the Preliminary Base Monthly Payment to be paid by the Contractors pursuant to said Contract for the period April 1, 2024 to March 31, 2025, at $26,201,756/12 = $2,183,480.

PASSED AND ADOPTED at a regular meeting by the Board of Directors of the Stockton East Water District on the 26th day of September 2023 by the following vote of the members thereof:

AYES: Atkins, Cortopassi, McGaughey, McGurk, Panizza, Sanguinetti
NAYES: None
ABSENT: Watkins
ABSTAIN: None

Richard Atkins, President
Board of Directors
Stockton East Water District

ATTEST:

Justin M. Hopkins, Secretary
Board of Directors
Stockton East Water District

Resolution No. 23-24-10

A RESOLUTION OF THE BOARD OF DIRECTORS OF
STOCKTON EAST WATER DISTRICT

AUTHORIZATION TO ACCEPT THE GRANT AWARD WITH THE CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE UNDER THE STATE WATER EFFICIENCY AND ENHANCEMENT PROGRAM BLOCK GRANT PILOT PROGRAM, EXECUTE ANY REQUIRED DOCUMENTS AND PROVIDE DELEGATION OF AUTHORITY

WHEREAS, the Stockton East Water District (SEWD), North San Joaquin Water Conservation District, and South San Joaquin Irrigation District, collectively Districts, received a grant award from the California Department of Food and Agriculture (CDFA) through the State Water Efficiency and Enhancement Program Block Grant Pilot Program (SWEEP BGP); and,

WHEREAS, the Districts' award from the SWEEP BGP provides $5,000,000 for installing new surface water diversions that result in measurable water and energy savings; and,

WHEREAS, SEWD intends to administer the SWEEP BGP on behalf of the Districts and administration costs will be reimbursed by the SWEEP BGP; and,

WHEREAS, the designated representative will be General Manager Justin M. Hopkins.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Stockton East Water District accept the SWEEP BGP grant award by the CDFA and authorize the General Manager to enter into an agreement to receive the grant and make all other required approvals.

PASSED AND ADOPTED at a regular meeting by the Board of Directors of the Stockton East Water District on the 26th day of September 2023 by the following vote of the members thereof:

AYES:	Atkins, Cortopassi, McGaughey, McGurk, Panizza, Sanguinetti
NAYES:	None
ABSENT:	Watkins
ABSTAIN:	None

Richard Atkins, President

ATTEST:

Justin M. Hopkins
Secretary of the Board

RESOLUTION NO. 23-24-11

RESOLUTION OF THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT

2023 WATER PROFESSIONALS APPRECIATION WEEK

WHEREAS, water is the lifeblood of California and without safe and reliable water, no community and no sector of the economy – from high tech to manufacturing to agriculture – can thrive or expand; and

WHEREAS, now more than ever, the water industry is proud of the important role our essential workers play in making sure our communities have safe and reliable drinking water; and

WHEREAS, thanks to technological advances by highly skilled and trained water professionals and the dedication of thousands of industry professionals in the state, California drinking water and treated wastewater meets some of the most stringent water quality standards in the nation; and

WHEREAS, depending on where you live in California, your water may come from a nearby well or river, or it may travel hundreds of miles through canals or pipelines to reach your tap. Regardless of where it originates, your drinking water is filtered, cleaned, tested and distributed in a process carefully managed by trained water professionals; and

WHEREAS, California is steadily expanding the reuse of treated wastewater and pioneering the use of advanced purified recycled water to replenish aquifers, prevent seawater intrusion and improve local water supply reliability; and

WHEREAS, water professionals at local public water and wastewater agencies work 24/7 to plan for the future, maintain and upgrade their systems and improve the safety and resiliency of local water supplies for their communities; and

WHEREAS, according to the Public Policy Institute of California, local public water and wastewater agencies invest more than $25 billion a year on local water-related programs and projects that protect public health and the environment, improve local water supply reliability, replenish and clean up groundwater basins, provide water for fire protection and protect against floods; and

WHEREAS, thousands of essential water, wastewater and recycled water industry professionals in the state dedicate their careers to keeping drinking water, recycled water and treated wastewater safe and reliable for use by Californians.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Stockton East Water District hereby declares Oct. 7-15, 2023 Water Professionals Appreciation Week and extends its sincere gratitude and appreciation to the water and wastewater professionals who work 24/7 to provide excellent essential services to our community every day.

PASSED AND ADOPTED at a regular meeting by the Board of Directors of the Stockton East Water District on the 3rd day of October 2023 by the following vote of the members thereof:

AYES: Atkins, Cortopassi, McGaughey, McGurk, Panizza, Sanguinetti, Watkins
NAYES: None
ABSENT: None
ABSTAIN: None

Richard Atkins, President
Board of Directors
Stockton East Water District

ATTEST:

Justin M. Hopkins, Secretary
Board of Directors
Stockton East Water District

Resolution No. 23-24-12

A RESOLUTION OF THE BOARD OF DIRECTORS OF
STOCKTON EAST WATER DISTRICT

AUTHORIZATION TO FILE A GRANT APPLICATION WITH THE UNITED STATES BUREAU OF RECLAMATION FOR THE WaterSMART Drought Response Program: Drought Resiliency Projects (Funding No. R24AS00007) FOR FISCAL YEAR 2024, EXECUTE ANY REQUIRED DOCUMENTS AND PROVIDE DELEGATION OF AUTHORITY

WHEREAS, the Board of Directors of the Stockton East Water District (District) desires to file a grant application with the United States Bureau of Reclamation for the WaterSMART Drought Response Program: Drought Resiliency Projects (Funding No. R24AS00007) the FY 24-25;

WHEREAS, the District intends to construct the Clements In-Lieu Recharge Pipeline (Project) to improve water management and groundwater recharge efforts;

WHEREAS, the Project budget is estimated at $1,381,535.64.

WHEREAS, the District will submit a grant application to the United States Bureau of Reclamation for the WaterSMART Drought Response Program: Drought Resiliency Projects (Funding No. R24AS00007) for $690,767.82 and the District will budget $690,767.82 for FY 25-26 towards matching funds for the Project;

WHEREAS, the General Manager, Justin M. Hopkins of the District is hereby authorized and directed to prepare the necessary data, conduct investigations, file such application, and execute a grant agreement with the United States Bureau of Reclamation; and

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Stockton East Water District that the grant application be made to the United States Bureau of Reclamation for the WaterSMART Drought Response Program: Drought Resiliency Projects (Funding No. R24AS00007), and to enter into an agreement to receive the grant.

PASSED AND ADOPTED at a regular meeting by the Board of Directors of the Stockton East Water District on the 14th day of November 2023 by the following vote of the members thereof:

AYES:	Atkins, Cortopassi, McGurk, Panizza, Sanguinetti, Watkins
NAYES:	None
ABSENT:	McGaughey
ABSTAIN:	None

Richard Atkins, President
Board of Directors
Stockton East Water District

ATTEST:

Justin M. Hopkins, Secretary
Board of Directors
Stockton East Water District

Resolution No. 23-24-13

A RESOLUTION OF THE BOARD OF DIRECTORS OF
STOCKTON EAST WATER DISTRICT

AUTHORIZATION TO FILE AN APPLICATION WITH THE
SAN JOAQUIN COUNCIL OF GOVERNMENTS FOR THE 2024 ONE VOICE PROGRAM
FOR FISCAL YEAR 2024, EXECUTE ANY REQUIRED DOCUMENTS AND PROVIDE
DELEGATION OF AUTHORITY

WHEREAS, the Board of Directors of the Stockton East Water District (District) desires to file an application with the San Joaquin Council of Governments for the 2024 One Voice Program;

WHEREAS, the District intends to construct the Bellota Weir Modifications Project (Project) to improve fish passage in the Calaveras River and secure critical surface water supplies for the area;

WHEREAS, the Project is estimated at $80,300,000 and the Project requires grant funding through the five phases of construction to ensure full Project completion;

WHEREAS, the District is developing a portfolio of local, state, and federal funds towards construction of the first phase of the Project;

WHEREAS, the District will submit an application to the San Joaquin Council of Governments for consideration of including the Project within the 2024 One Voice Program;

WHEREAS, the Stockton East Water District proposes to implement the Bellota Weir Modifications Project in the summer of 2024 or as early as funding will allow;

WHEREAS, the General Manager, Justin M. Hopkins of the District is hereby authorized and directed to prepare the necessary data, conduct investigations, file such application, and execute any agreements with the San Joaquin Council of Governments; and

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Stockton East Water District that the application be made to the San Joaquin Council of Governments for the 2024 One Voice Program and to enter into any agreements related thereto.

PASSED AND ADOPTED at a regular meeting by the Board of Directors of the Stockton East Water District on the 21st day of November 2023 by the following vote of the members thereof:

AYES:	Atkins, Cortopassi, McGurk, Panizza, Sanguinetti, Watkins
NAYES:	None
ABSENT:	McGaughey
ABSTAIN:	None

Richard Atkins, President
Board of Directors
Stockton East Water District

ATTEST:

Justin M. Hopkins, Secretary
Board of Directors
Stockton East Water District

RESOLUTION NO. 23-24-14

RESOLUTION OF THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT ADOPTING PROPOSED BUDGET FOR FISCAL YEAR 2024-2025

WHEREAS, the District Act establishes separate budgets and accounts for revenue and expenditures for the Administration Division, Agricultural Division and Municipal Division; and

WHEREAS, the District Act states that the Board each year shall hold a public hearing to consider the budget for each of the Administration, Agricultural and Municipal Divisions; and

WHEREAS, the District Act states that the Board shall receive recommendations from the Agricultural Operations Committee as to the budget to be established for the Agricultural Division and from the Municipal Operations Committee as to the budget to be established for the Municipal division and from the Administration Committee as to the budget of the Administration Division; and

WHEREAS, the Agricultural Committee has met and recommended approval of the respective portions of the proposed Fiscal Year 2024-2025 Budget;

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of the Stockton East Water District hereby adopts the proposed Fiscal Year 2024-2025 Budget as recommended.

PASSED AND ADOPTED this 12th day of December, 2023, by the following vote of the Board of Directors:

AYES:	Atkins, Cortopassi, McGaughey, McGurk, Panizza, Sanguinetti, Watkins
NOES:	None
ABSENT:	None
ABSTAIN:	None

Richard Atkins, President
Board of Directors
Stockton East Water District

ATTEST:

Justin M. Hopkins, Secretary
Board of Directors
Stockton East Water District

RESOLUTION NO. 23-24-15

RESOLUTION OF THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT

SETTING A REVISED BASE MONTHLY PAYMENT FOR PERIOD APRIL 1, 2024 TO MARCH 31, 2025, PURSUANT TO THE SECOND AMENDED CONTRACT AMONG THIS DISTRICT AND THE CALIFORNIA WATER SERVICE COMPANY, THE CITY OF STOCKTON, THE LINCOLN VILLAGE MAINTENANCE DISTRICT, AND THE COLONIAL HEIGHTS MAINTENANCE DISTRICT, PROVIDING FOR THE SALE OF TREATED WATER

WHEREAS, on September 25, 1987, the Stockton East Water District entered into a Second Amended Contract among the California Water Service Company, the City of Stockton, the Lincoln Village Maintenance District, and the Colonial Heights Maintenance District, providing for the sale of treated water; and

WHEREAS, the Stockton East Water District pursuant to Section 6D(1) of the Second Amended Contract shall announce an estimated new base monthly payment on or before the first day of October annually and this estimated base monthly payment is subject to revision upon the adoption of the Stockton East Water District Annual Budget prior to December 15 of each year under Sec. 9.2(d) of the District Act; and

WHEREAS, the Board of Directors of the Stockton-East Water District has determined that the budgeted costs for the Contract period April 1, 2024 to March 31, 2025 should be as follows:

6A(1)	Debt Service	$ 2,343,174
6A(3)	Operation & Maintenance	29,357,272
6A(4)	Administration	6,314,900
6A(8)	Payment into the Water Treatment Facilities Reserve Fund	100,000
		$38,115,346; and

WHEREAS, paragraph 6D(3) of said Second Amended Contract states that Stockton East shall annually levy a municipal groundwater assessment, pursuant to its enabling legislation such that the cost of groundwater use is equivalent to the cost of surface water use; and

WHEREAS, the preliminary 2024-2025 budget estimates the amount of $38,115,346 to be paid from base monthly payments, municipal groundwater assessments and other revenue as follows:

Base Monthly Payments ($2,189,528.60X 12)	$26,274,343
Municipal Groundwater Assessments	
(14,100 AF X $459.27)	6,475,707
Prior Fiscal Year BMP adjustment	4,425,296
Other Revenue	940,000
Total	$38,115,346; and

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Stockton East Water District that pursuant to said Second Amended Contract, this Board hereby establishes the Preliminary Base Monthly Payment to be paid by the Contractors pursuant to said Contract for the period April 1, 2024 to March 31, 2025, at $26,274,343/12 = $2,189,528.60.

PASSED AND ADOPTED at a regular meeting by the Board of Directors of the Stockton East Water District on the 26th day of December 2023 by the following vote of the members thereof:

AYES: Atkins, Cortopassi, McGurk, Panizza, Sanguinetti, Watkins
NAYES: None
ABSENT: McGaughey
ABSTAIN: None

Richard Atkins, President
Board of Directors
Stockton East Water District

ATTEST:

Justin M. Hopkins, Secretary
Board of Directors
Stockton East Water District

Resolution No. 23-24-16

A RESOLUTION OF THE BOARD OF DIRECTORS OF
STOCKTON EAST WATER DISTRICT

AUTHORIZATION TO ACCEPT THE GRANT AWARD WITH THE CALIFORNIA DEPARTMENT OF WATER RESOURCES UNDER WATERSHED RESILIENCE PILOT PROGRAM, EXECUTE ANY REQUIRED DOCUMENTS AND PROVIDE DELEGATION OF AUTHORITY

WHEREAS, the Stockton East Water District (SEWD) has ongoing collaboration with the California Department of Water Resources to complete the Calaveras River Flood-MAR (Managed Aquifer Recharge) Study; and,

WHEREAS, SEWD was selected by the California Department of Water Resources to receive an additional $2,000,000 of directed funding through the Watershed Resilience Pilot Program (Program) to further evaluate the Calaveras River watershed; and,

WHEREAS, the Program intends to expand upon existing Calaveras River watershed studies and fund development of watershed scale climate resiliency plans and projects to provide equitable solutions to for all stakeholders affected by climate change within the Calaveras River watershed; and,

WHEREAS, SEWD intends to accept the directed funding, identify and collaborate with Calaveras River watershed stakeholders, and lead efforts to develop watershed scale climate resiliency plans and project; and,

WHEREAS, the designated representative will be the General Manager or designee.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Stockton East Water District to accept the Watershed Resiliency Pilot Program grant award by the California Department of Water Resources and authorize the General Manager to enter into an agreement to receive the funding and make all other required approvals.

PASSED AND ADOPTED at a regular meeting by the Board of Directors of the Stockton East Water District on the 20th day of February 2024 by the following vote of the members thereof:

AYES: Atkins, Sangunetti, Panizza, Watkins
NAYES: None
ABSENT: Cortopassi, McGurk
ABSTAIN: None

Richard Atkins, President
Board of Directors
Stockton East Water District

ATTEST:

Justin M. Hopkins,
Secretary of the Board
Stockton East Water District

RESOLUTION NO. 23-24-17

A RESOLUTION OF THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT

AUTHORIZATION TO FILE A GRANT APPLICATION WITH THE UNITED STATES BUREAU OF RECLAMATION FOR THE WaterSMART Small Scale Water Efficiency Projects (Funding No. R24AS00059) FOR FISCAL YEAR 2024 and FISCAL YEAR 2025, EXECUTE ANY REQUIRED DOCUMENTS AND PROVIDE DELEGATION OF AUTHORITY

WHEREAS, the Board of Directors of the Stockton East Water District (District) desires to file a grant application with the United States Bureau of Reclamation for the WaterSMART Small-Scale Water Efficiency Projects (Funding No. R24AS00059) the FY 24-25;

WHEREAS, the District intends to install new telemetry aided flow measurement devices (Project) to improve reporting and water management efforts;

WHEREAS, the Project budget is estimated at $106,109.

WHEREAS, the District will submit a grant application to the United States Bureau of Reclamation for the WaterSMART Small-Scale Water Efficiency Projects (Funding No. R24AS00059) for $53,054.50 and the District will budget $53,054.50 for FY 24-25 towards matching funds for the Project;

WHEREAS, the General Manager, Justin M. Hopkins of the District is hereby authorized and directed to prepare the necessary data, conduct investigations, file such application, and execute a grant agreement with the United States Bureau of Reclamation; and

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Stockton East Water District that the grant application be made to the United States Bureau of Reclamation for the WaterSMART Small-Scale Water Efficiency Projects (Funding No. R24AS00059), and to enter into an agreement to receive the grant.

PASSED AND ADOPTED at a regular meeting by the Board of Directors of the Stockton East Water District on the 16th day of January 2024 by the following vote of the members thereof:

AYES:	Atkins, Cortopassi, McGurk, Panizza, Sanguinetti, Watkins
NAYES:	None
ABSENT:	None
ABSTAIN:	None

Richard Atkins, President
Board of Directors
Stockton East Water District

ATTEST:

Justin M. Hopkins, Secretary
Board of Directors
Stockton East Water District

Resolution No. 23-24-18

A RESOLUTION OF THE BOARD OF DIRECTORS OF
STOCKTON EAST WATER DISTRICT

AUTHORIZATION TO FILE A GRANT APPLICATION WITH THE UNITED STATES BUREAU OF RECLAMATION FOR THE WaterSMART Water and Energy Efficiency Grants (Funding No. R24AS00052) FOR FISCAL YEAR 2024 and FISCAL YEAR 2025, EXECUTE ANY REQUIRED DOCUMENTS AND PROVIDE DELEGATION OF AUTHORITY

WHEREAS, the Board of Directors of the Stockton East Water District (District) desires to file a grant application with the United States Bureau of Reclamation for the WaterSMART Water and Energy Efficiency Grant (Funding No. R24AS00052) the FY 24-25;

WHEREAS, the District intends to gunite line the Upper Farmington Canal to improve hydraulic conditions, minimize plant growth, and save water;

WHEREAS, the UFC Canal Lining Phase 1 (Project) budget is estimated at $1,690,844.

WHEREAS, the District will submit a grant application to the United States Bureau of Reclamation for the WaterSMART Water and Energy Efficiency Grants (Funding No. R24AS00052) for $845,422 and the District will budget $845,422 for FY 25-26 towards matching funds for the Project;

WHEREAS, the General Manager, Justin M. Hopkins of the District is hereby authorized and directed to prepare the necessary data, conduct investigations, file such application, and execute a grant agreement with the United States Bureau of Reclamation; and

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Stockton East Water District that the grant application be made to the United States Bureau of Reclamation for the WaterSMART Water Energy and Efficiency Grant (Funding No. R24AS00052), and to enter into an agreement to receive the grant.

PASSED AND ADOPTED at a regular meeting by the Board of Directors of the Stockton East Water District on the 13th day of February 2024 by the following vote of the members thereof:

AYES:	Atkins, Cortopassi, McGurk, Panizza, Sanguinetti, Watkins
NAYES:	None
ABSENT:	None
ABSTAIN:	None

Richard Atkins, President
Board of Directors
Stockton East Water District

ATTEST:

Justin M. Hopkins, Secretary
Board of Directors
Stockton East Water District

ADOPTED 12/12/2023



ANNUAL BUDGET
FISCAL YEAR 2024-2025

Stockton East Water District
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Stockton East Water District
Annual Budget Fiscal Year 2024-2025

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ANNUAL BUDGET
FISCAL YEAR 2024-2025

BASIC ASSUMPTIONS

WATER SUPPLY

1. The water usage assumed for proration/allocation of water costs for New Hogan and New Melones is reflected on Schedule A, Page **33**.

2. Proration of New Hogan water is based on estimates at the beginning of each fiscal year, but final allocation of costs is based on actual water used. Proration of New Melones water is based on the settlement agreement which sets the allocation at 90% M&I and 10% Ag. Since AG uses the system half of the year, the board approved allocation is set at 95% M&I and 5% AG.

3. Municipal water production figures are estimated at 14,100 AF for groundwater and 55,000 AF for surface water (same as previous year). Groundwater pumping costs are maintained at $116.00/AF as in the previous year's assumption.

4. Proration of the base monthly payment is broken into two components (see Schedule D) based on the May 1, 2012 Agreement among the urban contractors. The agreement has a different allocation percentages for the 10MG Clearwell Project funded by the State Revolving Fund Loan Program compared to the allocation percentages based on the Second Amended Contract.

SALARIES & WAGES

5. Salaries and wages are based on normal advancements for FY 2024-2025 covering the cost-of-living-allowance increase on employees' wages for certain positions based on the MOU between the District and employees dated April 1, 2020.

6. Employee benefits are calculated based on expected increases derived from ACWA/JPIA and CalPERS estimates. These items include health insurance, retirement benefits and provision for other post-employment benefits for employees to comply with GASB 75.

OTHERS

7. Estimated depreciation (a non-cash item) of ~$1,000,000 is excluded from the Base Monthly Payment calculations, in compliance with the Second Amended Contract.

8. A prior fiscal year adjustment is included in the Base Monthly Payment computation. This adjustment represents the variance between actual and budgeted figures from the previous fiscal year prior to this year's computations. The inclusion of this item complies with Sec. 7 of the 2001 Settlement Agreement.

9. Allocations of administrative and general expenses of the District are directly made based on Sec. 4 and Exhibit "A" of the Settlement Agreement. For FY 2022-2023, the District contracted Raftelis, Inc. to conduct an administrative cost allocation study.

ADMINISTRATION

DIVISION

Stockton East Water District
Annual Budget Fiscal Year 2024-2025

	70 - ADMINISTRATION FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	REVENUES				
10-4301-0	Interest Income	5,545	1,500	5,000	
10-8031-0	Reimbursement of Admin. Expenses - M&I	4,532,323	6,102,910	6,314,801	*94*
10-8031-0	Reimbursement of Admin. Expenses - AG	685,106	840,919	963,819	*67*
10-8031-0	Reimbursement of Admin Exepense - CSJWCD	0	75,000	0	*67*
10-4502-0	Reimbursement from CCWD	405,566	377,524	377,524	
10-4503-0	Reimbursement of NH Interest - CCWD	7,163	24,571	24,571	
10-4521-0	Property Taxes	613,804	490,000	500,000	
10-8021-0	Transfer to Other Division - (Property Taxes)	(613,804)	(490,000)	(500,000)	*67*
10-8021-0	Transfer from/to Other Divisions	373,785	(24,571)	(24,572)	
10-8041-0	Transfer to Water Development Fd & Water Supply Fd	(99,787)	(377,524)	(377,524)	*81 & 71*
	TOTAL REVENUES	**5,917,250**	**7,020,329**	**7,283,620**	
	BOARD EXPENSES				
10-5061-0	Director Fees	74,526	75,000	76,400	
10-5062-0	Directors Benefits	115,068	120,000	118,000	
	TOTAL BOARD EXPENSES	**189,594**	**195,000**	**194,400**	
	TOTAL SALARIES AND BENEFITS	**1,709,092**	**1,704,132**	**1,802,481**	
	BOARD EXPENSES				
10-5063-0	Election Expenses	511,075	0	525,000	
	TOTAL BOARD EXPENSES	**511,075**	**0**	**525,000**	
	TRAINING AND EDUCATION				
10-5101-0	Safety Equipment/Programs	48,731	40,000	53,700	
10-5102-0	Physical Examinations	4,530	5,000	5,000	
10-5103-0	Seminars/Conferences/Education	38,052	47,100	58,700	
10-5104-0	Travel, Food & Lodging	44,266	56,900	65,000	
10-5105-0	Association Dues and Fees	78,622	106,200	206,200	
10-5106-0	Books and Publications	1,079	9,400	5,700	
	TOTAL TRAINING AND EDUCATION	**215,280**	**264,600**	**394,300**	
	OFFICE SUPPORT				
10-5124-0	Office Equipment	20,438	31,200	31,700	
10-5125-0	Office Supplies	30,105	30,000	35,000	
10-5126-0	Postage and Courier	14,624	20,000	20,000	
10-5127-0	Office Expenses	29,458	20,000	30,000	
10-5128-0	Property and Liability Insurance	207,058	167,200	225,000	
10-5181-0	Vehicle Usage - Admn	15,152	20,000	20,000	
	TOTAL OFFICE SUPPORT	**316,834**	**288,400**	**361,700**	

	70 - ADMINISTRATION FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	PUBLIC RELATIONS				
10-5131-0	Water Conservation Education	197,000	197,000	197,000	
10-5132-0	Water Conservation Ad Campaign	31,537	40,000	30,000	
10-5133-0	Advertising and Public Relations	12,894	15,000	35,000	
	TOTAL PUBLIC RELATIONS	**241,430**	**252,000**	**262,000**	
	TECHNOLOGY				
10-5140-0	Technology Planning and Support	89,739	141,000	141,000	*1*
10-5141-0	Telecommunications	75,211	72,000	79,120	*2*
10-5142-0	Hardware Upgrades	50,155	45,000	45,000	*3*
10-5143-0	Software Licenses	82,103	108,600	106,700	
10-5144-0	Network Upgrades	0	20,000	10,000	*4*
10-5145-0	Application Development	0	0	430,000	*5*
10-5146-0	SCADA System (WTP)	700,188	926,287	559,000	*6*
10-5147-0	SCADA System (WS)	109,539	255,000	250,000	*7*
10-5148-0	Server Upgrades	9,238	8,000	4,000	*8*
	TOTAL TECHNOLOGY EXPENSES	**1,116,173**	**1,575,887**	**1,624,820**	
	ENGINEERING				
10-5110-0	Reports and Studies	35,124	50,000	70,000	*9*
10-5114-0	Permits and Fees	284,699	260,310	261,300	
10-5115-0	Professional Services - Grants	18,556	50,000	19,020	
10-5116-0	Professional Services - Planning	131,697	165,000	475,000	*10*
	TOTAL ENGINEERING	**470,076**	**525,310**	**825,320**	
	GENERAL MANAGER'S OFFICE				
10-5150-0	Legal Expenses - General	69,003	100,000	100,000	
10-5155-0	Lobbying	150,000	150,000	150,000	
10-5151-0	Audit and Accounting	38,600	45,000	45,000	
10-5152-0	Fiscal Agent Fees -ADP	24,679	20,000	28,000	
10-5154-0	Professional Services - GMO	115,473	175,000	175,000	*11*
	TOTAL GENERAL MANAGER'S OFFICE	**397,755**	**490,000**	**498,000**	
	EFFORTS TO SECURE NEW MELONES WATER				
10-5165-0	Legal Expenses - New Melones	36,247	100,000	50,000	
10-5166-0	Professional Services - New Melones	34,706	50,000	50,000	
	TOTAL EFFORTS TO SECURE NM WATER	**70,952**	**150,000**	**100,000**	
	EFFORTS TO PROTECT CALAVERAS RIVER				
10-5171-0	Legal Expenses - Calaveras	5,801	100,000	25,000	
10-5174-0	Calaveras River HCP	465,669	300,000	425,000	
10-5175-0	Professional Services - NH	0	20,000	10,000	
	TOTAL EFFORTS TO PROTECT CAL. RIVER	**471,470**	**420,000**	**460,000**	
	WATER SUPPLY ENHANCEMENT PROJECT				
10-5176-0	Legal Expenses - WSEP	11,691	100,000	50,000	
10-5178-0	Professional Services - WSEP	0	150,000	50,000	
	TOTAL WATER SUPPLY ENHANCEMENT PROJECT	**11,691**	**250,000**	**100,000**	

	70 - ADMINISTRATION FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	EFFORTS TO DEVELOP GROUNDWATER				
10-5177-0	Legal Expenses - SGMA	1,072	100,000	20,000	
10-5179-0	Professional Services - SGMA	0	50,000	20,000	
	TOTAL EFFORTS TO DEVELOP GROUNDWATER	**1,072**	**150,000**	**40,000**	
	BAY-DELTA WATER CONTROL PLAN				
10-5190-0	Legal Expenses - BDWCP	54,418	200,000	70,000	
10-5192-0	Professional Services - BDWCP	0	50,000	20,000	
	TOTAL BAY-DELTA WATER CONTROL PLAN	**54,418**	**250,000**	**90,000**	
	WATER TREATMENT PLANT				
10-5162-0	Legal Fees - Section 15	57,865	700,000	200,000	
	TOTAL SECTION 15 FEES	**57,865**	**700,000**	**200,000**	
	UNBUDGETED EXPENSES				
20-6999-0	Depreciation Expense	55,506	0	0	
	TOTAL UNBUDGETED EXPENSES	**55,506**	**0**	**0**	
	TOTAL EXPENSES	**5,700,692**	**7,020,329**	**7,283,620**	
	NET REVENUES OVER EXPENSES	**216,558**	**0**	**0**	

1 **Technology Planning and Support:**

Verve Contract	$	127,000
Cloud Storage (back-up)	$	14,000
	$	**141,000**

2 **Telecommunications -** Includes Fiber Optic internet, replacement of phone system, cellular & miscellaneous communication expenses:

Verizon	$	20,000
TPX Communications	$	34,000
Second Internet Path	$	5,000
Website	$	20,120
	$	**79,120**

3 **Hardware Upgrades**:

PC Replacements	$	45,000
	$	**45,000**

4 **Network Upgrades - Design, Labor, Network Cabling and Components:** $ 10,000

5 **Application Development:**

CMMS	$	430,000
	$	**430,000**

6 **SCADA System (WTP):**

Historian Reporting	$	450,000
Monitoring Wells Integration	$	84,000
SCADA Application Development/Support	$	25,000
	$	**559,000**

	70 - ADMINISTRATION FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
7	**SCADA System (WS):**				
	Copperopolis Gates and Trash Rack Integration			$ 90,000	
	Birdcage Trash Rack Integration			$ 90,000	
	3 Flashboard Dam Level and Flow Measurement Sites			$ 70,000	
				$ 250,000	
8	**Server Upgrades:**				
	Server Maintenance			$ 4,000	
				$ 4,000	
9	**Reports and Studies:**				
	USBR Water Management Plan			$ 70,000	
				$ 70,000	
10	**Professional Services Planning:**				
	Water Supply Master Plan			$ 350,000	
	GROWMAS Study for Water Year 2024			$ 50,000	
	Routine Engineering Services			$ 75,000	
				$ 475,000	
11	**Other Professional Services Include:**				
	Routine Prof Services			$ 175,000	
				$ 175,000	

AGRICULTURAL

DIVISION

Stockton East Water District
Annual Budget Fiscal Year 2024-2025

	67 - AGRICULTURAL FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	REVENUES				
	WATER ASSESSMENTS REVENUE				
10-4101-0	Revenue - Penalty Assessments	13,461	12,000	12,000	
10-4103-0	Revenue - Groundwater Assessments	795,404	752,700	799,500	*1*
10-4104-0	Revenue - Surface Water Charge	729,490	631,000	631,000	*2*
10-4105-0	Revenue - Domestic Water Assessments	296,545	294,000	312,000	*3*
10-4106-0	Revenue - Meter Rentals Charge	12,744	13,200	13,000	
10-4107-0	Out of District Deposit	1,500	0	0	
	TOTAL WATER ASSESSMENTS	**1,849,144**	**1,702,900**	**1,767,500**	
	OTHER REVENUES				
10-4301-0	Interest Income	10,395	10,000	10,000	*4*
10-4201-0	Grant Reimbursements	0	0	0	
10-8021-0	Transfer In From Other Funds-(Property Taxes)	613,804	490,000	500,000	*5*
10-8021-0	Transfer In (Out) From Other Funds	0	2,000	2,000	
NA	Transfer in from Reserves	0	782,041	2,800,363	
	TOTAL OTHER REVENUES	**624,199**	**1,284,041**	**3,312,363**	
	TOTAL REVENUES	**2,473,342**	**2,986,941**	**5,079,863**	
	EXPENSES				
	ADMINISTRATIVE AND WATER SUPPLY COSTS				
10-5211-0	New Melones Contract Water - USBR	891,527	314,000	373,985	*Sch A*
10-5211-0	New Melones Contract Water - USBR WIIN Act	0	0	0	
10-8001-0	Goodwin Dam Property Self Insurance	3,750	3,750	3,750	*Sch A*
10-8041-0	Water Cost Allocation O&M NM	78,622	535,385	386,135	*Sch A*
10-8041-0	Water Cost Allocation O&M NH	335,970	1,261,887	3,321,174	*Sch A*
10-8031-0	Administrative Division - Expense Allocation	685,106	840,919	963,819	*Sch B*
10-5423-0	New Melones Debt Service	353,178	0	0	*6*
10-5199-0	Dry Year Assessment Reserve	13,723	15,000	15,000	
10-6901-0	Allocated Pension Expense	51,003	16,000	16,000	
	TOTAL ADMINISTRATIVE AND WATER SUPPLY COSTS	**2,412,879**	**2,986,941**	**5,079,863**	
	OTHER EXPENSES				
10-5043-0	OPEB (Non Cash Expense)	13,124	0	0	
	TOTAL OTHER EXPENSES	**13,124**	**0**	**0**	
	UNBUDGETED EXPENSE				
	Depreciation Expense	30,663	0	0	
	TOTAL EXPENSES	**2,456,665**	**2,986,941**	**5,079,863**	
	NET REVENUES OVER EXPENSES	**16,677**	**0**	**0**	

1 *Estimated ground water sales (130,000 af @$ 6.15)*

2 *Estimated surface water sales (22,000 af @$23/af plus 1,000af @$200/af for out of district)*

3 *Estimated domestic unit charges (6,000 domestic units @ $52/unit)*

4 *Interest income on funds maintained*

5 *Projected property tax revenue is $500,000 for FY 2024-2025*

Stockton East Water District
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	58 - AG DRY YEAR RESERVE FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	REVENUES				
10-4301-0	Interest Income	888	3,500	3,500	
10-8021-0	Revenue-Dry Yr Reserve Fd Contributions	18,425	14,000	14,000	
10-8021-0	Transfer In (Out) Fr Other Funds	0	0	0	
	TOTAL REVENUES	**19,313**	**17,500**	**17,500**	
	RESERVES				
NA	Retained Reserves	19,313	17,500	17,500	
	TOTAL RESERVES	**19,313**	**17,500**	**17,500**	
	NET REVENUES OVER EXPENSES	**0**	**0**	**0**	

Stockton East Water District
Annual Budget Fiscal Year 2024-2025

	75 - DIRECT ASSESSMENT FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	REVENUES				
10-4301-0	Interest Income	0	0	0	
10-8021-0	Transfer In (Out) From Other Funds	0	0	0	
	TOTAL REVENUES	**0**	**0**	**0**	
	EXPENSES				
10-5152-0	Trustee/Fiscal Agent Fees	0	0	0	
	TOTAL EXPENSES	**0**	**0**	**0**	
	NET REVENUES OVER EXPENSES	**0**	**0**	**0**	

MUNICIPAL

DIVISION

Stockton East Water District
Annual Budget Fiscal Year 2024-2025

	94 - M&I FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Source Note
	REVENUES				
	WATER ASSESSMENTS REVENUE				
10-4120-0	Income - City of Stockton	11,963,472	13,008,277	14,462,099	*BMP*
10-4121-0	Income - California Water Service Co.	8,957,695	8,741,592	11,007,871	*BMP*
10-4122-0	Income - Lincoln Village	511,454	495,064	635,975	*BMP*
10-4123-0	Income - Colonial Heights	147,150	162,958	168,398	*BMP*
10-4131-0	Income - GW Rate Equalizations	2,597,334	5,810,751	6,475,707	*Sch C*
	TOTAL WATER ASSESSMENTS	**24,177,104**	**28,218,642**	**32,750,050**	
	OTHER REVENUES				
10-4301-0	Interest Income - M & I	27,691	100,000	100,000	
10-4141-0	Wheeling Revenue	248,640	0	240,000	
10-4201-0	Grant Reimbursements - ASR Well	0	0	600,000	
10-4701-0	Miscellaneous Income-M&I Fund	1,608	0	0	
	TOTAL OTHER REVENUES	**277,939**	**100,000**	**940,000**	
	REVENUES	**24,455,044**	**28,318,642**	**33,690,050**	
	PLUS/(MINUS) BMP PRIOR YEAR ADJ	**2,901,047**	**6,538,070**	**4,425,296**	
	NET TOTAL REVENUES	**27,356,091**	**34,856,712**	**38,115,347**	
	EXPENSES				
	Total Salaries	**2,891,465**	**3,392,488**	**3,550,326**	
	Total Benefits	**1,872,997**	**2,048,859**	**1,993,479**	
	TOTAL SALARIES AND BENEFITS	**4,764,462**	**5,441,347**	**5,543,805**	
	ADMINISTRATIVE AND WATER SUPPLY COSTS				
10-5211-0	New Melones Contract Water-USBR	2,801,011	4,926,650	5,676,700	
10-5211-0	Goodwin Dam Property Self Insurance	69,750	69,750	69,800	
10-8041-0	Water Cost Allocation O&M NM	1,462,375	3,262,168	1,602,200	
10-8041-0	Water Cost Allocation O&M NH	146,876	363,353	606,000	
10-8031-0	Admin Division - Expense Allocation	4,532,323	6,102,910	6,314,900	
10-6901-0	Allocated Pension Expense	462,150	250,000	250,000	
	TOTAL ADMINISTRATIVE AND WATER SUPPLY COSTS	**9,474,486**	**14,974,832**	**14,519,600**	
	OPERATIONS				
10-5301-0	Chemicals	1,608,410	1,500,000	1,769,300	
10-5302-0	Electricity	1,932,599	1,800,000	2,125,900	
10-5303-0	Natural Gas	21,075	13,000	23,200	
10-5304-0	Utilities - Others (Bellota Headworks)	7,542	15,000	15,000	
10-5306-0	Filter Media	395,552	600,000	600,000	
10-5307-0	Laboratory Equipment and Supplies	6,738	13,000	13,000	
10-5308-0	Analytical Services	63,564	45,000	70,000	
10-5329-0	Sludge Disposal	60,839	75,000	75,000	
10-5181-0	Vehicle Usage M&I	47,363	42,000	50,000	
	TOTAL OPERATIONS	**4,143,682**	**4,103,000**	**4,741,400**	

	94 - M&I FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Source Note
	MAINTENANCE				
10-5321-0	General Maintenance	238,154	241,500	237,000	*1*
10-5322-0	Electrical , Instrumentation & Controls	10,951	39,300	44,000	*2*
10-5323-0	Maintenance & Repair - Treatment Plant	654,804	4,580,000	8,300,000	*3*
10-5324-0	Maintenance & Repair - Plant Grounds	72,686	57,000	70,000	*4*
10-5325-0	WTP Service Contracts & Improvements	118,521	155,000	150,000	*5*
10-5326-0	Maintenance & Repair - Buildings	82,406	62,000	169,500	*6*
10-5327-0	Large Tools And Equipment	0	54,900	54,900	
10-5328-0	Equipment Rental	22,651	15,000	25,000	
10-5341-0	Protective Gear and Clothing	5,493	7,000	10,000	*7*
10-5342-0	Uniform and Laundry	7,715	12,000	12,000	
10-5343-0	Tools and Equipment	28,695	30,000	30,000	
10-5344-0	Treatment Plant Consumables	13,902	15,000	15,000	
	TOTAL MAINTENANCE	**1,255,978**	**5,268,700**	**9,117,400**	
	DEBT SERVICE				
10-2231-0	Transfer to Loan Repayment - State Revolving Fund	573,044	573,044	573,044	
10-5431-0	2002A Reimbursement - Fund 67	(353,178)	0	0	
10-8014-0	2019 Series Debt Service	4,265,611	4,269,541	4,271,761	
TBD	Bellota Debt Service	0	0	1,998,369	
10-8014-0	Development Fees Received 2002B Debt Service	(3,848,811)	(5,125,866)	(4,500,000)	
	TOTAL DEBT SERVICE	**636,666**	**(283,281)**	**2,343,174**	
	TRANSFERS				
10-8021-0	Transfer to Bellota Fish Screen Project Fund 89	0	3,500,000	0	
10-8021-0	Transfer Water Treatment Plant Reserve	100,000	100,000	100,000	
10-8021-0	Transfer Out GWPS (68)	1,035,574	1,752,114	1,749,968	
	TOTAL TRANSFERS	**1,135,574**	**5,352,114**	**1,849,968**	
	TOTAL EXPENSES	**21,410,847**	**34,856,712**	**38,115,347**	
	NET REVENUES OVER EXPENSES	**5,945,244**	**0**	**0**	

1 **General Maintenance budgeted expenses include:**

HSPS Pump & Motor Rebuild	$	50,000
Pump & Motor Efficiency Testing	$	12,000
Routine maintenance	$	175,000
	$	**237,000**

2 **Electrical, Instrumentation and Controls budgeted expenses include:**

Meter Calibrations	$	4,000
Routine maintenance	$	40,000
	$	**44,000**

	94 - M&I FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Source Note
3	**The Treatment Plant maintenance includes the following expenses:**				
	Filtration System Design			$ 425,000	
	Aquifer Storage Recovery Well Construction [2]			$ 2,100,000	
	Finish Reservoir Dive Inspections			$ 100,000	
	Solids Handling - Dewatering Lagoons Construction			$ 4,100,000	
	Replace and Retrofit Main Discharge Actuators			$ 120,000	
	Low Lift P-3 Pump Replacement			$ 400,000	
	Low Lift Stand-by Generators and Switchgear Replacement Design			$ 240,000	
	WTP Master Plan			$ 175,000	
	120/208V Distribution and Feeder Replacements [1]			$ 300,000	
	MCC-2 Rehabilitation [1]			$ 65,000	
	Replace Basement Chemical Components and Piping [1]			$ 75,000	
	Replace Reservoir Meters [1]			$ 200,000	
				$ 8,300,000	
4	**The Plant Grounds**				
	Irrigation supplies/plants/misc. expenses			$ 20,000	
	SJC Corrections Work Release Program/Temps			$ 50,000	
				$ 70,000	
5	**WTP Service Contracts & Improvements**				
	Hach Service Agmt			$ 50,000	
	THM Analyzer Service Agmt			$ 30,000	
	Landscaping			$ 60,000	
	Distribution & WTP items			$ 10,000	
				$ 150.000	
6	**Maintenance & Repair - Buildings**				
	Routine maintenance and repair			$ 32,000	
	HSR Roof Replacement			$ 137,500	
				$ 169,500	
7	**Protective Gear and Clothing**				
	Routine PPE			$ 10,000	
				$ 10,000	

1 - SEWD to Construct

2 - Grant Reimbursed

Stockton East Water District
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	68 - GROUNDWATER PROD. FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	REVENUES				
	WATER ASSESSMENTS REVENUE				
10-4101-0	Revenue - Penalty Assessments	3,978	10,000	10,000	
10-4103-0	Revenue - Groundwater Assessments	26,492	42,000	42,000	*1*
	TOTAL WATER ASSESSMENTS	**30,470**	**52,000**	**52,000**	
	OTHER REVENUES				
10-4151-0	Revenue-Rent	20,000	22,000	22,000	
10-4301-0	Interest Income	8,222	1,000	3,000	*2*
10-4701-0	Misc. Income	0	0	0	
10-8021-0	Transfer In - M&I	1,397,406	1,035,574	1,749,968	*94*
	TOTAL OTHER REVENUES	**1,425,628**	**1,058,574**	**1,774,968**	
	TOTAL REVENUES	**1,456,098**	**1,110,574**	**1,826,968**	
	ADMINISTRATIVE AND WATER SUPPLY COSTS				
10-5211-0	New Melones Contract Water	363,292	189,000	256,275	*Sch A*
10-8001-0	Goodwin Dam Property Self Insurance	1,500	1,500	1,500	*Sch A*
10-8041-0	Water Supply O&M NM	78,622	52,965	34,454	*Sch A*
10-8041-0	Water Supply O&M NH	335,970	591,244	1,183,872	*Sch A*
10-8021-0	Dry Year Assessment Reserve	250,527	1,000	1,000	
	TOTAL ADMINISTRATIVE AND WATER SUPPLY COSTS	**1,029,911**	**835,709**	**1,477,102**	
	GROUNDWATER DEVELOPMENT				
20-2235-0	Land Loan Principal (North Site Property)	151,084	145,181	151,084	*2*
10-5401-0	Land Loan Interest (North Site Property)	88,782	94,684	88,782	*2*
10-5302-0	Electricity	236,263	25,000	100,000	
10-5351-0	Recharge and Extraction Projects	1,620	10,000	10,000	
	TOTAL GROUNDWATER DEVELOPMENT	**477,749**	**274,865**	**349,866**	
	UNBUDGETED EXPENSES				
	Depreciation	46,462	0	0	
	TOTAL EXPENSES	**1,554,122**	**1,110,574**	**1,826,968**	
	NET REVENUES OVER EXPENSES	**(98,024)**	**0**	**0**	

1 *Projected 11,667 AF @ $3.60 .*

2 *Per Amortization Schedule.*

Stockton East Water District
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	59 - M&I DRY YEAR RESERVE FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	REVENUES				
30-4301-0	Interest Income	415	1,600	1,600	
30-4501-0	Revenue-Dry Yr Reserve Fd Contributions	709	1,000	1,000	
	TOTAL REVENUES	**1,124**	**2,600**	**2,600**	
	EXPENSES				
NA	Retained Reserves	1,124	2,600	2,600	
	TOTAL EXPENSES	**1,124**	**2,600**	**2,600**	
	NET REVENUES OVER EXPENSES	**0**	**0**	**0**	

Stockton East Water District
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	89 - FISH SCREEN IMPROVEMENT FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	REVENUES				
10-8021-0	Transfer In	848,780	0	1,998,369	*94*
10-8021-0	Transfer In from Reserves	0		300,000	
10-8021-0	Budget Amendment	0	0	0	*94*
	TOTAL REVENUES	**848,780**	**0**	**2,298,369**	
	EXPENSES				
10-5180-0	Project Expenses/Budget Amendment	848,780	0	1,998,369	
NA	WIFIA/SRF Expenses	0	0	300,000	
	TOTAL EXPENSES	**848,780**	**0**	**2,298,369**	
	NET REVENUES OVER EXPENSES	**(0)**	**0**	**0**	

Stockton East Water District
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	92 - M&I DEBT SERVICE FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	REVENUES				
10-4301-0	Interest Income	16,922	75,000	75,000	
10-8021-0	Transfer In - M&I Fund (Debt Service Shortfall)	0	0	0	
	TOTAL REVENUES	**16,922**	**75,000**	**75,000**	
	EXPENSES				
NA	Retained Reserves	16,922	75,000	75,000	
	TOTAL EXPENSES	**16,922**	**75,000**	**75,000**	
	NET REVENUES OVER EXPENSES	**0**	**0**	**0**	

Stockton East Water District
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	95 - SURPLUS FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	REVENUES				
30-4301-0	Interest Income	5,626	25,000	25,000	
	TOTAL REVENUES	**5,626**	**25,000**	**25,000**	
	EXPENSES				
NA	Retained Reserves	5,626	25,000	25,000	
	TOTAL EXPENSES	**5,626**	**25,000**	**25,000**	
	NET REVENUES OVER EXPENSES	**0**	**0**	**0**	

Stockton East Water District
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	96 - WATER TREATMENT FACILITIES RESERVE FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	REVENUES				
30-4301-0	Interest Income	1,856	5,000	5,000	
30-8021-0	Transfer In (Out) From Other Funds	100,000	100,000	100,000	
	TOTAL REVENUES	**101,856**	**105,000**	**105,000**	
	EXPENSES				
NA	Retained Reserves	101,856	105,000	105,000	
	TOTAL EXPENSES	**101,856**	**105,000**	**105,000**	
	NET REVENUES OVER EXPENSES	**0**	**0**	**0**	

Stockton East Water District
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	97 - WATER FUND [1]	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	REVENUES				
10-4301-0	Interest Income	0	0	0	
	TOTAL REVENUES	**0**	**0**	**0**	
	EXPENSES				
		0	0	0	
	TOTAL EXPENSES	**0**	**0**	**0**	
	NET REVENUES OVER EXPENSES	**0**	**0**	**0**	

1 *The Water Fund is primarily a depository fund for the base monthly payments from the Urban Contractors. At the end of each month, balances in Fund 97 are transferred over to Fund 94 - M&I Fund*

OTHER FUNDS

Stockton East Water District
Annual Budget Fiscal Year 2024-2025

	01 - GENERAL FUND [1]	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	REVENUES				
10-4301-0	Interest Income	0	0	0	
	TOTAL REVENUES	**0**	**0**	**0**	
	EXPENSES	0	0	0	
		0	0	0	
	TOTAL EXPENSES	**0**	**0**	**0**	

1 *The General Fund is primarily a depository and disbursing fund for payroll transactions.*

Stockton East Water District
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	56 - CONSTRUCTION FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	REVENUES				
	Transfers in from Reserves	0	196,000	0	
20-4301-0	Interest Income	2,930	4,000	0	
20-4303-0	Other Interest/Dividend Income	0			
	TOTAL REVENUES	**2,930**	**200,000**	**0**	
	EXPENSES	0			
20-5203-0	General Maintenance	2,930	200,000	0	
	TOTAL EXPENSES	**2,930**	**200,000**	**0**	
	NET REVENUES OVER EXPENSES	**0**	**0**	**0**	

Stockton East Water District
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	71 - WATER SUPPLY O&M FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	REVENUES				
10-8041-0	Reimbursement of Water Costs - M&I	1,663,993	3,181,780	2,208,071	
10-8041-0	Reimbursement of Water Costs - AG	783,798	1,655,309	3,707,309	
10-8041-0	Reimbursement of Water Costs - GWPS	697,675	783,349	1,218,327	
10-8041-0	Reimbursement of Water Costs - CCWD	467,399	377,525	377,524	
10-4201-0	Grant Reimbursements - Crossings	33,319	767,000	941,250	*Sch. A*
10-4201-0	Grant Reimbursements - LFC Repairs - FEMA	0	0	1,200,000	*Sch. A*
10-4301-0	Interest Income SJC	2,645	0	0	
10-4701-0	Miscellaneous Income	0	0	0	
10-8021-0	Transfer In (Out) From (To) Other Funds	1,209,120	0	0	
	TOTAL REVENUES	**4,857,949**	**6,764,963**	**9,652,481**	
	NEW MELONES SYSTEM				
	EXPENSES				
	Total Salaries	**586,817**	**675,602**	**703,776**	
	Total Benefits	**524,055**	**591,847**	**573,932**	
	SALARIES & BENEFITS	**1,036,339**	**1,267,449**	**1,277,708**	
	OPERATION AND MAINTENANCE				
10-5212-0	Goodwin Dam - Tri-Dam O&M	21,233	110,000	110,000	
10-5213-0	General Maintenance	587,018	577,500	847,500	*1*
10-5214-0	Goodwin Tunnel	381,011	364,000	0	
10-5215-0	Upper Farmington Canal	0	20,000	225,000	*2*
10-5216-0	Shirley/Hoods/Rock Creeks	64,650	2,500	2,500	*3*
10-5217-0	Lower Farmington Canal	490,337	665,000	390,000	*4*
10-5225-0	Peters Pipeline Maintenance	69,835	85,000	300,000	*5*
10-5218-0	Vehicle Usage NM	20,554	70,000	70,000	
	TOTAL O & M EXPENSES	**1,634,638**	**1,894,000**	**1,945,000**	
	TOTAL NEW MELONES EXPENSES	**2,670,978**	**3,161,449**	**3,222,708**	
	NEW HOGAN SYSTEM				
	EXPENSES				
	Total Salaries	**186,318**	**288,048**	**266,807**	
	Total Benefits	**139,692**	**223,000**	**180,600**	
	SALARIES & BENEFITS	**326,010**	**511,048**	**447,407**	
	OPERATION AND MAINTENANCE				
10-5201-0	New Hogan Dam - USACE	1,110,366	1,110,366	1,110,366	
10-5202-0	New Hogan Dam - O&M	145,746	167,500	167,500	*6*
10-5203-0	NH General Maintenance - AG	240,867	912,600	2,490,000	*7*
10-5204-0	Upper Calaveras River to Bellota	46,971	35,000	100,000	*8*
10-5205-0	New Hogan Distribution	20,239	767,000	1,902,500	*9*
10-5206-0	Bellota Pipeline	60,866	50,000	162,000	*10*
10-5207-0	Vehicle Usage NH	47,088	50,000	50,000	
	TOTAL O & M EXPENSES	**1,672,142**	**3,092,466**	**5,982,366**	
	TOTAL NEW HOGAN EXPENSES	**1,998,152**	**3,603,514**	**6,429,773**	

	71 - WATER SUPPLY O&M FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	TOTAL EXPENSES	**4,669,132**	**6,764,963**	**9,652,481**	
	NET REVENUES OVER EXPENSES	**188,817**	**0**	**0**	

1	**New Melones General Maintenance**		
	Canal Cleaning, Vegetation Management, General Maintenance - NM	$	247,500
	Storm Repairs - FEMA Funded [1 2]	$	600,000
		$	**847,500**
2	**Upper Farmington Canal**		
	Grading & Drainage Improvements	$	80,000
	Upper Farmington Canal Road Access [2]	$	145,000
		$	**225,000**
3	**Shirley-Hoods Creek**		
	Olsen Crossings Cleaning	$	2,500
		$	**2,500**
4	**Lower Farmington Canal**		
	Highway 4 Traveling Trash Racks [1]	$	200,000
	Raise LFC Bridge #6 [1]	$	105,000
	Modify LFC Headworks	$	55,000
	Grading & Drainage Improvements	$	30,000
		$	**390,000**
5	**Peters Pipeline**		
	Peters Pipeline Valve Station Improvements [1]	$	250,000
	Peters Pipeline Repairs	$	50,000
		$	**300,000**
6	**New Hogan General Maintenance**		
	Canal Cleaning, Vegetation Management, General Maintenance - NH	**$**	**167,500**
7	**New Hogan Maintenance - Ag**		
	Meter Replacements[1]	$	85,000
	Potter Creek Pump Station Upgrade	$	830,000
	Calaveras Pipeline	$	1,575,000
		$	**2,490,000**
8	**Upper Calaveras River to Bellota**		
	McGurk Low Water Crossing [1]	$	100,000
		$	**100,000**
9	**New Hogan Distribution**		
	Storm Repairs- FEMA Funded [1 2]	$	600,000
	George Watkins Low-Water Crossing [2]	$	900,000
	Design OCR Fish Passage Barrier at OCR/SDC Confluence	$	245,000
	Hogan Low-Water Crossing - USACE Permitting [2]	$	41,250
	Fujinaka Low-Water Crossing - USACE Permitting [2]	$	41,250
	Design Flow Measurement Site at OCR/SDC Confluence	$	75,000
		$	**1,902,500**
10	**Bellota Pipeline and Intake**		
	Bellota Intake Maintenance	$	12,000
	Air Release Valve Replacement[1]	$	150,000
		$	**162,000**

1 - SEWD to Construct

2- Grant Reimbursed

Stockton East Water District
Annual Budget Fiscal Year 2024-2025

	72 - OTHER POST EMPLOYMENT BENEFITS FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	REVENUES				
	OTHER REVENUES				
10-4301-0	Interest Income	16,930	30,000	30,000	
10-4701-0	Miscellaneous Income	0			
10-2125-0	OPEB CONTRA Account	352,930	335,235	335,235	
	TOTAL OTHER REVENUES	**369,860**	**365,235**	**365,235**	
	TOTAL REVENUES	**369,860**	**365,235**	**365,235**	
	EXPENSES				
NA	Retained Reserves	369,860	365,235	365,235	
	TOTAL EXPENSES	**369,860**	**365,235**	**365,235**	
	NET REVENUES OVER EXPENSES	**0**	**0**	**0**	

Stockton East Water District
Annual Budget Fiscal Year 2024-2025

	79 - GOODWIN DAM PROPERTY SELF INSURANCE FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	REVENUES				
10-4301-0	Interest Income	12,836	32,000	32,000	
10-8001-0	Transfer In - Goodwin Dam Prop Insurance	75,000	75,000	75,000	
	TOTAL REVENUES	**87,836**	**107,000**	**107,000**	
	EXPENSES				
NA	Retained Reserves	87,836	107,000	107,000	
	TOTAL EXPENSES	**87,836**	**107,000**	**107,000**	
	NET REVENUES OVER EXPENSES	**0**	**0**	**0**	

Stockton East Water District
Annual Budget Fiscal Year 2024-2025

	81 - WATER DEVELOPMENT FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	REVENUES				
10-4301-0	Interest Income	22,487	25,000	25,000	
10-8021-0	Transfer In	0	0	0	*70*
	TOTAL REVENUES	**22,487**	**25,000**	**25,000**	
	EXPENSES				
10-5189-0	Misc Expenses	0	0	0	
NA	Retained Reserves	22,487	25,000	25,000	
	TOTAL EXPENSES	**22,487**	**25,000**	**25,000**	
	UNBUDGETED EXPENSES				
10-6901-0	Accrued Pension Expense - GASB68	462,150	**0**	**0**	
	TOTAL UNBUDGETED EXPENSES	**462,150**	**0**	**0**	
	NET REVENUES OVER EXPENSES	**0**	**0**	**0**	

Stockton East Water District
Annual Budget Fiscal Year 2024-2025

	83 - FARMINGTON PROJECT LOCAL COST SHARE FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	REVENUES				
30-4301-0	Interest Income	75	350	350	
10-8021-0	Transfer In	0	0	0	
	TOTAL REVENUES	**75**	**350**	**350**	
	EXPENSES				
NA	Retained Reserves	75	350	350	
	TOTAL EXPENSES	**75**	**350**	**350**	
	NET REVENUES OVER EXPENSES	**0**	**0**	**0**	

Stockton East Water District
Annual Budget Fiscal Year 2024-2025

	91 - VEHICLE FUND	FY 2022-2023 Actual	FY 2023-2024 Budget	FY 2024-2025 Budget	Sch. *Note*
	REVENUES				
10-4301-0	Interest Income	809	500	3,000	
10-5181-0	Vehicle Use Reimbursement - Admin	15,142	20,000	20,000	
10-5181-0	Vehicle Use Reimbursement - M&I	47,363	42,000	42,000	
10-5218-0	Vehicle Use Reimbursement - NM	77,363	70,000	70,000	
10-5207-0	Vehicle Use Reimbursement - NH	70,533	50,000	50,000	
10-4701-0	Miscellaneous Revenue	0	0	0	
NA	Transfer from Reserves	75,794	0	101,000	
	TOTAL REVENUES	**287,004**	**182,500**	**286,000**	
	EXPENSES				
	OPERATION AND MAINTENANCE				
10-5182-0	Total Maintenance Expenses	192,251	120,000	135,000	*1*
10-5343-0	Small Tools & Equipment	0	2,500	5,000	*2*
	TOTAL O&M EXPENSES	**192,251**	**122,500**	**140,000**	
	OTHER EXPENSES				
10-8021-0	Vehicle Replacements	59,139	45,000	146,000	*3*
NA	Retained Reserves	0	15,000	0	
	TOTAL OTHER EXPENSES	**59,139**	**60,000**	**146,000**	
	UNBUDGETED EXPENSES				
	Depreciation Expense	35,614	0	0	
	TOTAL EXPENSES	**287,004**	**182,500**	**286,000**	
	NET REVENUES OVER EXPENSES	**0**	**0**	**0**	

1 Maintenance Expenses

Fleet Maintenance	*$135,000*
	$135,000

2 Small Tools & Equipment:

Fleet Tools	*$5,000*
	$5,000

3 Replacement vehicles:

Replacement vehicles (3)	*$146,000*
	$146,000

SCHEDULE A

STOCKTON EAST WATER DISTRICT
PRORATION OF WATER COSTS - NEW HOGAN & NEW MELONES SYSTEMS
FISCAL YEAR 2024-2025

ITEM	FUND 71 WATER SUPPLY	FUND 67 AG DIV.	%	MUNICIPAL DIVISION FUND 94 TREATMENT PLANT	%	FUND 68 GWPS	%	CCWD	%
NEW MELONES CONVEYANCE SYSTEM - Direct Expenses									
				-					
USBR (Ag = 4,500 AF @assumed $55.33/AF)	248,985	248,985	*100*			-			
OID/SSJID for Out of District (1,000AF@$125/AF)	125,000	125,000	*100*						
(GWPS = 4,500 AF @assumed $56.95/AF)	256,275	-				256,275	*100*		
USBR (M&I water usage=47,000 af @ $56.95/AF)	2,676,650			2,676,650	*100*				
OID/SSJID M&I Water (10,000 AF@$300/AF)	3,000,000			3,000,000					
NM - CONTRACT WATER COSTS	**6,306,910**	**373,985**		**5,676,650**		**256,275**		**-**	
GOODWIN DAM PROP. SELF INSURANCE	**75,000**	**3,750**	*5*	**69,750**	*93*	**1,500**	*2*	**-**	
NEW HOGAN CONVEYANCE SYSTEM - Allocated Expenses									
New Hogan - Salaries and Benefits	447,407	152,118	*34*	80,533	*18*	214,755	*48*	-	
USBR-New Hogan O&M USACE	1,110,366	244,281	*22*	133,244	*12*	355,317	*32*	377,524	*34*
New Hogan O&M	167,500	56,950	*34*	30,150	*18*	80,400	*48*		
NH General Maintenance - AG	2,490,000	2,490,000	*100*	-	*0*	-	*0*		
Calaveras to Bellota	100,000	34,000	*34*	18,000	*18*	48,000	*48*	-	
Hogan Distribution	1,902,500	646,850	*34*	342,450	*18*	913,200	*48*	-	
Grant Reimbursements Watkins/Fujinaka	(941,250)	(320,025)	*34*	(169,425)	*18*	(451,800)	*48*	-	
Bellota Pipeline	162,000	-	*0*	162,000	*100*	-	*0*	-	
Vehicle Operation - NH	50,000	17,000	*34*	9,000	*18*	24,000	*48*	-	
New Hogan - O&M	*5,041,116*	*3,169,056*	*34*	*525,419*	*18*	*969,117*	*48*	*377,524*	
TOTAL NEW HOGAN O&M COSTS	**5,488,523**	**3,321,174**		**605,952**		**1,183,872**		**377,524**	
NEW MELONES CONVEYANCE SYSTEM - Allocated Expenses									
Salaries and Benefits	1,277,708	63,885	*5*	1,188,268	*93*	25,554	*2*	-	
Vehicle Operation	70,000	3,500	*5*	65,100	*93*	1,400	*2*	-	
General Maintenance	847,500	42,375	*5*	788,175	*93*	16,950	*2*	-	
NM - O & M	**2,195,208**	**109,760**	***5***	**2,041,543**	***93***	**43,904**	***2***	**-**	
Upper Farmington Canal	225,000	11,250	*5*	209,250	*93*	4,500	*2*	-	
Shirley/Hoods/Rock Creeks	2,500	125	*5*	2,325	*93*	50	*2*	-	
Lower Farmington Canal	390,000	19,500	*5*	362,700	*93*	7,800	*2*	-	
Grant Reimbursements LFC FEMA	(1,200,000)	(60,000)	*5*	(1,116,000)	*93*	(24,000)	*2*		
Goodwin Tunnel	-	-	*5*	-	*93*	-	*2*	-	
Goodwin Dam - O&M	110,000	5,500	*5*	102,300	*93*	2,200	*2*	-	
Peters Pipeline	300,000	300,000	*100*	-	*0*	-	*0*	-	
TOTAL NEW MELONES - O & M	**2,022,708**	**386,135**		**1,602,118**		**34,454**		**-**	
TOTAL ALLOCATED WATER COSTS	**7,511,231**	**3,707,309**		**2,208,071**		**1,218,327**		**377,524**	
TOTAL WATER COSTS	**13,893,141**	**4,085,044**		**7,954,471**		**1,476,102**		**377,524**	

ESTIMATED NEW HOGAN water usage:			*Contract Water*	*SEWD Only*
AG	*28,000*	*AF*	*22%*	*34%*
M&I	*15,000*	*AF*	*12%*	*18%*
GWPS	*40,000*	*AF*	*32%*	*48%*
CCWD (A)	*4,000*	*AF*	*34%*	*-*
TOTAL	*87,000*	*AF*	*100%*	*100%*

(A) 30,000 AF - Allocation per Agreement w/ CCWD

TOTAL ESTIMATED NEW HOGAN WATER:		
Total Water Usage	*87,000*	*AF*
System Loss(10%)	*8,700*	*AF*
TOTAL	*95,700*	*AF*

ESTIMATED NEW MELONES WATER:			
AG	*4,500*	*AF*	*5%*
M&I	*40,000*	*AF*	*45%*
GWPS	*4,500*	*AF*	*5%*
CSJWCD	*40,000*	*AF*	*45%*
TOTAL	*89,000*	*AF*	*100%*

NEW MELONES CONVEYANCE FACILITY
NMCF Split based on Settlement Agreement= AG - 10%/ M&I - 90%
AG - (50% utilization x 10%) = 5%
M&I (50% utilization x 10%) = 5% + 88% = 93%
GWPS = 2%

SCHEDULE B

STOCKTON EAST WATER DISTRICT
PRORATION OF EXPENSES - ADMINISTRATION DIVISION
FISCAL YEAR 2024-25

ITEM	BUDGET 2024-2025	AG DIVISION	%	M&I DIVISION	%
DIRECTORS	194,400	44,712	*23*	149,688	*77*
SALARIES AND BENEFITS	1,545,192	200,875	*13*	1,344,317	*87*
SALARIES AND BENEFITS	62,889	20,124	*32*	42,765	*68*
SALARIES AND BENEFITS [1]	**1,802,481**	**265,711**	***15***	**1,536,769**	***85***
BOARD EXPENSES	**525,000**	**36,750**	***7***	**488,250**	***93***
TRAINING AND EDUCATION	**394,300**	**35,487**	***9***	**358,813**	***91***
OFFICE SUPPORT	**361,700**	**28,936**	***8***	**332,764**	***92***
PUBLIC RELATIONS	**262,000**	**6,650**		**255,350**	
Water Conservation	227,000	0	*0*	227,000	*100*
Advertising and Public Relations	35,000	6,650	*19*	28,350	*81*
TECHNOLOGY EXPENSES	**1,624,820**	**126,449**		**1,498,371**	
Technology - Admin	815,820	48,949	*6*	766,871	*94*
Technology - Water Supply	250,000	77,500	*31*	172,500	*69*
Technology - WTP	559,000	0	*0*	559,000	*100*
ENGINEERING	**825,320**	**148,558**		**676,762**	
Planning Water Resources	825,320	148,558	*18*	676,762	*82*
Planning Water Treatment	0	0	*0*	0	*100*
PROFESSIONAL SERVICES	**1,488,000**	**315,940**		**1,172,060**	
General Manager's Office	498,000	89,640	*18*	408,360	*82*
Efforts to Secure New Melones Water	100,000	16,000	*16*	84,000	*84*
Efforts to Protect Calaveras River	460,000	151,800	*33*	308,200	*67*
Water Enhancement Project	100,000	27,000	*27*	73,000	*73*
Efforts to Develop Groundwater	40,000	10,800	*27*	29,200	*73*
Section 15 Fees	200,000	0	*0*	200,000	*100*
Bay-Delta Water Control Plan	90,000	20,700	*23*	69,300	*77*
T O T A L S	**7,283,620**	**964,481**		**6,319,139**	
Less: Projected Interest Income - Adm Fund	5,000	662		4,338	
N E T T O T A L S	**7,278,620**	**963,819**		**6,314,801**	

Notes:

(1) Allocations are primarily based on revised agreed-upon percentage allocations (Exhibit A) of the Settlement Agreement with the Urban Contractors. For employees salaries and benefits, general allocation is 88% - M&I and 12% - AG, while directors fees and benefits is 60% - M&I and 40% - Ag.

SCHEDULE C

STOCKTON EAST WATER DISTRICT
CALCULATION OF RATE EQUALIZATION GROUND WATER ASSESSMENT & BASE MONTHLY PAYMENT
FISCAL YEAR 2024-2025

CALCULATION OF RATE EQUALIZATION GROUND WATER(GW) ASSESSMENT

(A) Assumed Groundwater Pumping Cost:

Power cost per acre foot	$	70.00
Operation & Maintenance cost	$	36.00
Replacement costs	$	10.00
Total GW Pumping Cost	$	116.00

(B) Calculation of Rate Equalization Groundwater Assessment:

2023- 2024 (Previous Budget)	Water Production		$ Cost/AF	Amount
Ground water	14,100	AF	$ 116.00	$ 1,635,600.00
Surface water	55,000	AF	$ 645.49	$ 35,502,077.27
Totals	69,100	AF		$ 37,137,677.27
GW Rate Equalization Assessment:	69,100		$ 37,137,677.27	$ 537.45
Less: GW Pumping Cost				$ (116.00)
2023-2024 GW Rate Equalization Assessment				**$ 421.45**

2024- 2025 (Current Budget)				
Ground water	14,100	AF	$ 116.00	$ 1,635,600.00
Surface water	55,000	AF	$ 693.01	$ 38,115,346.64
Totals	69,100	AF		$ 39,750,946.64
GW Rate Equalization Assessment:	69,100		$ 39,750,946.64	$ 575.27
Less: GW Pumping Cost				$ (116.00)
2024-2025 GW Rate Equalization Assessment				**$ 459.27**

BASE MONTHLY PAYMENT (BMP) \CALCULATION					Amount
Treatment Plant Budget - FY 2024-2025					**$ 38,115,346.64**
Revenue - Groundwater Rate Equalization	14,100	AF	$ 459.27		$ 6,475,707.00
Other Sources of Revenue - M&I					$ 940,000.00
Total Revenues before Base Monthly Payment				(b)	**$ 7,415,707.00**
Total Annual Payment (a)-(b)				(c)	$ 30,699,639.64
Less: Prior Fiscal Year BMP adjustment (credit)				(d)	$ (4,425,296.50)
Total - Adjusted Annual Payment - FY 2024-2025					**$ 26,274,343.14**

STOCKTON EAST WATER DISTRICT
PRORATION OF BASE MONTHLY PAYMENT
FOR FISCAL YEAR 2024-2025 (04/01/24- 03/31/25)

Total Base Monthly Payment (BMP) FY 2024-2025	26,274,343.14
Less: State Revolving Fund (SRF) Loan Repayment - FY 2024-2025	(573,044.38)
Base Monthly Payment FY 2024-2025 (excluding State Revolving Fund loan repayment)	**25,701,298.76**
Base Monthly Payment (BMP) FY 2024-2025 (per month)	**$2,141,774.90**

	2022-2023 Water Produced (AF)				Percentage	2024-2025 Monthly BMP	Previous 2023-2024 Monthly BMP	Difference
	DWSP	Surface	Well	Total				
City of Stockton	14,621	14,100	2,138	30,859	55.5988%	**$ 1,190,801.07**	1,094,813.02	95,988.05
Lincoln Village	0	1,340	0	1,340	2.4143%	**$ 51,708.53**	40,906.20	10,802.33
Colonial Heights	0	355	0	355	0.6396%	**$ 13,698.90**	13,557.15	141.75
California Water Service	0	20,271	2,678	22,949	41.3473%	**$ 885,566.40**	713,100.09	172,466.31
Totals	14,621	36,066	4,816	55,503	100.0000%	**$ 2,141,774.90**	$ 1,862,376.46	279,398.44

**Proration of the State Revolving Fund Loan is under the provisions of the Agreement dated May 1, 2012 signed by the Urban Contractors with the following breakdown:*

Annual State Revolving Fund (SRF) Loan Payment	**$573,044.38**
Monthly Repayment	$47,753.70

	% Share	Monthly SRF
City of Stockton	30.10%	**$14,373.86**
Lincoln Village	2.70%	**$1,289.35**
Colonial Heights	0.70%	**$334.28**
California Water Service	66.50%	**$31,756.21**
	100.00%	**$47,753.70**

	BMP FY 2024-2025	SRF Loan Repayment FY 2024-2025	Adjusted BMP Calculation FY 2024-2025
City of Stockton	$1,190,801.07	$14,373.86	**$1,205,174.93**
Lincoln Village	$51,708.53	$1,289.35	**$52,997.88**
Colonial Heights	$13,698.90	$334.28	**$14,033.18**
California Water Service	$885,566.40	$31,756.21	**$917,322.61**
Total	**$2,141,774.90**	**$47,753.70**	**$2,189,528.60**

RESOLUTION 90“91-02

RESOLUTION FINDING NO GROUNDWATER BENEFIT
AND ASSESSING NO GROUNDWATER ASSESSMENT

WHEREAS, the Stockton East Water District ("District") is engaged in a project to convey water from New Melones Dam and Reservoir, via the Goodwin Dam, to the geographical area of the District in San Joaquin County, for the benefit of the inhabitants of the District, through relief of the critically overdrafted groundwater basin, of the inhabitants of San Joaquin County ("Project"); and

WHEREAS, in pursuit of the common benefit of their inhabitants, District and the County of San Joaquin, a political subdivision of the State of California, have entered into a joint exercise of powers agreement pursuant to California Government Code Section 6500 et seq., and have created the Goodwin Tunnel Financing Authority ("Authority"); and

WHEREAS, the Authority and District are purchasing real property in Stanislaus, Calaveras and San Joaquin County which is required for construction of the Project ("Property"); and

WHEREAS, the Owners of the Property wish to annex to the District in order to obtain water service; and

WHEREAS, the District is required by Section 9,4 of Chapter 819 of the Statutes of 1971, as amended, to annually determine groundwater assessments within the District; and

WHEREAS, the District's special consultant, Woodward-Clyde engineers, has completed seepage estimates for the groundwater basin along the canals and creeks (12/19/89 Study for the Upper Farmington Canal, and 1/30/90 Study for the Lower Canal and Creeks which studies are available for review at the District office and which are incorporated herein by reference) and has concluded that, ". . . the amount of seepage recovered by any pumping well will be small and will be on the order of about 5 gpm"; and

WHEREAS, since agricultural wells within the present boundaries of the District produce approximately 1000 gpm, it is reasonable to find that the owners of the potential 5 gpm wells should not be assessed,

NOW, THEREFORE, be it resolved and it is resolved by the Board of Directors of the District as follows:

1. Based upon the groundwater seepage estimates calculated by Woodward-Clyde , the New Melones/Goodwin Canal and Tunnel Project will not significantly improve groundwater conditions under property in the vicinity of the Upper and Lower Canals, and those portions of Shirley, Hoods, and Rock Creeks to be used to convey Project water.

2. No groundwater assessments will be levied on property within five miles of the Project, including such canals and creeks which may be part of the Project, and which may be annexed to the District.

3. The gro ndwater assessment will be reevaluated by the District in five (5) years to determine whether or not the Project has provided any actual benefits to the Property.

Adopted this 1st day of May, 1990, by the Board of Directors of the Stockton East Water District at a regular meeting thereof.

AYES: Dondero, Laven, Bozzano, MacNear, Huckins

NOES: George, Tone

ABSENT: None

ABSTENTIONS: None

PRESIDENT, Board of Directors
of stock ton-East Water
District

ATTEST:

SECRETARY, Be td of Directors
of Stockton-East Water
District

SECRETARY'S CERTIFICATE

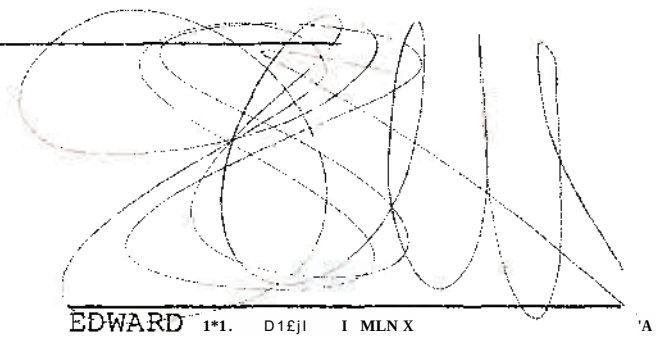
I, EDWARD M. STEFFANI, Secretary of the Board of Directors of the STOCKTON-EAST WATER DISTRICT, Stockton, California, do hereby certify as follows:

The foregoing is a full, true and correct copy of a resolution duly adopted at a Regular Meeting of the Board of Directors of said District duly and regularly and legally held at the regular meeting place thereof on Tuesday, May 1, 1990, of which meeting all of the members of said Board of Directors had due notice and at which a majority thereof were present.

I have carefully compared the same with the original minutes of said meeting on file and of record in my office, and the foregoing is a full, true, and correct copy of the original resolution adopted at said meeting and entered in said minutes.

Said resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

Dated: 5/!/90



EDWARD 1*1. D1£jl I MLN X 'A
Secretary of the Board
STOCKTON-EAST WATER DIST

(SEAL)

RESOLUTION NO. 92-93-01A
OF THE STOCKTON EAST WATER DISTRICT BOARD OF DIRECTORS
RELATING TO BOARD AND DISTRICT
PROCEDURES AND ORGANIZATION

WHEREAS, it is necessary and desirable to reevaluate and revise certain Board procedures, certain administrative procedures, and the administrative organization for the operation and government of the District;

NOW, THEREFORE, BE IT RESOLVED AS FOLLOWS:

I

REPEAL OF CONFLICTING RESOLUTIONS

Resolution 79-80-19, 83-84-17, 84-85-08, 90-91-13 and all other Resolutions, or portions thereof, in conflict with this Resolution are hereby repealed; and

II

1. Regular Meetings. The Board of Directors of the Stockton East Water District (hereinafter referred to as Board) shall hold regular meetings at its office at 6767 East Main Street, Stockton, California on the first and third Tuesday of each month. Said regular meetings shall be at noon during the portion of the year in which Standard time is in effect and at 7:00 P.M. during the portion of the year in which Daylight Savings time is in effect.

2. Adjournment of Meetings. The Board may adjourn any regular, adjourned regular, special or adjourned special meeting to a time and place specified in the order of adjournment. Less

than a quorum may so adjourn from time to time. If all Directors are absent from any regular or adjourned regular meeting, the Secretary of the Board may declare the meeting adjourned to a stated time and place and shall cause a written notice of the adjournment to be given in the same manner as provided in Section 3 below for special meetings, unless such notice is waived as provided for special meetings. A copy of the order or notice of adjournment shall be conspicuously posted on or near the door of the place where the regular, adjourned regular, special or adjourned special meeting was held within 24 hours after the time of the adjournment. When a regular or adjourned regular meeting is adjourned as provided in this section, the resulting adjourned regular meeting is a regular meeting for all purposes. When an order of adjournment of any meeting fails to state the hour at which the adjourned meeting is to be held, it shall be held at the hour specified for regular meetings.

3. Special Meetings. Special meetings may be ordered by the President, or by a majority of the members of the Board, specifying in writing the business to be transacted. Any order calling for a special meeting shall be entered in the minutes of the Board. The Secretary shall give three days' notice of any special meeting to any member of the Board not joining in the order calling the special meeting by mailing written notice to the member at the member's address as disclosed by the District records. Such written notice may be waived by any Director by filing a written waiver of notice with the Secretary. Additionally, such written notice is waived as to any Director who is actually present at the meeting at the time it convenes.

On the day prior to any special meeting, or earlier if possible, but at least 24 hours before the time of such special meeting, the Secretary shall mail a notice of the special meeting to the Stockton Record. The Secretary shall also give notice to any other parties as may be required by law. Only the business specified in the notice may be considered at such special meeting .

4. Oath of Office, Bonds and Effective Date of Taking Office. Elected officials of the District shall take office effective upon the taking and subscribing to an official oath and executing and filing the bond required by law; the newly elected official shall take the Oath of Office and execute the required bond at a meeting of the Board after the general district election, but in no event later than the last day of December.

5. Organization Meetings. At the first meeting of the Board following the time of taking office of the directors elected in the general District election, but in no event later than the last day of December, the Directors then holding office shall meet and organize as a Board.

5.1 Annual Organization Meetings. Notwithstanding any other provision of this Resolution, the Directors shall hold an organizational meeting at least annually.

6. Officers . At each of its organizational meetings, the Board shall elect a President and a Vice-President from among their number and shall appoint a Secretary, who need not be a member of the Board. Unless otherwise specifically provided by the Board, the General Manager of the District shall automatically serve as Secretary. Each of the foregoing officers

shall hold office at the pleasure of the Board. The duty of the Vice-President shall be to preside at any meeting, or portion thereof, at which the President is not present.

It is the intention of the Board that the offices of President and Vice-President shall be rotated annually among members of the Board. The President shall be chosen from those Directors serving the last two years of his or her term.

7. Voting at Board Meetings.

A. All voting members of the Board present shall vote on all questions coming before the Board either in the affirmative or in the negative, except that on any matter coming before the Board which may present a conflict of interest to one or more members, such member or members shall announce that they have a conflict of interest at the time of the commencement of discussion on the question and said member or members having a conflict shall thereafter refrain from discussion and voting on anything pertaining to such a matter; and further, except that any member of the Board who has not been present to participate in all, or a portion, of the discussion relating to a matter may abstain for that reason. If a member of the Board chooses not to vote on a question coming before the Board when there is no conflict of interest with respect to that member, by absenting himself or herself from the meeting room at the time of the vote, then that member shall not be entitled to discuss the matter either prior to or after the vote. Any member who chooses to discuss a matter shall vote on that matter. Any member who chooses to discuss a matter and then absents himself or herself to avoid the vote shall be considered, and his or her vote shall

be recorded, as voting with the majority, or in the case of no majority, in the affirmative.

B. All votes may be by voice vote with both the "ayes" and "nays" being called. In the event that upon a voice vote being taken it appears to the President, or to any member of the Board, that the vote is not unanimous, a roll call shall then be taken.

8. Agendas. On or before the Friday preceding each regular or adjourned regular meeting, the Secretary shall mail an agenda for the forthcoming meeting. Said agenda shall be prepared by the Secretary and upon mailing the same, the Secretary shall accompany the agenda with as much explanatory material relating to the items on the agenda as is reasonably possible. An agenda for each special meeting shall be mailed as early in advance of the special meeting as is reasonably possible and shall be accompanied by such explanatory material as is necessary to advise the Board of the nature of the matter or matters coming before the Board at the special meeting.

9. Records. The Secretary of the Board shall keep, and make available to the public, accurate minutes of all proceedings of the Board. The proceedings of the Board shall be recorded by a tape recorder and the Secretary shall then, from the tape record, prepare minutes in summary form. Minutes shall not be read at Board meetings but shall be mailed in advance of meetings to the Board members, so that the same may be considered for approval without being read aloud at Board meetings. Tapes of Board meetings shall be kept by the Secretary for two years and thereafter may be erased or otherwise destroyed.

10. Order of Business. The order of business at each meeting of the Board, unless suspended or varied upon order of the President or by majority vote of the board, shall be as follows:

A. Roll Call;

B. Consent Calendar;

C. Public Comment (Non-agenda items);

D. Scheduled presentations and agenda items (to be considered in this order:

1. Staff report

2. Board discussion

3. Public comment on the specific item, with time limitations determined by the chair-person;

4. Board action);

E. Committee Reports (detailed committee minutes);

F. Report of the General Manager (information items listed on the agenda, but bound separately from the other agenda material);

G. Report of the Counsel, if any;

H. Communications;

X. Agenda planning for next meeting;

J. Director Reports;

K. Adjournment.

All items of business which, in the judgment of the Secretary require neither Board discussion nor a public hearing,

shall be included in the Consent Calendar; provided that the agenda indicate on its face for each such items that such items is included in the Consent Calendar, and provided further that a written report and recommendation of the General Manager on each item so included has been mailed to the Board members with the agenda. The Consent Calendar may include the approval of minutes and expenses. Any Board member or the General Manager may request that any item on the Consent Calendar be removed therefrom for discussion and separate consideration.

11. Committees. There shall be standing committees of the Board as follows: Administration, Agricultural Operations and Municipal Operations. Other committees may be established from time to time by the President as required in the opinion of the President. The members of all committees shall be appointed by the 'President from among the members of the Board. All Directors shall serve on at least one committee, and should there be a minimum of five committees, Directors shall serve on at least two committees.

12. Quorum and Tie Votes. In conducting the business of the Board, the following shall apply with respect to quorum requirements:

A. A majority of the Board shall constitute a quorum for the transaction of business;

B. All board actions shall require a vote of the majority of the members present unless other wise provided by law or this Resolution; and

C. A tie vote shall be considered a negative vote, provided that in the event of a tie vote, while the matter shall

be considered determined in the negative, the General Manager shall place the matter on the agenda for reconsideration at the next succeeding meeting.

13. Conduct of Business. The procedure for the conduct of business shall be as follows:

A. Each agenda item shall be taken up in order by the presiding officer except that all items designated as consent items shall be taken up under the Consent Calendar;

B. The presiding officer shall call upon the General Manager or such other person or persons as may be appropriate to the present the matter to the Board;

C. The matter shall then be discussed by the Board members and such other Staff persons or consultants as may be called upon by the President;

D. As to all matters not included within the Consent Calendar, and including those matters which have been removed from the Consent Calendar as provided herein, if a motion is made in connection with a matter, prior to vote on the motion, the President shall call for comments on the proposed motion from members of the public. Public comments shall be limited to the motion then before the Board. The President shall have the authority to limit the duration of or refuse to permit public comment if such public comment is repetitive, disorderly, or otherwise not in furtherance of a reasonably expeditious review of the merits of the pending motion;

E. It shall be understood that any member of the public desiring further discussion on an item after a vote is taken, or on an item on which no motion is made, shall take the

matter up with the Board member representing the division of the District in which said member of the pubic resides, or owns or operates property, or with any other Board member after adjournment of the meeting;

F. At the conclusion of public comment on any pending motion, the President shall announce that the time for public discussion of the matter is closed;

G. The foregoing procedure shall not apply to the conduct of "public hearings", and in the case of "public hearings", the requirements of statutes and the duly adopted rules of the District shall prevail;

H. Prior to the commencement of any "public hearing", the President shall request that an attorney for the District, and in the attorney's absence the General Manager, outline the procedure to be observed in the conduct of the "public hearing";

I. The foregoing procedure shall not apply to the Consent Calendar which shall be governed by this subparagraph, the Consent Calendar shall be approved without discussion by a single vote of those Board members present, except as to items removed from the Consent Calendar as provided herein. In the event of removal, any such items shall be considered in accordance with the procedures outlined in the foregoing subparagraph of this section at the appropriate place on the agenda; and

J. The foregoing procedure shall not apply to the Public Comment Section of the Agenda, which shall be governed by this subparagraph. The Public Comment Section of the Agenda

shall be reserved for any member of the public wishing to comment on any matter pertaining to District business other than matters which appear on the same agenda. The President shall have the authority to limit the duration of or refuse to permit public comment if it is repetitive, disorderly, or otherwise not in furtherance of a reasonably expeditious review of District business .

14. Roberts Rules of Order. Roberts Rules of Order Revised are hereby adopted by the Board in all cases not otherwise provided for in this Resolution and not otherwise provided for by applicable law.

Ill

DUTIES OF THE GENERAL MANAGER

1. Responsibility . The General Manager shall be directly responsible to the Board and subject to the general supervision of the Board. The General Manager shall carry out and execute all policies and directives of the Board. As to matters concerning District policies (as opposed to non-substantive matters of detail), it is understood that the General Manager is subject to the direction of the Board, acting as a Board, and not to the direction of an individual Board member or group of Board members not acting as a committee.

2. Duties . The General Manager shall, among other things, do the following:

A. Have charge of all activities and functions of the District and all of the office and field personnel of the District ;

B. In her or his discretion, appoint and discharge all employees of the District and from time to time, as she or he deems proper, make salary and wage change recommendations to the Board ;

C. Receive all communications addressed to the District ;

D. Unless another person has been appointed as Secretary, fulfill the duties of Secretary of the District as prescribed by law and in that capacity, have authority to appoint Deputy Secretaries ;

E. When he or she deems it necessary, request the President to call special meetings of the Board;

F. Enforce all rules of the District;

G. Prepare and present proposed budgets and recommend replenishment and assessment rates and surface water charges to the Board, in accordance with the requirements of statutes ;

H. From time to time, recommend to the Board proposed capital improvements necessary to carry out the purposes and programs of the District;

I. Advise the Board as to when engineering and legal services are required by the District;

J. On behalf of the District, without further action of the Board, be authorized to file protests to any application filed with the State Water Resources Control Board for appropriation of water from the Calaveras River or any tributary or distributary thereof. Any such protest so filed

shall thereafter be subject to the control and direction of the Board; and

K. Be authorized to call such committee meetings as from time to time may be necessary, to carry on the business of the District.

IV

PQLITICAL ACTIVITY

It is hereby declared by this Board that the General Manager of this District the General Counsel for the District } and all of their subordinate employees are employed for the purpose of administering and executing the policies } rules, programs 7 and directives established by the Board as the policy making agency of the District. They shall not be subjected to personal or political pressure nor shall they participate in any of the political affairs of the District including but not limited to any election campaign for a District office.

V

flexibility

The foregoing policies r procedures , and requirements are intended to be applied flexibly to meet the needs of the District and it is intended by the Board that they shall be revised from time to time as is necessary and appropriate to further meet the needs of the District.

PASSED AND ADOPTED by the Board of Directors of the Stockton East Water District on the 14th Day of April *1992,* by the following vote:

AYES: Directors Alonzo, Clayton, Dondero, Laven, Tone, MacNear

NOES: None

ABSTENTIONS: None

ABSENT: Director George

JACK LAVEN, President
Board of Directors
Stockton East Water District

ATTEST:

EDWARD M. STEFANI, Secretary
Board of Directors
Stockton East Water District

RESOLUTION NO. 92-93-01A

SECRETARY'S CERTIFICATE

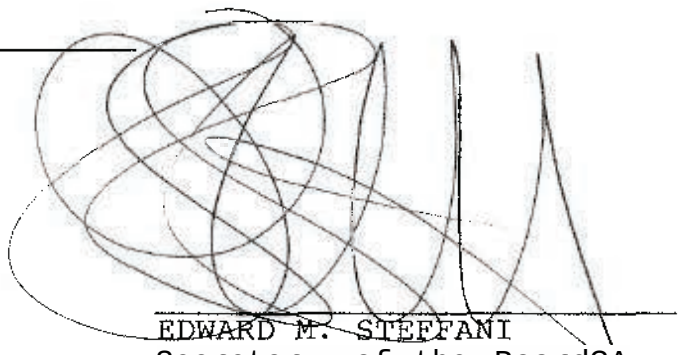
I, EDWARD M. STEFFANI, Secretary of the Board of Directors of the STOCKTON EAST WATER DISTRICT, Stockton, California, do hereby certify as follows:

The foregoing is a full, true and correct copy of a resolution duly adopted at a Regular (Regular/Special) Meeting of the Board of Directors of said District duly and regularly and legally held at the regular meeting place thereof on April 14, 1992, of which meeting all of the members of said Board of Directors had due notice and at which a majority thereof were present.

I have carefully compared the same with the original minutes of said meeting on file and of record in my office, and the foregoing is a full, true, and correct copy of the original resolution adopted at said meeting and entered in said minutes.

Said resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

Dated: 4/14/92



EDWARD M. STEFFANI
Secretary of the Board?A
STOCKTON EAST WATER DISTRICT

(SEAL)

2-RESCER

RESOLUTION NO. 92-93-0 1A

TO REVISE RESOLUTION NO. 83-84-17
WITH RESOLUTION NOS. 84-85-08
AND 90-91-13 INCORPORATED

RELATING TO BOARD AND DISTRICT
PROCEDURES AND ORGANIZATION

WHEREAS , it is necessary and desirable to reevaluate and revise certain Board procedures , certain administrative procedures, and the administrative organization for the operation and government of the District;

NOW, THEREFORE, BE IT RESOLVED AS FOLLOWS:

I

REPEAL OF CONFLICTING RESOLUTIONS

Resolution 79-80-19 and all other Resolutions, or portions thereof, in conflict with this Resolution are hereby repealed; and

II

1. Regular Meetings. The Board of Directors of the Stockton East Water District (hereinafter referred to as Board) shall hold regular meetings at its office at *2526//East//tMM* *6767* East Main Street, Stockton, California on the first and third Tuesday of each month. Said regular meetings shall be at *Hi*30//$/$/ noon during the portion of the year in which Standard time is in effect and at 0/00 7:00 P.M. during the portion of the year in which Daylight Savings time is in effect.

2. Adjournment of Meetings. The Board may adjourn any regular, adjourned regular, special or adjourned special meeting to a time and place specified in the order of adjournment. Less

than a quorum may so adjourn from time to time. If all Directors are absent from any regular or adjourned regular meeting, the Secretary of the Board may declare the meeting adjourned to a stated time and place and shall cause a written notice of the adjournment to be given in the same manner as provided in Section 3 below for special meetings, unless such notice is waived as provided for special meetings. A copy of the order or notice of adjournment shall be conspicuously posted on or near the door of the place where the regular, adjourned regular, special or adjourned special meeting was held within 24 hours after the time of the adjournment. When a regular or adjourned regular meeting is adjourned as provided in this section, the resulting adjourned regular meeting is a regular meeting for all purposes. When an order of adjournment of any meeting fails to state the hour at which the adjourned meeting is to be held, it shall be held at the hour specified for regular meetings.

3. Special Meetings. Special meetings may be ordered by the President, or by a majority of the members of the Board, specifying in writing the business to be transacted. Any order calling for a special meeting shall be entered in the minutes of the Board. The Secretary shall give three days[7] notice of any special meeting to any member of the Board not joining in the order calling the special meeting by mailing written notice to the member at the member's address as disclosed by the District records. Such written notice may be waived by any Director by filing a written waiver of notice with the Secretary. Additionally, such written notice is waived as to any Director who is actually present at the meeting at the time it convenes.

On the day prior to any special meeting, or earlier if possible, but at least 24 hours before the time of such special meeting, the Secretary shall mail a notice of the special meeting to the Stockton Record. The Secretary shall also give notice to any other parties as may be required by law. Only the business specified in the notice may be considered at such special meeting .

4. Oath of Office, Bonds and Effective Date of Taking Office. Elected officials of the District shall take office effective upon the taking and subscribing to an official oath and executing and filing the bond required by law; the newly elected official shall take the Oath of Office and execute the required bond at Od/dddK/ddddZdd a meeting MdZd of the Board after the ddtd/df general district election, but in no event later than the last day in November of December.

5. Organization Meetings. At the ddd'Z///rd dlddX/ scheduled first meeting of the Board following the time of taking office of the directors elected in the general District election, but in no event later than the last day of November December , the Directors then holding office shall meet and organize as a Board .

5.1 Annual Organization Meetings . Notwithstanding any other provision of this Resolution, the Directors shall hold an organizational meeting at least annually.

6. Officers. At each of its organizational meetings, the Board shall elect a President and a Vice-President from among their number and shall appoint a Secretary, who need not be a member of the Board. Unless otherwise specifically provided by

the Board, the General Manager of the District shall automatically serve as Secretary. Each of the foregoing officers shall hold office at the pleasure of the Board. The duty of the Vice-President shall be to preside at any meeting, or portion thereof, at which the President is not present.

It is the intention of the Board that the offices of President and Vice-President shall be rotated annually among members of the Board. The President shall be chosen from those Directors serving the last two years of his or her term.

7. Voting at Board Meetings .

A. All voting members of the Board present shall vote on all questions coming before the Board either in the affirmative or in the negative, except that on any matter coming before the Board which may present a conflict of interest to one or more members, such member or members shall announce that they have a conflict of interest at the time of the commencement of discussion on the question and said member or members having a conflict shall thereafter refrain from discussion and voting on anything pertaining to such a matter; and further, except that any member of the Board who has not been present to participate in all, or a portion, of the discussion relating to a matter may abstain for that reason. If a member of the Board chooses not to vote on a question coming before the Board when there is no conflict of interest with respect to that member, by absenting himself or herself from the meeting room at the time of the vote, then that member shall not be entitled to discuss the matter either prior to or after the vote. Any member who chooses to discuss a matter shall vote on that matter. Any member who

chooses to discuss a matter and then absents himself or herself to avoid the vote shall be considered, and his or her vote shall be recorded, as voting with the majority, or in the case of no majority, in the affirmative.

B. All votes may be by voice vote with both the "ayes" and "nays" being called. In the event that upon a voice vote being taken it appears to the President, or to any member of the Board, that the vote is not unanimous, a roll call shall then be taken.

8. Agendas . On or before the Friday preceding each regular or adjourned regular meeting, the Secretary shall mail an agenda for the forthcoming meeting. Said agenda shall be prepared by the Secretary and upon mailing the same, the Secretary shall accompany the agenda with as much explanatory material relating to the items on the agenda as is reasonably possible. An agenda for each special meeting shall be mailed as early in advance of the special meeting as is reasonably possible and shall be accompanied by such explanatory material as is necessary to advise the Board of the nature of the matter or matters coming before the Board at the special meeting.

9. Records. The Secretary of the Board shall keep, and make available to the public, accurate minutes of all proceedings of the Board. The proceedings of the Board shall be recorded by a tape recorder and the Secretary shall then, from the tape record, prepare minutes in summary form. Minutes shall not be read at Board meetings but shall be mailed in advance of meetings to the Board members, so that the same may be considered for approval without being read aloud at Board meetings. Tapes

of Board meetings shall be kept by the Secretary for two years and thereafter may be erased or otherwise destroyed.

10. Order of Business. The order of business at each meeting of the Board, unless suspended or varied, upon order of the President or by majority vote of the board, shall be as follows 2

A. Roll Call;

B. Consent Calendar;

C. Public Comment (for non-agenda items);

D. Scheduled presentations and agenda items (to be considered in this order:

1. Staff report

2. Board discussion

3. Public comment on the specific item, with time limitations determined by the chairperson

4. Board action);

E. Committee Reports (eliminate the committee summary, but increase the detail of the committee minutes);

F. Report of the General Manager (continue to list the information items on the agenda, but bind this material separately from the other agenda material);

G. Report of the Counsel, if any;

H. Communications;

I. ~~Other Business~~ Agenda planning for next meeting;

J. Agenda/planning/for/next/meeting Director Reports;

K. Adjournment.

All items of business which, in the judgment of the Secretary require neither Board discussion nor a public hearing, shall be included in the Consent Calendar; provided that the agenda indicate on its face for each such items that such items is included in the Consent Calendar, and provided further that a written report and recommendation of the General Manager on each item so included has been mailed to the Board members with the agenda. The Consent Calendar may include the approval of minutes and expenses. Any Board member or the General Manager may request that any item on the Consent Calendar be removed therefrom for discussion and separate consideration.

11. Committees. There shall be standing committees of the Board as follows: tM/ itit/MMtiit/MMtttMi/tM/ttMMi Committees;/tM/MKUiUMKl/MHKtUM/UMUMii //tM/ /MKUMM MHKttMi/ /HMlttM/ //tM/ KMt/MtlM/HMlttMi /the/Personnel Committees;/tM/KMlMHiitlM/tiMtttMi /KM/M/U iMtM/ /KM MMLti/ ///'MtKtMM/ ///Committee Administration, Agricultural Operations and Municipal Operations. MHtit Other committees may be established from time to time by the President as ti required in the opinion of the President. The members of all committees shall be appointed by the President from among the members of the Board. All Directors shall serve on at least one committee, and should there be a minimum of five committees, Directors shall serve on at least two committees.

12. Quorum and Tie Votes. In conducting the business of the Board, the following shall apply with respect to quorum requirements :

A. A majority of the Board shall constitute a quorum for the transaction of business;

B. All board actions shall require a vote of the majority of the members present unless other wise provided by law or this Resolution; and

C. A tie vote shall be considered a negative vote, provided that in the event of a tie vote, while the matter shall be considered determined in the negative, the General Manager shall place the matter on the agenda for reconsideration at the next succeeding meeting.

13. Conduct of Business. The procedure for the conduct of business shall be as follows:

A. Each agenda item shall be taken up in order by the presiding officer except that all items designated as consent items shall be taken up under the Consent Calendar;

B. The presiding officer shall call upon the General Manager or such other person or persons as may be appropriate to the present the matter to the Board;

C. The matter shall then be discussed by the Board members and such other Staff persons or consultants as may be called upon by the President;

D. As to all matters not included within the Consent Calendar, and including those matters which have been removed from the Consent Calendar as provided herein, if a motion is made in connection with a matter, prior to vote on the motion,

the President shall call for comments on the proposed motion from members of the public. Public comments shall be limited to the motion then before the Board. The President shall have the authority to limit the duration of or refuse to permit public comment if such public comment is repetitive, disorderly, or otherwise not in furtherance of a reasonably expeditious review of the merits of the pending motion;

E. It shall be understood that any member of the public desiring further discussion on an item after a vote is taken, or on an item on which no motion is made, shall take the matter up with the Board member representing the division of the District in which said member of the pubic resides, or owns or operates property, or with any other Board member after adjournment of the meeting;

F. At the conclusion of public comment on any pending motion, the President shall announce that the time for public discussion of the matter is closed;

G. The foregoing procedure shall not apply to the conduct of "public hearings", and in the case of "public hearings", the requirements of statutes and the duly adopted rules of the District shall prevail;

H. Prior to the commencement of any "public hearing", the President shall request that an attorney for the District, and in the attorney's absence the General Manager, outline the procedure to be observed in the conduct of the "public hearing";

I. The foregoing procedure shall not apply to the Consent Calendar which shall be governed by this subparagraph.

the Consent Calendar shall be approved without discussion by a single vote of those Board members present, except as to items removed from the Consent Calendar as provided herein. In the event of removal, any such items shall be considered in accordance with the procedures outlined in the foregoing subparagraph of this section at the appropriate place on the agenda; and

J. The foregoing procedure shall not apply to the Public Comment Section of the Agenda, which shall be governed by this subparagraph. The Public Comment Section of the Agenda shall be reserved for any member of the public wishing to comment on any matter pertaining to District business other than matters which appear on the same agenda. The President shall have the authority to limit the duration of or refuse to permit public comment if it is repetitive, disorderly, or otherwise not in furtherance of a reasonably expeditious review of District business .

14. Roberts Rules of Order. Roberts Rules of Order Revised are hereby adopted by the Board in all cases not otherwise provided for in this Resolution and not otherwise provided for by applicable law.

Ill

DUTIES OF THE GENERAL MANAGER

1. Responsibility. The General Manager shall be directly responsible to the Board and subject to the general supervision of the Board. The General Manager shall carry out and execute all policies and directives of the Board. As to matters concerning District policies (as opposed to

non-substantive matters of detail), it is understood that the General Manager is subject to the direction of the Board, acting as a Board, and not to the direction of an individual Board member or group of Board members not acting as a committee.

2. Duties. The General Manager shall, among other things, do the following:

A. Have charge of all activities and functions of the District and all of the office and field personnel of the District ;

B. In her or his discretion, appoint and discharge all employees of the District and from time to time, as she or he deems proper, make salary and wage change recommendations to the Board;

C. Receive all communications addressed to the District ;

D. Unless another person has been appointed as Secretary, fulfill the duties of Secretary of the District as prescribed by law and in that capacity, have authority to appoint Deputy Secretaries;

E. When he or she deems it necessary, request the President to call special meetings of the Board;

F. Enforce all rules of the District;

G. Prepare and present proposed budgets and recommend replenishment and assessment rates and surface water charges to the Board, in accordance with the requirements of statutes ;

H. From time to time, recommend to the Board proposed capital improvements necessary to carry out the purposes and programs of the District;

I. Advise the Board as to when engineering and legal services are required by the District;

J. On behalf of the District, without further action of the Board, be authorized to file protests to any application filed with the State Water Resources Control Board for appropriation of water from the Calaveras River or any tributary or distributary thereof. Any such protest so filed shall thereafter be subject to the control and direction of the Board ; and

K. Be authorized to call such committee meetings as from time to time may be necessary, to carry on the business of the District.

IV

POLITICAL ACTIVITY

It is hereby declared by this Board that the General Manager of this District, the General Counsel for the District, and all of their subordinate employees are employed for the purpose of administering and executing the policies, rules, programs, and directives established by the Board as the policy making agency of the District. They shall not be subjected to personal or political pressure nor shall they participate in any of the political affairs of the District, including but not limited to any election campaign for a District office.

V

FLEXIBILITY

The foregoing policies, procedures, and requirements are intended to be applied flexibly to meet the needs of the District and it is intended by the Board that they shall be revised from time to time as is necessary and appropriate to further meet the needs of the District.

PASSED AND ADOPTED by the Board of Directors of the Stockton East Water District on the 14th Day of April, 1992, by the following vote:

AYES: Directors Alonzo, Clayton, Dondero, Laven, Tone and MacNear

NOES: None

ABSTENTIONS: None

ABSSENT: Director George

_____
JACK LAVEN, President
Board of Directors
Stockton East Water District

ATTEST:

_____
EDWARD M. STEFFANI, Secretary
Board of Directors
Stockton East Water District

Agenda 9/15/92
D - 2

RESOLUTION OF THE BOARD OF DIRECTORS
OF STOCKTON EAST WATER DISTRICT

RESOLUTION NO. 92-93- 05

SETTING A BASE MONTHLY PAYMENT
FOR PERIOD APRIL 1, 1993 TO MARCH 31, 1994,
PURSUANT TO THE SECOND AMENDED CONTRACT AMONG THIS DISTRICT
AND THE CALIFORNIA WATER SERVICE CO., THE CITY OF STOCKTON,
THE LINCOLN VILLAGE MAINTENANCE DISTRICT,
AND THE COLONIAL HEIGHTS MAINTENANCE DISTRICT,
PROVIDING FOR THE SALE OF TREATED WATER

WHEREAS, on September 25, 1987, the Stockton East Water District entered into a Second Amended Contract among the California Water Service Company, the City of Stockton, the Lincoln Village Maintenance District, and the Colonial Heights Maintenance District, providing for the sale of treated water; and

WHEREAS , the Board of Directors of the Stockton-East Water District has determined that the revised budgeted costs for the Contract period April 1, 1993 to March 31, 1994 should be as follows:

6A(1)	Debt Service	$3,698,448
	Debt Service Surcharge	341,361
6A(2)	Raw Water	105 ,871
6A(3)	Operation & Maintenance	1,837,265
6A(4)	Administration	161,048
6A(5)	Insurance	50,000
6A(7)	Reserve Fund Payment Pursuant to Paragraphs 8 & 9 of said Contract	35,000
6A(8)	Payment into the Water Treatment Facilities Reserve Fund	100,000
		$6,328,993; and

WHEREAS, paragraph 6D(3) of said Second Amended Contract states that Stockton East shall annually levy a municipal groundwater assessment, pursuant to its enabling legislation such that the cost of groundwater use is equivalent to the cost of surface water use; and

WHEREAS, the proposed 1993-94 budget estimates the amount of $5,505,881 to be paid from municipal groundwater assessments and base monthly payments as follows:

Municipal Groundwater Assessments (35,000 AF X $76.15)	$2,665,250
Base Monthly Payments	2,840,361
Total	$5,505,881

NOW, THEREFORE, BE IT RESOLVED, that pursuant to said Second Amended Contract, this Board hereby establishes the Base Monthly Payment to be paid by the Contractors pursuant to said Contract for the period April 1, 1993 to March 31, 1994, at $2,840,631/12 $236,719.25, which is the same amount as for the 1992-93 fiscal year.

PASSED AND ADOPTED BY THE BOARD OF DIRECTORS OF THE STOCKTON-EAST WATER DISTRICT ON THE 15TH DAY OF SEPTEMBER, 1993, BY THE FOLLOWING VOTE:

AYES: Directors Dondero, Tone, Laven, Clayton, MacNear, Alonzo

NOES: None

ABSENT: Director George

ABSTENTIONS: None

JACK HAVEN, President
Board of Directors
Stockton-East Water District

ATTEST:

EDWARD M. STEFFANI, Secretary
Board of Directors
Stockton-East Water District

RESOLUTION NO. 92-93-05

SECRETARY'S CERTIFICATE

I, EDWARD M. STEFFANI, Secretary of the Board of Directors of the STOCKTON EAST WATER DISTRICT, Stockton, California, do hereby certify as follows:

The foregoing is a full, true and correct copy of a resolution duly adopted at a Regular/Special Meeting of the Board of Directors of said District duly and regularly and legally held at the regular meeting place thereof on _____, of which meeting all of the members of said Board of Directors had due notice and at which a majority thereof were present.

I have carefully compared the same with the original minutes of said meeting on file and of record in my office, and the foregoing is a full, true, and correct copy of the original resolution adopted at said meeting and entered in said minutes.

Said resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

Dated: 9/16/92

EDWARD M. STEFFANI
Secretary of the Board
STOCKTON EAST WATER DISTRICT

(SEAL)

RESCER

Proration of Base Monthly Payment for 1993-94 Fiscal Year (4/1/93 - 3/31/94)

Amounts required - $2,840,631/12 = $236,719.25 monthly

	1990-91 Water Use (AF)			Percentage	Amount	Monthly 15 Year Adjustment as per Second Amended Contract	1992-93 Base Monthly Payment
	Surface	Well	Total				
City of Stockton	4,624	14,283	18,907	35.6	$84,272.05	$35,451.38	$119,723.43
Lincoln Village	351	1,054	1,405	2.6	6,154.70	2,343.31	8,498.01
Colonial Heights	88	418	506	1.0	2,367.19	739.99	3,107.18
Cal Water	9,423	22,876	32,299	60.8	143,925.31	<38,534.68>	105,390.63
Totals	14,486	38,631	53,117	100%	$236,719.25	$ 0	$236,719.25

STOCKTON EAST WATER DISTRICT
Treatment Plant Section
Projected Expenses
Fiscal Year 1993-94

Contract Paragraph	1992-93 Revised Budget 20,000 AF	1993-94 Proposed Budget 20,000 AF
Debt Service		
1975 Revenue Bonds		
Principal Account	$ 700,000	$ 750,000
Interest Account	1,005,937	955,188
Bondholders Reserve (20%)	340,612	341,361
1990 Certificates of Participation		
Principal	295,000	295,000
Interest	1,698,260	1,698,260
Less CSJWCD Contribution (20,000 AF)	0	0
Debt Service Totals	4,039,809	4,039,809
Raw Water		
New Hogan (20,000 AF)		105,871
New Malones (0 AF)	0	0
	105,871	105,871
Operation & Maintenance Account		
Salaries :		
Muni Operation Supt.	55,650	55,650
Treated Water Supervisor	44,700	44,700
Treatment Plant Operator III	160,000	160,000
Maintenance Foreman	48,350	48,350
Maintenance Mechanic II (2)	72,500	72,500
Water Quality Supervisor	50,300	50,300
Laboratory Technician II	36,600	36,600
Maintenance Mechanic I	31,300	31,300
Landscape Person	30,300	30,300
Temporary Labor	0	0
Systens Foreman - 10%	4,000	4,000
Agri. Operator-1 0%	8,000	8,000
Contingencies	42,000	42,000
	583,700	583,700
Payroll Taxes	2,000	2,000
Employee Insurance	70,000	70,000
Retirement	50,000	50,000
Worker's Compensation	24,000	24,000
Deferred Compensation	14,000	14,000
	160,000	160,000

		1992-93 Revised Budget 20,000 AF	1993-94 Proposed Budget 20,000 AF
	Operations & Maintenance:		
	Chemicals	225,000	225,000
	Electricity	250,000	250,000
	Diesel & Oil	150,000	150,000
	Natural Gas	10,000	10,000
	Other Utilities	15,000	15,000
	Laboratory Supplies	12,000	12,000
	Analytical Services	30,000	30,000
	Small Tools & Equipment	5,000	5,000
	Equipment Rental	5,000	5,000
	Protective Clothing & Laundry	3,000	3,000
	Vehicle Operation	5,000	5,000
	Vehicle Maintenance & Repair	5,000	5,000
	Maintenance & Repair:		
	Treatment Plant	50,000	50,000
	Grounds	5,000	5,000
	Headworks	5,000	5,000
	Existing R-O-W Maint.	3,000	3,000
	New Tunnel, Canals, Pipe-line Maintenance	33,000	33,000
	Goodwin Dam Operations & Maintenance Costs	75,000	75,000
	Goodwin Dam Property Self Ins.	75,000	75,000
	Legal	3,000	3,000
	Auditing	6,000	6,000
	Fiscal Agent	12,000	12,000
	Travel & Education	4,000	4,000
	Books & Periodicals	1,000	1,000
	Office Supplies	1,000	1,000
	Advertising/Public Relations	2,000	2,000
	Safety Signs & Equipment	1,000	1,000
	Dry Year Assessment Reserve	3,000	3,000
	Interest Expense on M & I Use of Water	25,000	25,000
	"Sally-Save-Water" Program	34,565	34,565
	Contingencies	40,000	40,000
	Operation & Maintenance Totals	1,093,565	1,093,565
6A(4)	Administration	161,048	161,048
6A(5)	Insurance	50,000	50,000
6A(7)	Reserve Fund Payments Pursuant to Paragraphs 8 & 9 of said Contract	35,000	35,000
6A(8)	Payment into the Water Treatment Facilities Reserve Fund	100,000	100,000
	Total	$6,328,993	$6,328,993

STOCKTON EAST WATER DISTRICT
Treatment Plant Section
Projected Revenue
Fiscal Year 1993-94

	1992-93 Revised Budget 20,000 AF	1993-94 Proposed Budget 20,000 AF
Revenue required	$6,328,993	$6,328,993
Less 20% Bondholders Surcharge	(340,612)	(340,612)
	$5,988,381	$5,988,381
Sources and amounts of revenue:		
Interest Income	400,000	400,000
Income from land lease and misc.	7,500	7,500
Surplus from Bond Reserve Fund	75,000	75,000
Revenue from municipal groundwater assessments	2,665,250**	2,665,250**
Base Monthly Payments	2,840,631	2,840,631
	$5,988,381	$5,988,381

Rate Equalization Summary

Surface Water	20,000 AF	20,000 AF
Ground Water	35,000	35,000
	55,000 AF	55,000 AF

Calculation of Rate Equalization Groundwater Assessment

20,000 AF X $299.42	=	$5,988,381	$5,988,381
35,000 AF X 90.00	=	3,150,000	3,150,000
55,000 AF		$9,138,381	$9,138,381

$9,138,381/55,000-$90.00=76.15 X 35,000=$2,665,250**

RfSOLUTICN OF THE BOARD OF DIREUKKS / - j3
OF STOCKTON EAST WATER DISTRICT

RESOLUTION NO. 92-93- 20

SETTING A REVISED BASE MONTHLY PAYMENT
FOR PERIOD APRIL 1, 1993 TO MARCH 31, 1994,
PURSUANT TO THE SECOND AMENDED CONTRACT AMONG THIS DISTRICT
AND THE CALIFORNIA WATER SERVICE CO., THE CITY OF STOCKTON,
THE LINCOLN VILLAGE MAINTENANCE DISTRICT,
AND THE COLONIAL HEIGHTS MAINTENANCE DISTRICT,
PROVIDING FOR THE SALE OF TREATED WATER

WHEREAS, on September 25, 1987, the Stockton East Water District entered into a Second Amended Contract among the California Water Service Company, the City of Stockton, the Lincoln Village Maintenance District, and the Colonial Heights Maintenance District, providing for the sale of treated water; and

WHEREAS, the Board of Directors of the Stockton-East Water District has determined that the revised budgeted costs for the Contract period April 1, 1993 to March 31, 1994 should be as follows?

6A(1)	Debt Service	$3,611,022
	Debt Service Surcharge	310,364
6A(2)	Raw Water	102,301
6A(3)	Operation & Maintenance	2,527,533
6A(4)	Administration	174,115
6A(5)	Insurance	50,000
6A(7)	Reserve Fund Payment Pursuant to Paragraphs 8 & 9 of said Contract	35,000
6A(8)	Payment into the Water Treatment Facilities Reserve Fund	100,000
		$6,910,335; and

WHEREAS, paragraph 6D(3) of said Second Amended Contract states that Stockton East shall annually levy a municipal groundwater assessment, pursuant to its enabling legislation such that the cost of groundwater use is eguivalent to the cost of surface water use; and

WHEREAS, the revised 1993-94 budget estimates the amount of $6,149,471 to be paid from municipal groundwater assessments and base monthly payments as follows:

Municipal Groundwater Assessments (15,000 AE X $54.54)	$ 818,100
Base Monthly Payments	5,331,371
Total	$6,149,471

NOW, THEREFORE, BE IT RESOLVED, that pursuant to said Second Amended Contract, this Board hereby establishes the Revised Base Monthly Payment to be paid by the Contractors pursuant to said Contract for the period April 1, 1993 to March 31, 1994, at $5,331,371/12 = $444,280.92.

RESOLUTION NO. 92-93-20

SECRETARY'S CERTIFICATE

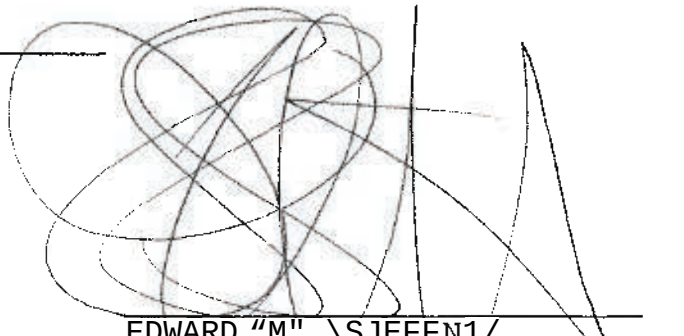
I, EDWARD M. STEFFANI, Secretary of the Board of Directors of the STOCKTON EAST WATER DISTRICT, Stockton, California, do hereby certify as follows:

The foregoing is a full, true and correct copy of a resolution duly adopted at a Regular (Regular/Special) Meeting of the Board of Directors of said District duly and regularly and legally held at the regular meeting place thereof on March 16, 1993, of which meeting all of the members of said Board of Directors had due notice and at which a majority thereof were present.

I have carefully compared the same with the original minutes of said meeting on file and of record in my office, and the foregoing is a full, true, and correct copy of the original resolution adopted at said meeting and entered in said minutes.

Said resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

Dated: March 16, 1993



EDWARD "M".\SJEFFN1/
Secretary of the fioard
STOCKTON EAST WATER DISTRICT

(SEAL)

2-RESCER

Attachment C.1. Example of Factory Certification for Propeller Meters

Propeller Meter

CERTIFIED TEST REPORT

CUSTOMER: KIRKPATRICK ASSOCIATES

MODEL NO: M0312

METER SERIAL NO: 12-10330

CONFIGURATION

METER INSIDE DIAMETER: 11.875

METER OUTSIDE DIAMETER: 12.25

TEST DATE: 11/21/2012

TEST FACILITY: Volumetric

IDEAL TEST CONSTANT: 1542

CALIBRATION DATA

	Tested TC	GPM	Accuracy
1	1546	2564	100.3

CERTIFIED BY: Paul Hobbs DATE: 11/26/2012

This calibration was performed on a gravimetric or volumetric test facility traceable to the National Institute of Standards and Technology, USA The estimated flow measurement uncertainty of the calibration facilities are Gravimetric +/- 0.15% Volumetric +/- 0.5%

McCROMETER
3255 WEST STETSON AVENUE
HEMET, CA 92545 USA
PHONE (951) 652-6811 / FAX (951) 652-3078
WEB SITE: http://www.mccrometer.com E-MAIL: info@mccrometer.com

Attachment C.2. Sample Meter Calibration Documents

M-5B

Calibration Report

McCROMETER

Serial Number: AG19-0920 Test Number: AG19-0920

Converter Serial Number: McMag3000

Model: G306-2-ITR9 Calibration Date: 11/15/2019

Report Date: 11/15/2019

Sold To: STOCKTON EAST WATER

Description: MC MAG 3000,6"

Notes:

Customer I.D.: 6.356 in
161 mm

KA: 1.5611
KZ: -889

Any difference between the customer specified application dimension and test pipe dimension is accounted for by the flow converter.
The reported velocities shown on this report indicate actual meter performance and are independent of the inside diameter used in the calibration.

Calibration Report

	Velocity (m/s) min	Velocity (m/s) max	PLBF Accuracy (as % of reading)
1	0.45	0.82	98.97
2	0.82	1.20	98.76
3	1.20	1.57	98.73
4	1.57	1.95	98.77
5	1.95	2.32	98.83
6	2.32	2.70	98.92
7	2.70	3.07	99.01
8	3.07	3.45	99.10
9	3.45	3.82	99.20
10	3.82	4.20	99.31

KL Values

KL00:	043720045
KL01:	105820107
KL02:	168860170
KL03:	230820232
KL04:	327000327
KL05:	000000000
KL06:	000000000
KL07:	000000000
KL08:	000000000
KL09:	000000000
KL10:	000000000
KL11:	000000000

Approved By:
Vince H. Morton
ID#: 117110

Test Fluid: Water

Instrumentation Traceability Kit Number: V0143

Standard Used: Secondary

Test Data

	Water Temperature (°C)	Test Time (seconds)	Air Temperature (°C)	Barometric Pressure (kPa)	Relative Humidity (%)	Viscosity (cP)	Average Rate of Flow (m3/sec)	Test Pipe Inside Diameter (in)
1	21.2	30.260	21.5	96.33	30	1	0.07791	6.060
2	21.1	88.704	21.5	96.33	30	1	0.06016	6.060
3	21.1	30.298	21.5	96.33	30	1	0.04282	6.060
4	21.1	30.354	21.5	96.33	30	1	0.02566	6.060
5	21.1	30.432	21.5	96.33	30	1	0.00841	6.060

This calibration was performed using standards traceable to the National Institute of Standards and Technology (NIST), USA. Certificates of traceability for the individual test measurements listed in this report are documented and serialized by the Test Stand Instrumentation Traceability Kit Number identified above and are available upon request. Combined Uncertainty to a 95% confidence level is developed for each test point according to the methods described in the ANSI/NCSL Z540-2-1997. Methods and procedures used in this calibration are in accordance with the latest revision of the McCrometer Flow Laboratory Technical Manual.

McCrometer, Inc. • 3255 West Stetson Avenue, Hemet, CA 92545, USA
Tel (951) 652-6811 • Fax (951) 652-3078 • Website: www.mccrometer.com
Hours: 8am – 4:30pm PST, Monday - Friday

Attachment C.3. Rubicon BladeMeter Data Sheet

BladeMeter™

RUBICON™

Overview

The BladeMeter is a major advance in valve technology. It is now possible to automatically deliver precise quantities of water at both high and low flow rates in pipelines using only gravity pressure and solar energy.

The BladeMeter's integrated actuation and meter controls and measures flow at the outlet end of a gravity pressure pipe. It modulates to maintain a constant flow rate, even when the supply pressure fluctuates. With remote control built-in, it can be remotely operated or pre-set to turn on and off automatically to deliver a constant and accurately measured flow rate and volume, day or night.

Its compact, all-in-one design ensures rapid installation, reliable operation and easy maintenance. Using only renewable energy, the BladeMeter has an extremely low cost of operation. Its unique actuation mechanism and large diameter reduces head loss, helps to prevent weed fouling and is easy to visually inspect, service and clean.

And by using Sonaray® flow measurement technology it measures accurately at high and very low flow rates, so it has the flexibility to deliver water at rates suited to a wide range of applications.

The built-in software provides the following control options:

Control objective		Valve action
Local	Position	Opens to a desired position and stays there
	Flow	Maintains a desired flow rate
Network*	Demand	Incorporates knowledge of pipe network dynamics and overall demand to maintain desired flow rates through multiple turnouts

* Network operation is available when used with other BladeMeters in a Rubicon Low Energy Pipeline Solution.

When used with Rubicon's Low Energy Pipeline Solution, the BladeMeter is able to manage large flows in situations where static head is frequently below 33' (14 PSI).

A TCC® product

The BladeMeter is one of the products making up a modular family of precision hardware and software called TCC (Total Channel Control®). TCC is an advanced technology set designed to improve the management and productivity of water in open canal and gravity pipeline distribution. Unlike traditional infrastructure, TCC products can interact and work together to help managers improve:

- the availability of water
- service and equity to users
- management and control
- health and safety for canal operators



Features

- Large 2' diameter for high flow gravity irrigation
- Fully submersible
- Wide flow measurement range
- Sonaray flow measurement accuracy of ±2.5%†
- Solar powered
- SCADA-ready communication system

An ideal solution for turnouts...

- Connected to hydrostatic (gravity) pressure pipes
- Connected to open canal supply networks
- That need to pass a wide range of flow rates
- Requiring remote operation and accurate metering
- That need to be fully accessible for easy maintenance







BladeMeter™

Local control pedestal

Each BladeMeter installation includes a robust pedestal that provides power and control to the valve and is a secure, weather proof housing for electronic components and batteries.

The pedestal also serves as a local user interface. A keypad and LCD display are located under the lockable pedestal lid, allowing farmers to monitor, or operators to control and troubleshoot on-site.

Valve control technology

The BladeMeter's drive mechanism is a nut and shaft system that uses opposing threads machined into a high grade stainless-steel shaft to provide positive drive for valve opening and closing. Together with integrated digital valve position sensing, the BladeMeter precisely modulates to deliver a required flow rate, even with fluctuating supply pressure.

The control plates are driven by a long-life brushless motor and gearbox located within a fully submersible housing and an integrated water detection sensor provides peace of mind against water ingress.

Rubicon's SolarDrive® technology – a purpose built integrated circuit board – manages valve positioning, solar power regulation, battery charge, fusing and the pedestal keypad interface.

Remote management

The BladeMeter can be managed remotely with Rubicon's SCADAConnect® software or third party SCADA systems. Authorized users can remotely set the BladeMeter to turn on and off automatically, view real-time and historical flow information and configure alarms that can be sent via text message to nominated mobile phones.

Low maintenance

The BladeMeter's compact, all-in-one design allows it to be maintained in the field with minimal tools, training, and easily replaceable parts.

- High quality components designed for long-life
- Unique dual-plate design helps prevent weed fouling
- Built-in on-site diagnostic software and remote alerts
- Control and meter components easily accessible for visual inspection



Local user interface



Keypad and display



Submersible motor housing



SCADAConnect® software

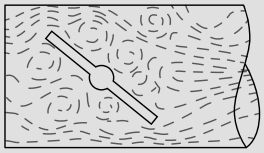
Unique low head loss design

Traditional butterfly valves use a circular disc in the flow path to control flow though the conduit. This creates substantial flow disturbance, resulting in head loss, particularly at lower flow rates when the valve is only open by a small amount. Many valves are inherently unstable at lower opening angles, which limits their ability to precisely control flows. The disc also forms an obstruction upon which debris can easily become wedged.

The BladeMeter's unique dual-plate design provides excellent hydraulic performance, minimizing flow disturbance and maximizing flow capacity. The controlplates sit downstream of the flow path and their contoured surfaces promote a smooth and symmetrical flow profile, making it ideal for gravity applications where it is essential to minimize head loss.

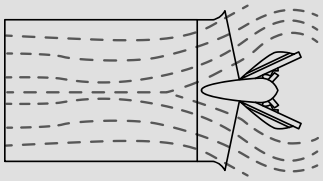
Additionally the dual plate design minimizes the opportunity for weeds and other debris to accumulate and clog the meter.

Traditional valve (Plan view)



Traditional valve designs, such as butterfly valves cause swirling eddies resulting in friction losses and create an obstruction for weeds and other debris to catch on

BladeMeter™ (Plan view)



The BladeMeter's control plates have been designed to minimize head loss by maintaining a uniform flow profile

BladeMeter™ components

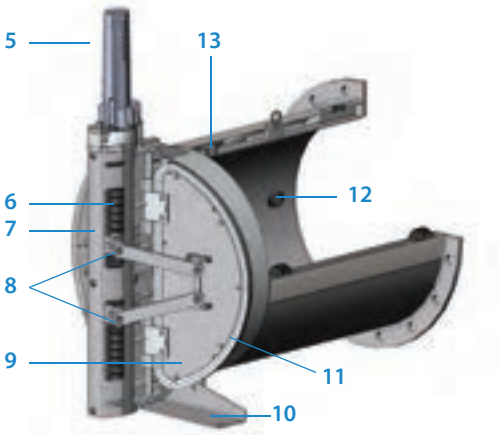
Control pedestal

1 Antenna
2 Solar panel
3 Hinged mast
4 Secure controller housing with LCD display

Meter/control unit

5 Motor housing with integrated water detection sensor
6 Drive shaft
7 Shaft cover
8 Actuator arms
9 Control plate
10 Foot
11 Seals
12 Sonaray sensors
13 Pipe-not-full sensor





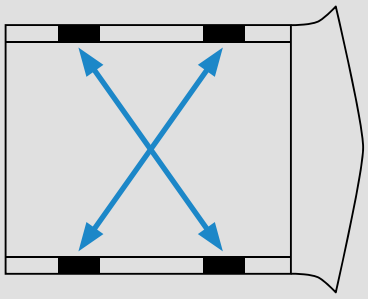
Sonaray® flow measurement technology

The BladeMeter employs Rubicon's Sonaray cross-path ultrasonic flow measurement technology. Four transducers on a horizontal plane send and receive ultrasonic pulses to determine velocity by measuring the transit time taken for the pulses to travel between transducers.

Cross-path measurement means that the control valve can be located directly downstream from the measurement area without affecting accuracy. It also eliminates the need for flow profile calibrations that are required for single-point, single-path and doppler flow meters.

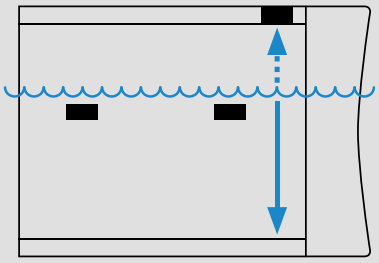
The BladeMeter also has a downward facing transducer to verify that the pipe is completely full, eliminating flow measurement error caused by partially full conduits.

Cross-path measurement (Plan view of measurement plane)



Four transducers implement cross-path transit time measurement to sample the velocity field.

Pipe-not-full sensor (Side view)

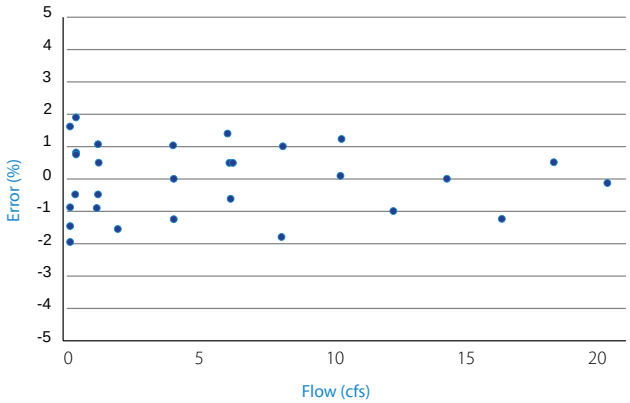


A downward-facing transducer transmits a signal which reflects off the bottom of the meter pipe. Any air in the to of the pipe prevents transmission and reception of the signal triggering an alarm.

The BladeMeter's Sonaray technology enables it to measure to within ±2.5% at flow rates ranging from 0.4 to 20 cfs.

BladeMeter™ flow measurement accuracy

(2' BladeMeter prototype relative to ABB Magmaster at Rubicon hydraulics laboratory)



BladeMeter™ specifications

General	
K-factor (head loss coefficient)	1.0 The BladeMeter's head loss characteristics are similar to those of a normal pipe exit
Data interface	Local display (4 line LCD), Modbus serial data interface
Units of measurement	User definable (metric/imperial (US))
Keypad language	English, Spanish, French, Chinese and Italian
Data tags	140+ available for integration into SCADA systems
Data storage	All volumetric usage is accumulated and backed up internally in non-volatile memory
Not full alarm	Alarm indicates when pipe is not full
Control	Local or remote via SCADA
Drive mechanism	Opposing thread nut and shaft system
Electronics	SolarDrive® power management and control technology housed in the local control pedestal. Each unit passes a 12 hour heat pre-stress and 100% functional test.
Motor	Brushless 12V DC
Valve position	Hall effect sensor
Seal performance	Less than 0.1 gallons / minute / foot of seal (exceeds AWWA C513 standard)
Actuation options	12V DC powered (solar); 120-240V AC powered
Typical stroke time	4-5 minutes
Enclosure rating	NEMA 6
Flow measurement	
Flow measurement range	0.4 to 20 cfs
Technique	Cross-path ultrasonic transit-time
Transit time measurement resolution	100 picoseconds
Measurement frequency	0.5 seconds
Accuracy	±2.5% † Accuracy of 2' BladeMeter verified by Rubicon Hydraulics Laboratory, February 2014
Velocity measurement range	Accuracy listed above is achieved at flow velocities greater than 1" per second
Sensor quantity	5 ultrasonic transducers
Calibration method	Factory pre-calibrated with simple in-field verification process
Material	
Meter body	Marine grade aluminum
Valve	Die cast aluminum
Hardware	Stainless steel
Drive shaft	Stainless steel
Drive nuts	Phosphor bronze
Seals	EDPM rubber (Durometer 50 (Shore A))
Transducer housing	Injection moulded xenoy
Power	
Power supply	12V sealed gel lead acid battery charged from solar panel or AC line power
Solar panel	85W monocrystalline
Batteries	2 or 3 12V 28 Ah sealed gel lead acid with temperature sensor (~5yr life, provides ~5 days of operation without solar or AC line power)
Communications	
Protocols	Modbus, DNP3, MDLC

Specifications subject to change

RUBICON™

Dimensions

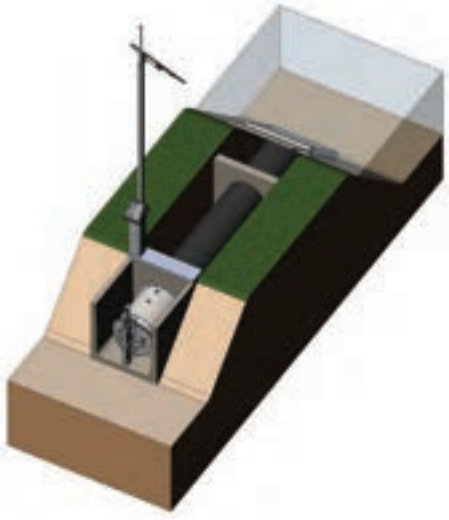
Model	A	B	C	D	E	F	Weight
	in	in	in	in	in	in	lbs
BM-2	51	46	18	30	32	24	265

A Height
B Length
C Min height from structure floor
D External diameter (excluding flange)
E External diameter (including flange)
F Internal diameter

Installation options

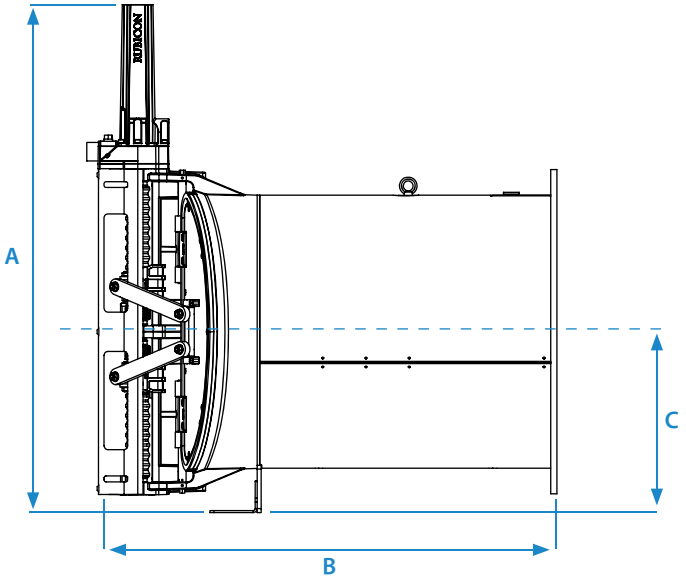


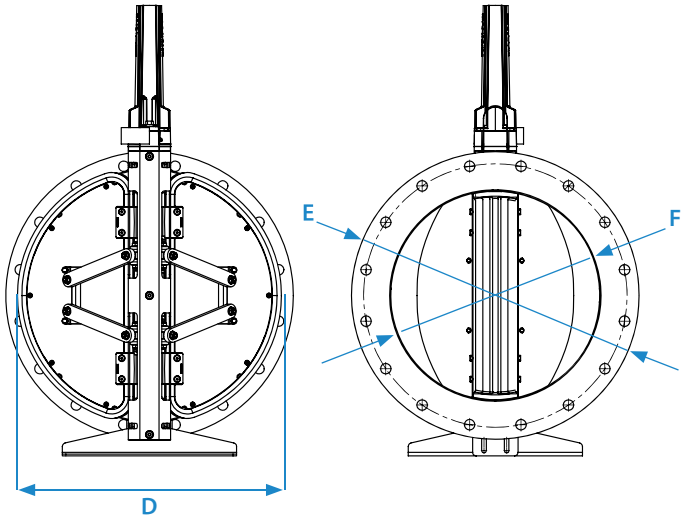
Pipe network turnout



Canal turnout

Front, rear and side views





About Rubicon Water

Rubicon Water delivers advanced technology that optimizes gravity-fed irrigation, providing unprecedented levels of operational efficiency and control, increasing water availability and improving farmers' lives.

Founded in 1995, Rubicon has more than 20,000 gates installed in TCC systems in 10 countries.

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California Contractor's License Number 984209.

www.rubiconwater.com

Attachment D District Sample Bills

Attachment D.1. 2023 District Sample Bill

2023 Final Bill

Stockton East Water District
6767 E. Main Street Stockton, CA 95215
P.O. Box 5157 Stockton, CA 95205
(209) 948-0333 Phone
(209) 948-0423 Fax
Website: www.sewd.net
E-mail: sewd@sewd.net

Account No.	[redacted]
Net Ag Acres	17.3
Billing Date	2/1/2024
Payment Due Upon Receipt	

Site: [redacted]

Pump ID: CR-83

[redacted]
ELK GROVE CA 95757

Description	Qty	Unit	Unit Charge	Water Rights (%)	Extended Amount	Invoice Total
Domestic Unit Charge	1.000	Each	$52.00		$52.00	$52.00
Cherries - Metered Surface Water	34.720	Acre Feet	$23.00		$798.56	$798.56
6 Meter Charge - SW - After 01-01-98"	1.000	Each	$105.00		$105.00	$105.00
Payment					($602.51)	
Payment					($353.05)	($955.56)

Meter Number	*Beginning*	*Ending*	*Net*
1	30.689	65.394	34.710

AMOUNT DUE $0.00

A PENALTY OF 5% WILL BE ASSESSED IF PAID AFTER 4/30/2024.

Please detach and return with payment.

Stockton East Water District
6767 E. Main Street Stockton, CA 95215
P.O. Box 5157 Stockton, CA 95205
(209) 948-0333 Phone
(209) 948-0423 Fax
Website: www.sewd.net
E-mail: sewd@sewd.net

2023 Final Bill

Account: [redacted]

Class: AG

Site Address: [redacted]

A PENALTY OF 5% WILL BE ASSESSED IF PAID AFTER 4/30/2024.

Payment Due Upon Receipt.

Thank You for Your Prompt Payment

[redacted]
ELK GROVE CA 95757

AMOUNT DUE $0.00

AMOUNT ENCLOSED

Attachment D.2. 2023 and 2024 Rate Ordinance, and Rate Equalization Groundwater Assessment and Base Monthly Payment

ORDINANCE NO.49
Adopted 04/11/2023

AN ORDINANCE ESTABLISHING MUNICIPAL GROUNDWATER ASSESSMENTS, AGRICULTURAL GROUNDWATER ASSESSMENTS, DOMESTIC GROUNDWATER ASSESSMENTS, CHARGES FOR STREAM-DELIVERED WATER AND CHARGES FOR OUT-OF-DISTRICT WATER FOR CALENDAR YEAR 2023

The Board of Directors of Stockton East Water District does hereby ordain as follows:

Section 1: The Municipal Groundwater Assessment for calendar year 2023 shall be Four Hundred Twenty-One Dollars and Fort-Five Cents ($421.45) for Rate Equalization and Three Dollars and Sixty Cents ($3.60) for base Groundwater Production Assessment for a Total Municipal Groundwater Assessment of Four Hundred Twenty-Five Dollars and Five Cents ($421.45 + $3.60= $425.05) per acre-foot of water.

Section 2: The Agricultural Groundwater Assessment for calendar year 2023 shall be Six Dollars and Fifteen Cents ($6.15) per acre-foot of water.

Section 3: The Domestic Groundwater Assessment for calendar year 2023 shall be Fifty-Two Dollars ($52.00) per Domestic Use Unit.

Section 4: The rate for sales of Stream-Delivered Water for calendar year 2023 shall be Twenty-Three Dollars ($23.00) per acre-foot of water.

Section 5: The rate for sales of Out-Of-District Water shall be the cost of water designated under the purchase contract PLUS a charge up to the New Melones Conveyance System wheeling rate of Twenty-Seven Dollars and Eighty-One Cents ($27.81) per acre-foot of water.

Section 6: This ordinance shall take effect thirty (30) days after its final passage, and shall be published at least once in a newspaper of general circulation within fifteen (15) days after its final passage, with the names of the members of the Board of Directors voting for and against the same.

AYES:	Atkins, Cortopassi, McGaughey, McGurk, Panizza, Sanguinetti, Watkins
NAYES:	None
ABSTAIN:	None
ABSENT:	None

Richard Atkins, President
Board of Directors

ATTEST:

Justin M. Hopkins, Secretary
Board of Directors

ORDINANCE NO.50
Adopted 04/02/2024

AN ORDINANCE ESTABLISHING MUNICIPAL GROUNDWATER ASSESSMENTS, AGRICULTURAL GROUNDWATER ASSESSMENTS, DOMESTIC GROUNDWATER ASSESSMENTS, CHARGES FOR STREAM-DELIVERED WATER AND CHARGES FOR OUT-OF-DISTRICT WATER FOR CALENDAR YEAR 2024

The Board of Directors of Stockton East Water District does hereby ordain as follows:

Section 1: The Municipal Groundwater Assessment for calendar year 2024 shall be Four Hundred Fifty-Nine Dollars and Twenty-Seven Cents ($459.27) for Rate Equalization and Three Dollars and Sixty Cents ($3.60) for base Groundwater Production Assessment for a Total Municipal Groundwater Assessment of Four Hundred Sixty-Two Dollars and Eighty-Seven Cents ($459.27 + $3.60= $462.87) per acre-foot of water.

Section 2: The Agricultural Groundwater Assessment for calendar year 2024 shall be Six Dollars and Thirty-Nine Cents ($6.39) per acre-foot of water.

Section 3: The Domestic Groundwater Assessment for calendar year 2024 shall be Fifty-Four Dollars ($54) per Domestic Use Unit.

Section 4: The rate for sales of Stream-Delivered Water for calendar year 2024 shall be Twenty-Three Dollars ($23.00) per acre-foot of water.

Section 5: The rate for sales of Out-Of-District Water shall be the cost of water designated under the purchase contract PLUS a charge up to the New Melones Conveyance System wheeling rate of Twenty-Seven Dollars and Eighty-One Cents ($27.81) per acre-foot of water.

Section 6: The rate for sales of Non-Agricultural Stream-Delivered water shall be Sixty Dollars ($60.00) per acre-foot of water.

Section 7: This ordinance shall take effect thirty (30) days after its final passage, and shall be published at least once in a newspaper of general circulation within fifteen (15) days after its final passage, with the names of the members of the Board of Directors voting for and against the same.

AYES: Atkins, Cortopassi, McGurk, Nakaue, Panizza, Sanguinetti, Watkins
NAYES: None
ABSTAIN: None
ABSENT: None

Richard Atkins, President
Board of Directors

ATTEST:

Justin M. Hopkins, Secretary
Board of Directors

Attachment E District Water Shortage Plan

Attachment E.1. Drought Management Plan

Supplemental Information for CA DWR Agricultural Water Management Plan

Drought Management Plan

Additional Documentation as Required by California Department of Water Resources and Executive Order B-29-15.

STOCKTON EAST WATER DISTRICT
PROVIDING SERVICE SINCE 1948

July 2017

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Attachment

Attachment A: District Rules and Regulations (See Attachment F 2014 Reclamation Water Management Plan pdf page 215) and Revised Rule 120)

1 Introduction

1.1 Purpose of Drought Management Plan

On April 1, 2015 Governor Brown signed Executive Order B-29-15, directing agricultural water suppliers to prepare an *Agricultural Water Management Plan* which consists of two parts: 1) a *Drought Management Plan*, and 2) a *Quantification of Water Demands*. The purpose of the drought management plan is to detail how water suppliers prepare for droughts and manage water supplies and allocations during drought conditions. This document is intended to serve as the additional documentation that Stockton East Water District (SEWD) must include with the United States Bureau of Reclamation (USBR) water management plan and submit to the California Department of Water Resources (DWR) to document compliance with specified requirements of the Executive Order.

As a Central Valley Project contractor, the District is required by USBR to prepare a water management plan in accordance with USBR criteria. SEWD's current USBR-approved plan was prepared under USBR's 2011 Standard Criteria. The District also prepares annual updates each year in compliance with the USBR criteria.

Senate Bill X7-7 (SBx7-7), the Water Conservation Act of 2009, mandated water conservation and measurement and reporting activities for certain agricultural water suppliers, including the preparation of water management plans. The provisions of SBx7-7 were incorporated in California Water Code §10828, which now allows agricultural water suppliers subject to the USBR water management plan process to submit their current accepted plan along with additional documentation to DWR to meet SBx7-7 requirements. SEWD prepared and submitted this additional documentation to DWR under Attachment R of the 2014 USBR Plan. Subject to Executive Order B-29-15, a Drought Management Plan must also accompany the USBR water management plan when submitted to the DWR as part of the Agricultural Water Management Plan. In addition, Executive Order B-29-15 requires the submission of water supply and demand data for 2013-2015.

1.2 District Background

Stockton East Water District, as currently structured, was formed in 1948 under the 1931 Water Conservation Act of the State of California. As such, SEWD is responsible for acquiring a supplemental water supply and developing water use practices that would secure a balance between the District's surface water and its customer's groundwater supplies.

From 1948 to 1963, the District focused its efforts on water resource planning by evaluating groundwater conditions and determining requirements for supplemental water. These intensive efforts by the District and other local agencies resulted in the construction of New Hogan Dam in 1964. The reservoir is owned and operated by the United States Army Corps of Engineers (USACE). The District's first supply of supplemental surface water was obtained through a contract with Reclamation, and a final agreement in 1970, which guaranteed 56.5% of New Hogan Reservoir's yield to the District, was put in place between SEWD and the Calaveras County Water District. SEWD is also the reservoir water master.

In 1971 by Special Act of the Legislature, District boundaries were expanded to include the entire Stockton urban area, and plans were initiated for a 30 million gallon per day drinking water treatment plant. In 1975, a District-wide election resulted in the approval of a $25 million bond to fund the new plant. The Dr. Joe Waidhofer Water Treatment Plant (DJW WTP) was constructed in 1977 and began operation in 1978. In 1979, the Independent Benefit Commission concluded

that the new drinking water treatment plant was a benefit to Stockton's planning areas. In 2005, annexed an additional 27,000 acres into the district. Today, SEWD's area encompasses approximately 143,300 acres.

From its formation until 1962, the District's basic financial structure was dependent upon property taxes. In 1963, the Governor of California signed a bill establishing the District's right to levy groundwater use fees and surface water charges. The District used the additional revenue to contract for New Hogan water. About this time, SEWD began registering wells within the district, while check dams were built on the Calaveras River and Mormon, and Mosher Sloughs to control surface irrigation water and promote groundwater recharge. The District also became actively involved in the pursuit of projects to mitigate significant groundwater issues, which included declining aquifer levels, pumping depressions under urban Stockton, and the continuing threat of saline intrusion in wells near the Delta.

Since its inception, SEWD has actively sought supplemental surface water from the American River via the Folsom South Canal. Reclamation directed the District to the Stanislaus River when they were applying for the water permits for New Melones Reservoir. Since the mid-1990's, SEWD has been receiving surface water supplies from the Stanislaus River to supplement its Calaveras River supply. SEWD is currently attempting to secure the right to divert a portion of the flood flows from the Calaveras River, and from Littlejohn, Shirley, Hood, and Rock Creek that can utilize the existing New Melones conveyance facilities.. The goal of this pursuit is to provide the sources of water needed to fully address the overdraft condition of the Eastern San Joaquin County Groundwater Basin.

Recently, East Bay Municipal Utility District built a costly alternative to their right to American River water diverted into the Folsom South Canal. This Freeport Regional Water Project was completed in 2010. San Joaquin County continues to pursue a permit for a portion of the American River flows. Conveying these flows into San Joaquin County could occur by wheeling through the Freeport Project or by completion of the Folsom South Canal.

In 1983, SEWD and Central San Joaquin Water Conservation District (CSJWCD) contracted with Reclamation for allocation of 75,000 and 80,000 acre-feet, respectively, from the New Melones Reservoir. This is known as the District's Central Valley Project contract. That same year, SEWD expanded its surface water distribution system for irrigation water by constructing a 16,000 gallon-per-minute diversion from Calaveras River and Mormon Slough to Potter Creek Under current Reclamation operation of New Melones, SEWD and CSJWCD are provided up to 155,000 acre-feet of water from New Melones annually.

In 1997, SEWD entered into a water transfer agreement with Oakdale Irrigation District (OID) and South San Joaquin Irrigation District (SSJID). This agreement allocates 8,000 to 30,000 acre-feet annually, based on New Melones storage and inflow as of April 1 of each year. The OID & SSJID contract period for the allocation of New Melones water to SEWD ended in 2009. This Agreement and shared ownership of Goodwin Dam have led to many opportunities for cooperative efforts to protect water rights and contracts of the Stanislaus River.

In 2001, SEWD completed the Farmington Groundwater Recharge and Seasonal Habitat Study in conjunction with the United States Army Corps of Engineers and other local agencies. The Farmington Study identified areas suitable for recharge and seasonal habitat development, evaluated recharge techniques, conducted pilot recharge tests, developed a final report and recharge guide, and recommended an implementation strategy for the phased Farmington Program.

In 2003, the District completed the Pilot Phase of the Farmington Program, which consists of 60 acres of recharge ponds and fields adjacent to the Dr. Joe Waidhofer Drinking Water Treatment Plant. The Demonstration Phase, which began in 2003, will investigate and construct up to 1,200 acres of recharge ponds and fields. To date, over 13 sites have been investigated and two sites are moving forward to a demonstration study. In 2006, construction began on another 30-acre recharge site at the drinking water treatment plant.

2 Water Shortage Allocation Practices and Policies

2.1 Current Practices and Policies

SEWD maintains Board adopted rules, ordinances, and regulations that govern water diversions, measurements, rates and rights. Full text on this information is explained in detail in Appendix F of the approved Reclamation Water Management Plan.

Riparian right users have first call on up to 13,000 acre-feet of water from New Hogan Reservoir. Through contract, the urban area is guaranteed 20,000 ac-ft of water, if supplies are available. Water is then allocated to all other surface water users. The agricultural water shortage plan for dry year or drought conditions is described below.

As Water Master of New Hogan Reservoir, SEWD assesses the water supply by April of each year. A sufficient volume to supply enough water for a full irrigation season is 152,000 to 161,000 acre-feet based on an irrigation demand of 3 feet per acre and the number of acres under cultivation. SEWD generally has sufficient water to withstand two to three dry years. If a water year has been identified as a dry year, SEWD asks its customers for voluntary reductions in use. If a second subsequent year is identified as a dry year, SEWD still requests voluntary reductions, but identifies these reductions as critical. A third subsequent dry year may result in continued voluntary reductions, or may require mandatory reductions—SEWD makes this determination at the beginning of the water year. The district informs its customers of the available water supply, and any need for reductions, through its newsletter, as well as postcard reminders and the SEWD website. A final option is to allow diversions only by riparian users and the water treatment plant.

In all water years, SEWD requests that its customers call the district in advance of diverting water, so that SEWD can adjust releases at the dam. Customers are asked to provide the following information 24 hours in advance of the diversion: location of diversion, name of owner or operator, beginning diversion time, pumping rate, and ending diversion time. In non-dry years, this request is voluntary. In dry years, the advance notice is mandatory, and the district may enforce penalties on customers who do not advise the district prior to their water use.

3 Drought Management Plan

3.1 Hydraulic Levels or Conditions

Urban and agricultural water users in the SEWD rely on a combination of surface water and groundwater to meet their water demands. As such, SEWD manages the surface water and groundwater supplies in its service area conjunctively. Since its inception, SEWD has aggressively sought to acquire supplemental surface water supplies for its customers and has been proactive in developing programs to augment and protect its service area groundwater.

SEWD obtains its annual surface water supply from two different sources (contractual agreements): New Hogan Reservoir and New Melones Reservoir. Water obtained from New Hogan Reservoir is distributed within SEWD by its New Hogan Water Conveyance System. Similarly, water obtained from New Melones Reservoir is distributed within SEWD by its New Melones Water Conveyance System. In general, most of the surface water used for agricultural irrigation in SEWD originates from New Hogan Reservoir. The balance of the agricultural water demands not met by available surface water each year is satisfied with pumped groundwater. The following sections provide a brief description of SEWD's conjunctive management of its surface water and groundwater supplies with respect to dry water years and long-term drought conditions.

New Hogan Reservoir Surface Water Supply

The New Hogan Reservoir has a capacity of 317,100 acre-feet (AF) and a 10-year average storage of 152,662 AF. Riparian water rights holders on the Calaveras River below New Hogan Dam have first priority for taking and using water from the Calaveras River. Annual riparian water use is estimated to be about 13,000 AF. The City of Stockton has a firm supply of 20,000 AF from the New Hogan Reservoir. The estimated total annual irrigation volume required to meet the agricultural water demands in SEWD range from 152,000 AF – 161,000 AF. The total annual supply available to SEWD and Calaveras County Water District during normal water years is about 84,100 AF. The annual use by Calaveras County Water District is typically between 3,500 to 3,700 AF. Therefore, in normal water years SEWD can rely on an annual supply of about 80,000 AF which is equivalent to the reservoir's operational safe yield. As the Water Master, SEWD assesses the water supply in New Hogan Reservoir by April of each year and determines how much water from the reservoir is available for sale to farmers in its service area.

New Melones Reservoir Surface Water Supply

As mentioned previously, SEWD contracted with USBR in 1983 for an annual allocation of 75,000 AF from the New Melones Reservoir. Annual water allocation amounts to SEWD are determined by USBR and are based on its March-September water forecast inflow and the February end-of-month storage in New Melones Reservoir each year and the terms of SEWD's long-term contract with USBR. Due to environmental flow requirements on New Melones Reservoir, annual allocations to SEWD from New Melones Reservoir have fluctuated from year-to-year from full allocation to zero allocation.

Groundwater Supply

The boundaries of SEWD are located within the Eastern San Joaquin Groundwater Basin (Basin), a subbasin of the greater San Joaquin Valley Groundwater Basin. During the 2010 water year,

agricultural groundwater pumping accounted for more than 90 percent of the irrigation requirement to satisfy crop water demands in SEWD. Long-term dependence of farmers on groundwater as the primary source of irrigation water has led to significant overdraft conditions in eastern San Joaquin County and a large groundwater depression east of Stockton.

To address the overdraft conditions and to improve water supply reliability in the region, the Eastern San Joaquin County Groundwater Basin Authority (GBA) was formed in 2001 as a joint powers authority comprised of the agencies (including SEWD) overlying the Basin. In 2005, SEWD adopted the Eastern San Joaquin Groundwater Basin Groundwater Management Plan prepared by the North-eastern San Joaquin County Groundwater Banking Authority. The plan objectives are to review existing groundwater management policies and programs in eastern San Joaquin County, and develop new policies and programs to ensure the long-term sustainability of groundwater resources in this area.

In 2014, the DWR California Statewide Groundwater Elevation Monitoring (CASGEM) Program identified the Eastern San Joaquin Subbasin as a high priority basin in need of a groundwater elevation monitoring program to track seasonal and long-term trends in groundwater elevations in the Basin. Early in the development of the CASGEM Program, the San Joaquin County Flood Control and Water Conservation District (SJCFCWCD) was designated as the entity to oversee groundwater elevation monitoring and reporting on behalf of the GBA. Currently, SJCFCWCD monitors groundwater elevations in 128 wells located throughout the Basin.

Also in 2014, the California Legislature passed the landmark Sustainable Groundwater Management Act (SGMA). Under SGMA, all basins designated as high or medium priority and critically overdrafted shall be managed under a groundwater sustainability plan enforced by a Groundwater Sustainability Agency (GSA). In 2016, SEWD adopted a resolution to become the GSA under the SGMA requirements for the area of the Basin for which its service area overlies. In 2017, SEWD entered into a Joint Powers Agreement (JPA) forming the Eastern San Joaquin Groundwater Authority to work to prepare the Groundwater Sustainability Plan for the basin. The ultimate objective of the SGMA process and the utility of monitoring data generated by the CASGEM Program is for SEWD as the GSA to sustainably manage its groundwater resources; while protecting existing surface water and groundwater rights within its boundaries. The structured approach required by the SGMA process will provide SEWD with the authority it needs to continue improving its conjunctive management of surface water, and groundwater in its service area under increasing uncertainty of future hydrologic conditions in the state (e.g., long-term droughts, climate change impacts).

3.2 Stages of Actions

Riparian right users have first call on up to 13,000 acre-feet of water from New Hogan Reservoir. Through contract, the urban area is guaranteed 20,000 acre-feet, if supplies are available. Water is then allocated to all other surface water users. The agricultural water shortage plan for dry year or drought conditions is described below.

As Water Master of New Hogan Reservoir, SEWD assesses the water supply by April of each year. A sufficient volume to supply enough water for a full irrigation season is 152,000 – 161,000 acre-feet. SEWD generally has sufficient water to withstand two to three dry years. If a water year has been identified as a dry year, SEWD asks its customers for voluntary reductions in use. If a second subsequent year is identified as a dry year, SEWD still requests voluntary reductions, but identifies these reductions as critical. A third subsequent dry year may result in continued voluntary reductions, or may require mandatory reductions—SEWD makes this determination at

the beginning of the water year. The District informs its customers of the available water supply, and any need for reductions, through its newsletter, as well as postcard reminders and the SEWD website. A final option is to allow diversions only by riparian users and the water treatment plant.

In all water years, SEWD requests that its customers call the District in advance of diverting water, so that SEWD can adjust releases at the dam. Customers are asked to provide the following information 24 hours in advance of the diversion: location of diversion, name of owner or operator, beginning diversion time, pumping rate, and ending diversion time. In non-dry years, this request is voluntary. In dry years, the advance notice is mandatory, and the district may enforce penalties on customers who do not advise the district prior to their water use. The postcard reminds customers of this penalty.

3.3 Operational Adjustments

The mission of SEWD is the management and protection of the groundwater supplies, and to provide a reliable supply of surface water to its urban and agricultural customers. SEWD attempts to achieve those goals by managing the surface water and groundwater supplies in its service area conjunctively.

During water years when surface water supplies from the New Hogan and New Melones reservoirs are ample, SEWD encourages its agricultural customers to purchase surface water to meet their irrigation demands in lieu of pumping groundwater (in-lieu recharge). SEWD has also promoted the use of surface water by expanding its conveyance system into areas of its service area where farmers traditionally pump groundwater. By using available surface water instead of pumping, farmers conserve the groundwater in storage that will then be available for use in years of limited surface water supply. In addition to in-lieu recharge, groundwater recharge also occurs passively as seepage losses in unlined rivers and canals of the SEWD conveyance system and as intentional recharge in percolation basins located on SEWD property. Operationally, conjunctive use management takes advantage of abundant surface water supplies during wet water years to decrease groundwater use and increase groundwater recharge, so that increased groundwater reserves can be more heavily relied on in dry years, or during long-term drought when surface water supplies are chronically limited.

SEWD operates two intentional recharge projects in particular: the North Site Groundwater Recharge Basins Program and the Farmington Groundwater Recharge Program. The North Site Program consists of a 60-acre recharge site located adjacent to the Dr. Joe Waidhofer Water Treatment Plant (DJW WTP). The recharge site of the Farmington Program is located below the Farmington Dam and is also 60-acres in size. Between 2003 and 2015, SEWD has recharged 54,889 AF of surface water through these two programs. SEWD is currently planning to expand the North Site Program by the addition of a recently purchased 230-acre parcel located adjacent to DJ WTP. In addition, SEWD continues to seek willing landowners to volunteer the use of their land to expand the recharge activities of the Farmington Program.

In 2003, SEWD received a Proposition 13 Groundwater Recharge Storage Construction Grant for the Peters Pipeline portion of the Farmington Groundwater Recharge Program. The Peters Pipeline receives surface water from the Lower Farmington Canal (i.e., part of New Melones Water Conveyance System) and conveys it to the recharge site at DJW WTP. In dry years when surface water supplies are limited, the recharged groundwater can be pumped from the site and treated for use in the Stockton urban area. Also, to improve distribution efficiency, SEWD has installed a Supervisory Control and Data Acquisition system on its agricultural surface water

conveyance system for the purpose of monitoring, and ultimately minimizing any spills or system end losses that could occur during any water year type.

Overall, the recharge programs (in-lieu, conveyance seepage losses, intentional recharge) and improvements in conveyance system distribution efficiency (spill reductions, Peters Pipeline) all contribute to improving the conjunctive management of surface water and groundwater supplies by SEWD.

3.4 Demand Management

SEWD makes available several programs to farmers that promote on-farm water conservation and water use efficiency. First, using grant funding from USBR, SEWD has provided on-farm irrigation and drainage system evaluations free to its customers, since 1999. The irrigation and drainage system evaluation program is voluntary, but is encouraged and supported by SEWD. Second, SEWD makes available real-time and normal irrigation scheduling and crop evapotranspiration (ET) information. A list of crops and crop evapotranspiration (ETc) values was compiled specifically for SEWD to provide growers with a resource for irrigation management. Third, SEWD currently offers a Surface Water Incentive Program. This program utilizes water pricing to encourage farmers to switch from pumping groundwater to meet their crop water demands to purchasing surface water from SEWD. While not directly lowering on-farm water use, farmers using surface water when available rather than pumping groundwater supports SEWD's overall mission of protecting basin groundwater resources through conjunctive use management.

3.5 Alternative Water Supplies

The District provides surface water for both agricultural and urban uses, and encourages the continued expansion of surface water diversions instead of pumping groundwater for the benefit of the groundwater basin. By providing surface water for agricultural irrigation, the District supports a reliable water supply for a San Joaquin County's agricultural industry.

From 1948 to 1963, SEWD focused its efforts on water resource planning by evaluating groundwater conditions and determining requirements for supplemental water. These intensive efforts on the part of SEWD and other local agencies resulted in the construction of New Hogan Dam in 1964. SEWD signed a contract for supplemental surface water with the United States Bureau of Reclamation in 1970. Also in 1970, SEWD and Calaveras County Water District signed a contract, which assigned SEWD 56.5 percent of the yield from New Hogan Reservoir.

In 1983, SEWD and the Central San Joaquin Water Conservation District contracted with USBR for annual allocations of 75,000 and 80,000 acre-feet (ac-ft), respectively, from New Melones Reservoir. Also in 1983, SEWD expanded its surface water irrigation capabilities by constructing the 12,000 gallons per minute Potter Creek Pump Facility to facilitate diversions from New Melones Reservoir. Construction of the New Melones Conveyance System, in anticipation of a new water supply from the New Melones Reservoir, was completed in 1994.

The New Melones Conveyance System, which supplies water to the Dr. Joe Waidhofer WTP, consists, sequentially, of a diversion structure at Goodwin Dam, the Goodwin Tunnel, the Upper Farmington Canal, Shirley Creek, Hoods Creek, Rock Creek, the Lower Farmington Canal, and Peters Pipeline to the existing 54-inch-diameter Bellota Pipeline, or to the 6-mile Peters Pipeline extension. A 78-inch-diameter section of Peters Pipeline extends 3 miles from the terminus of the Lower Farmington Canal to the existing 54-inch-diameter pipeline from Bellota to the WTP.

Under this Groundwater Recharge Storage Project, SEWD built a six-mile, 60-inch diameter extension to the Peters Pipeline. Construction on the Peters Pipeline Project was completed in 2006.

This extension provides water for agricultural irrigation, groundwater recharge, and drinking water treatment. In dry years, well water resulting from wet year recharge is pumped into the pipeline for use in the Stockton urban area. The availability of both the Bellota Pipeline and the Peters Pipeline extension gives SEWD redundancy and flexibility in supplying water to the Dr. Joe Waidhofer WTP. This conjunctive use project enables the treatment of a greater percentage of available surface water, and benefits the groundwater basin by banking water in-lieu of pumping it by the construction of the 6-mile extension to the Peters Pipeline.

Another project, The Farmington Groundwater Recharge Program is led by SEWD, in partnership with the Sacramento division of the US Army Corps of Engineers. SEWD created the Farmington Groundwater Recharge Program with the intent of replenishing the aquifer to help ensure future groundwater supply and protect against further saltwater intrusion. The program primarily benefits the regional aquifer, or groundwater basin. As the program is implemented, local groundwater availability and quality will also improve as aquifer levels stabilize. Water quality and abundance will also improve in the Calaveras River with the recharging of the groundwater aquifer.

The goal of the program is to recharge an average of 35,000 acre-feet of water annually into the Eastern San Joaquin Basin by (1) directly recharging surface water to the groundwater aquifer on 800 to 1,200 acres of land and, (2) increasing surface water deliveries in-lieu of groundwater pumping to reduce overdraft and establish a barrier to saline water intrusion. Spreading water on agricultural fields and other recharge basins provides seasonal migratory waterfowl habitat.

A network of agricultural wells is needed to pump stored surface water from recharge efforts and assure reliability of water supply in years when ample surface water is not available. Based on the hydrologic history of the region, more average to wet years occur than below average to critically dry years. Therefore, over the long-term, if the aquifer is recharged during all average to wet years, and groundwater pumping reliance is limited to below average to critically dry years, aquifer levels are expected to rise and stabilize.

The Farmington Groundwater Recharge Program identifies areas suitable for recharge and seasonal habitat development, evaluates recharge techniques, and conducts pilot recharge tests. SEWD is continuing to identify and develop new recharge sites for this phased program. Available surplus water from SEWD's conveyance systems is diverted into recharge cells at the project site. Stored surface water would be pumped from the aquifer for agricultural, municipal, and industrial use.

3.6 Coordination and Collaboration

Through a web presence and several scheduled publications. SEWD coordinates and collaborates with its customers, and surrounding agencies. SEWD's website contains contact information regarding District staff and programs along with links to support programs for agricultural water users. Specific publications that SEWD publishes include Water Supply Conditions, Dam Removal Schedule, Ag Report, Water Rates, High and Dry Book, useful links, and a newsletter.

The Water Supply conditions provides timely information regarding reservoir conditions at both New Hogan and New Melones. Information includes status of storage and projected storage as

information becomes available. Irrigators in turn use this information to manage their use of water.

3.7 Revenue and Expenditures

Stockton East Water District charges on a per acre foot basis. As part of its rate structure, the District charges a higher rate for surface water than for ground water. Furthermore, the District has access for two surface water sources, which are New Melones and New Hogan Dam. During 2013 and 2014, the District's surface water supply was fairly constant despite the drought and thus revenues were also fairly constant.

However, in 2015, SEWD received zero allocation from New Melones Reservoir.. As a result, surface water deliveries were significantly reduced and consequently total revenues were adversely affected by as-much-as 23%.

The District's operational expenses have remained relatively constant, and ongoing maintenance is performed throughout the year for both surface water conveyance systems. From 2013 thru 2015, revenues have sufficiently covered operational expenses.

On an annual basis, the District evaluates the sufficiency of rates as-well-as possible increases under its enabling legislation and as otherwise required by California law. Therefore, the District will continue to monitor financial results to anticipate future necessary changes to its rate structure.

4 2013-2015 Water Supply and Demand Data

As required under Executive Order B-29-15

The following tables provide water supply and use information for SEWD for the period of 2013-2015. Table 1 is a rollup of supporting tables based on DWR's 2015 AWMP Guidebook.

Following Table 1 the supporting tables are listed in numeric order used by DWR.

Table 1. Water budget summary for 2013-2015.

Water Budget Summary (AF)			
Water Accounting	2013	2014	2015
1 Water Supplies (refer to Worksheet 47)	227,507	281,631	227,353
2 Water Uses/Demand (refer to Worksheet 44)	205,202	199,908	190,979

Worksheet 21. Agricultural Crop Data For 2013		
Crop	Total Acreage	Total Crop Water Needs (AF)
Walnut	25,169	70,472
Cherries	11,033	30,893
Vineyard	4,819	13,492
Tomatoes	1,168	3,271
Pasture	1,804	5,052
Apples	1,037	2,904
Corn	1,686	4,721
Other	8,139	21,155
TOTAL	54,855	151,960

Worksheet 21. Agricultural Crop Data For 2014		
Crop	Total Acreage	Total Crop Water Needs (AF)
Walnut	26,708	74,782
Cherries	11,021	30,858
Vineyard	5,174	14,486
Tomatoes	1,209	3,384
Pasture	1,760	4,928
Apples	1,013	2,837
Corn	1,487	4,164
Other	8,466	21,536
TOTAL	56,837	156,975

Worksheet 21. Agricultural Crop Data For 2015		
Crop	Total Acreage	Total Crop Water Needs (AF)
Walnut	28,142	78,797
Cherries	11,108	31,103
Vineyard	5,517	15,447
Tomatoes	1,415	3,962
Pasture	1,345	3,766
Apples	1,008	2,821
Corn	782	2,190
Other	8,796	22,822
TOTAL	58,113	160,909

Worksheet 24. Environmental Water Uses. not shown – no uses.
Worksheet 25. Recreational Water Uses. not shown – no uses.

Worksheet 26. Municipal/Industrial Water Uses (AF)				
Municipal/Industrial Entity	Representative Year	Planning Cycle		
		2013	2014	2015
Municipal Entity		46,087	37,600	2,513
		3,051	1,781	25,428
Industrial Entity				
TOTAL		49,138	39,381	27,941

Worksheet 27. Groundwater Recharge Water Uses (AF)				
Location/ Groundwater Basin	Method of Recharge	Planning Cycle		
		2013	2014	2015
Commitments/Dedicated	Percolation	4,104	3,552	2,129
TOTAL		4,104	3,552	2,129

Worksheet 28. Transfers and Exchanges Water Uses. not shown – no uses.
Worksheet 29. Other Water Uses. not shown – no uses.

Worksheet 40. Surface Water Supplies (AF)			
Source	2013	2014	2015
CVP Class 1 Contracts	8,037	8,235	143
Pre-1914 Rights			
SWP			
Local Surface Water	70,781	62,085	17,189
Upslope Drain Water			
Transfers & Exchanges			
Recycled Water			
Other [Identify]			
Total	78,818	70,320	17,332

Worksheet 41. Groundwater Supplies Summary For 2013-2015 (AF)						
	2013		2014		2015	
Month	Supplier	Customers	Supplier	Customers	Supplier	Customers
January					0	
February					0	
March					0	
April					0	
May					184	
June					206	
July					848	
August					949	
September					967	
October					1015	
November					972	
December					841	
sub-total		122,999		126,481	5982	140,357
Total	122,999		126,481		146,340	

Worksheet 42. Effective Precipitation Summary (AF)			
	Planning Cycle		
Month	2013	2014	2015
TOTAL	25,691	84,829	63,682

Worksheet 44. Quantify Water Use (AF)			
Water Use	2013	2014	2015
Crop Water Use (Worksheet 21)			
1 Crop Evapotranspiration	151,960	156,975	160,909
Conveyance & Storage System			
2 Leaching			
3 Cultural Practices			
4 Conveyance seepage			
5 Conveyance evaporation			
6 Conveyance operational spills			
7 Reservoir evaporation			
8 Reservoir seepage			
Environmental Use (Consumptive)			
9 Environmental use – wetlands (Worksheet 24)			
10 Environmental use – Other (Worksheet 24)			
11 Riparian vegetation (Worksheet 24)			
12 Recreational use (Worksheet 25)			
Municipal and Industrial			
13 Municipal (Worksheet 26)	49,138	39,381	27,941
14 Industrial (Worksheet 26)			
Outside the District			
15 Transfers or Exchanges out of the service area (Worksheet 28)			
Conjunctive Use			
16 Groundwater recharge (Worksheet 27)	4,104	3,552	2,129
Other (Worksheet 29)			
Subtotal	205,202	199,908	190,979

Worksheet 47. Quantify Water Supplies (AF)			
Water Supplies	Planning Cycle		
	2013	2014	2015
1 Surface Water (Worksheet 40)	78,818	70,320	17,332
2 Groundwater (Worksheet 41)	122,999	126,481	146,340
3 Annual Effective Precipitation (Worksheet 42)	25,691	84,829	63,682
4 Water purchases			
Subtotal	227,507	281,631	227,353

Attachment A

District Rules and Regulations

(see Attachment F from the 2014 USBR Plan; note Rule 139 repealed)

and

Revision of Rule 120

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RULE NO. 120
ADOPTED: 02/15/1977
REVISED: 06/24/2014

MANDATORY REQUIRED NOTICE TO DISTRICT BY OWNER OF DIVERSION OF STREAM DELIVERED WATER

Whereas, the Board of Directors hereby finds the necessity to revise Rule No. 120 by incorporating Rule No. 132 (Stream Diversion Call-In Rule; adopted 04/07/1986) and Rule No. 139 (Regulating Waste of Surface Water; adopted 04/21/1992) for the purpose of correcting contact information and outlining consequences for failure to follow mandatory notification procedures for the diversion of stream delivered water; and

Whereas, the Act authorizes the Board to make such Rules and Regulations as it deems necessary and proper for carrying out the provisions of the Act; and

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE STOCKTON EAST WATER DISTRICT HEREBY REVISES RULE NO. 120 AS FOLLOWS:

A. Mandatory Notification Required. Any person desiring to divert surface water provided by the District shall first inform the District at its office (6767 East Main Street, Stockton, California), at least forty-eight (48) hours prior to the start of such diversion. The District will receive such notice 7 days a week at the following numbers: Monday through Friday (8:00 a.m. to 5:00 p.m.) 209-948-0333; all other times, 209-469-3335 or online at www.sewd.net. The following information must be provided: name, phone number, pump ID number, diversion rate, beginning date/time, end date/time and run time.

B. The objective of Paragraph A is to avoid waste of water, which will cause loss of a valuable resource in limited supply, affecting the District and all other agricultural irrigators in the District, in an amount which cannot be accurately determined but shall be conclusively presumed to cause loss of $500 worth of water.

C. For the first such notification failure by any person, such person will be charged for $100 worth of water, and such amount will be added to such person's account with the District.

D. For the second such notification failure by any person, that person will be charged for $200 worth of water, and such amount will be added to such person's account with the District.

E. For the third and any subsequent such notification failure by any person, that person will be charged for the full $500 worth of water, conclusively presumed to be wasted, and such amount will be added to such person's account with the District.

F. Upon determination of any notification failure, the District shall notify the person who failed to follow this Rule.

G. The amount added to such person's account shall be collected as part of such person's account in the manner provided in the Act.

H. Any person charged under this Rule may appeal to the District's Board of Directors which may waive any charge imposed by this Rule, which would be inequitable under the circumstances the Board of Directors determines.

I. Diverters upon request of District shall provide District with a monthly irrigation plan to permit District to forecast irrigation demand. Diverters shall follow the plan as closely as possible.

J. Rule Nos. 102, 132 and 139 of this District are hereby repealed.

Attachment E.2. Urban Water Shortage Contingency Plan

URBAN WATER SHORTAGE CONTINGENCY PLAN

FOR

STOCKTON EAST WATER DISTRICT

March 2021

Prepared By:

Provost & Pritchard Consulting Group

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1 - PURPOSES AND PRINCIPLES OF PLAN

The purpose of the Stockton East Water District (SEWD or District) Urban Water Shortage Contingency Plan (WSCP) is to provide a methodology for analyzing water supply reliability, establishing water shortage stages, identifying appropriate response actions, and documenting protocols for implementing the WSCP. This WSCP was prepared according to requirements in Sections 10632 & 10635 of the California Water Code. Certain components of the WSCP, such as water use restrictions and enforcement, are not applicable to SEWD since they provide wholesale water. The District's Urban Contractors also have their own Water Shortage Contingency Plans applicable to their customers.

2 - PROCEDURES FOR CONDUCTING ASSESSMENT

Decision Making Process

The District provides wholesale treated water to the City of Stockton, California Water Service Company, and San Joaquin County, collectively called the Urban Contractors. The District policy has been to provide as much treated surface water to the urban area as possible because of the danger of saline intrusion into the groundwater basin from the Delta. The percentages and amounts of entitlements to each Urban Contractor are calculated annually. When the District declares a supply shortage, all Urban Contractors receive a uniform percentage reduction from their contractual allocation. The District can only deliver what is available. Any deficiencies in treated water deliveries from the treatment plant are reflected in additional groundwater pumping by the contractors to make up the difference. It is the Urban Contractors' responsibility to implement water use restrictions from their customers during a water shortage.

The following general process is performed in assessing water supplies and demands and determining urban water deliveries.

1. Urban Contractors provide their estimated demands for a calendar year each preceding fall.
2. Annual crop water demands are estimated from the District's previous Annual Crop Report.
3. Estimated surface water allocations are provided for the New Melones Reservoir, New Hogan Reservoir, and District's agreement with Central San Joaquin Water Conservation District by the Spring each year.
4. Groundwater capacity is estimated by the number of operational wells and recent pumping data.
5. Per agreement with Urban Contractors, minimum of 20,000 ac-ft/yr is used for urban demands.
6. If total supplies are not adequate to meet all urban and agricultural demands, agricultural deliveries may be reduced, as long as there are adequate groundwater supplies to meet demands while maintaining a sustainable groundwater supply.
7. If demands are significantly higher than supplies, then groundwater wells and water transfers may be used to augment supplies.

Quantification of Water Supply

The District has three water supplies: New Hogan Reservoir, New Melones Reservoir, and groundwater. Following are discussions on how available water supplies are quantified.

New Hogan Reservoir (Calaveras River)

The District receives water from the New Hogan Project pursuant to an August 25, 1970 Contract among the USBR, the District, and Calaveras County Water District (CCWD). The Contract allocates 56.5 percent of the yield from New Hogan Reservoir to the District, and the remaining 43.5 percent to CCWD. The total annual supply available is approximately 84,100 ac-ft/yr in normal water years. The Allocation Contract also provides that any water not used by CCWD can be used by the District. At the current level of CCWD use, the District can rely on about 83,000 ac-ft/yr of supply from the New Hogan Project in normal water years under safe yield operation. If CCWD maintains its percentage entitlement (43.5 percent) and exercises it, the District's share would be reduced. The District is the water master and controls New Hogan Dam releases for irrigation and municipal use for the District and CCWD during non-flood control periods. The United States Army Corps of Engineers (USACE) operates the dam for flood control.

New Melones Reservoir (Stanislaus River)

The District receives water from the New Melones Project pursuant to a December 1983 Contract with USBR allocating the District 75,000 ac-ft annually. New Melones Reservoir is a part of the Central Valley Project (CVP), receives its water from rain and snowmelt runoff, and has a capacity of 2.4 million ac-ft. It is located approximately 40 miles east of Stockton, north of State Highway 120 in Stanislaus County. Central San Joaquin Water Conservation District (CSJWCD) also has a water supply contract with USBR for the New Melones Project. Together the District and CSJWCD are entitled to up to 155,000 ac-ft of water from New Melones Reservoir annually. Water allocation amounts are based on the March-September water forecast and the February end of month storage in the New Melones Reservoir each year. This water is subject to cutbacks based on the USBR's overall CVP operations.

In 2014, the District entered into an agreement with Central San Joaquin Water Conservation District (Central) by which Central permanently assigned to the District, for the benefit of the City of Stockton and Cal Water, 15,000 ac-ft per year of firm water Central is entitled to receive under its existing contract with the USBR. Central takes their 80,000 ac-ft contract amount before SEWD receives it's allocated 15,000 ac-ft, but this occurs in all years except some years of a multi-year drought.

Groundwater

The District has five wells that are only used during operational emergencies or severe droughts. The capacity of the wells was estimated to be 13,700 ac-ft/yr in 2020. The capacity available each year is based on the number of wells operational and recent pumping data.

Existing Infrastructure Constraints

Primary infrastructure includes a 65-MGD water treatment plant, five groundwater wells, New Melones Dam and New Hogan Dam, and conveyance facilities that bring water from the dams to the water treatment plant.

Water Treatment Plant. The Water Treatment Plant has six backup generators so it can continue operating during a power outage. The Water Treatment Plan may temporarily be down in case of malfunction or other operational problem.

Groundwater Wells. The District operates five wells for use during severe droughts or operational emergencies related to the dams or conveyance facilities.

Dams. New Hogan Dam and New Melones Dam are owned and managed by the Federal government. Consequently, infrastructure problems at either facility are outside of the control of SEWD. If problems at either facility restricts water supplies, then the District can use their wells to provide a temporary water supply.

Conveyance Facilities. All surface water is delivered to the water treatment plant and to the Urban Contractor connections by gravity through a series of creeks, diversion structures, and canals. No power is needed for conveyance. If the conveyance facilities experience damage or malfunctions that limit water deliveries, then the District can use their wells as a temporary water supply.

3 - WATER SHORTAGE STAGES

The Water Code lists six standard Water Shortage Stages for use in WSCPs, each increasing gradually by 10% up to the highest level which is a 50+% reduction. These stages are generally not applicable to SEWD since they provide a wholesale supply and have limited mitigation options. Further, due to a reliable water supply, aggressive responses are only needed in extreme water shortages.

Table 1 summarizes four supply reduction conditions that align better with the District's response actions described in the following section:

Table 1: Water Shortage Stages

Stage	Period	Supply Reduction	Water Supply Condition
1	Long-term	0%-50%	Water Supply Shortage
2	Long-term	50%-75%	Severe Water Supply Shortage
3	Long-term	75+%	Critical Water Supply Shortage
4	Short-term	>50%	Severe Water Supply Shortage

Notes:
1 – Short term conditions occur for 45 days or less and may be attributed to infrastructure, water quality, or power issues, as well as hydrologic conditions. Long-term conditions are greater than 45 days and are typically due to hydrologic conditions.

4 - SHORTAGE RESPONSE ACTIONS

Response Actions by Water Shortage Stage

The District is a wholesaler of treated water and has no authority over mandatory prohibitions on water use. Any resolution or ordinance to end users would be issued by the Urban Contractors. The

District, however, can take a few actions during water shortages to improve water supply conditions. These are described below.

1. Water Conservation Education. The District funds and supports water conservation education through the Stockton Area Water Suppliers group. These education programs could potentially be expanded or re-focused on specific topics during a water shortage.
2. Reduce Agricultural Water Deliveries. A primary method to reduce surface water use is to decrease water deliveries to agricultural customers. This method has been successfully used in the past. The growers practice conjunctive use and rely on groundwater to supplement surface water, especially during dry periods. SEWD performs both in-lieu and direct recharge to sustain groundwater levels and is developing a long-term recharge program that will help ensure sustainable groundwater supplies. This will allow growers to accommodate reduced surface water deliveries in dry years through higher groundwater pumping. This method is often used; however, the District still strives to meet all of the urban and agricultural water demands each year and tries to minimize surface water cutbacks to agricultural customers.
3. Pumping Groundwater. The District has five wells that are only used during operational emergencies or severe droughts. They were used in 2015 and 2016 due to a serious multi-year drought. The well water is delivered to the water treatment plant and conveyed to the Urban Contractors.
4. Water Transfer Purchases. Water supplies could be augmented through water transfers. However, any such transfer would likely be on a temporary annual basis. While SEWD may seek such transfers in future droughts, they are not guaranteed.

Table 2 lists the Response Actions that can be taken during each Water Shortage Stage.

Table 2: Response Actions During Water Shortages

Stage	Period	Supply Reduction	Response Actions
1	Long-term	0%-50%	Expand/re-focus water conservation education Reduce deliveries to agricultural customers
2	Long-term	50%-75%	Expand/re-focus water conservation education Reduce deliveries to agricultural customers Pump groundwater from District wells
3	Long-term	75+%	Expand/re-focus water conservation education Reduce deliveries to agricultural customers Pump groundwater from District wells Water transfer purchases
4	Short-term	>50%	Expand/re-focus water conservation education Reduce deliveries to agricultural customers Pump groundwater from District wells

Locally Appropriate Supply Augmentation Actions

Locally appropriate supply augmentation actions are pumping groundwater from District wells and water transfer purchases. These are discussed above.

Locally Appropriate Operational Changes
During a drought, operational changes to the water treatment plant may be needed to accommodate different mixtures of the three water supplies (New Hogan, New Melones, and groundwater). In addition, the District may reduce intentional groundwater recharge to preserve water for customer demands.

Gap Between Supply and Demand
Wells. The District's wells have an annual capacity of about 13,700 ac-ft as of 2020. The District also plans to construct one new well every five years, adding an additional 2,400 ac-ft/yr capacity with each new well.

Water Transfers. The supply from a water transfer will vary based on the amount purchased. Surplus waters are often limited in supply or not available at reasonable costs during droughts. However, in 2016, SEWD did purchase 10,000 ac-ft from Oakdale Irrigation District during a severe drought.

5 - COMMUNITY OUTREACH

Current and Predicted Shortages
If a water shortage occurs, SEWD will inform the Urban Contractors as soon as feasible. The Urban Contractors are responsible for notifying local residents of specific water use restrictions, water waste penalties, and water conditions specific to their individual agency.

Shortage Response Actions
SEWD notifies the Urban Contractors on a regular basis about the availability of water supplies. They will generally be notified if wells or water transfers are used to augment supplies and how it will impact their deliveries.

6 - LEGAL AUTHORITY OF THE PLAN

This WSCP adheres with the California Water Code 10632. This document is also required by State law as outlined in the Water Code, which states that, "Every urban water supplier shall prepare and adopt a water shortage contingency plan as part of its urban water management plan…" (WC 10632). As an established California Water District, SEWD has the authority to implement the WSCP, declare water shortages, and implement shortage response actions.

Declaring a Water Shortage Emergency
SEWD will follow the protocols outlined in this Plan should it become necessary to declare a water shortage emergency. The process will follow the pertinent sections of the California Water Code and be noticed for a public hearing, typically at a Board of Directors meeting.

Supplier Coordination
The District Manager or designated staff will be available and responsible for coordinating with the Urban Contractors if there will be a proclamation of a water shortage.

7 - REVENUE REDUCTIONS AND EXPENSE INCREASES

The various revenue sources available to the District during droughts include, but are not limited to water sales, assessments, and other non-operating revenues such as grant funding when available. In addition, special outside funding sources may be made available to water agencies during a water emergency or drought.

Each year a budget is adopted at a public hearing to determine the amount of revenue needed from the Urban Contractors to meet treatment plant related expenses for the succeeding year. Revenue requirements are adjusted for over or under collection from the previous year, which are generally related to the amount of water treated. At the end of each year, budgeted expenditures are compared with actual expenditures. Credits are applied to retailer accounts in the event that actual expenditures are less than budgeted expenditures.

Each year a review is conducted to compare increases in District expenses to revenues, in order to determine if rate adjustments may be necessary to help ensure an adequate budget for operations and maintenance expenses.

Potential Revenue Reductions and Expense Increases

Potential revenue reductions in droughts may include but are not limited to:

- Decreased water sales to the Urban Contractors
- Decreased water sales to agricultural customers

Potential expense increases in droughts may include but are not limited to:

- Additional costs for groundwater pumping
- Purchases of higher priced transfer water

Mitigation Actions

To assure adequate operating budget, the District strives to maintain dry year reserves. One reserve account is provided for agricultural supply and another account is provided for municipal and industrial supply. Each year a contribution is made to each reserve fund based upon the quantity of water delivered in that year to irrigators and Urban Contractors. The amount in the reserves is limited based on the District's enabling legislations. The reserve accounts help to keep the District financially viable during droughts when water sales are lower.

8 - MONITORING AND EVALUATING THE PLAN

The District first adopted their WSCP in 1991. This WSCP has been updated to incorporate new requirements established in 2020, as well as important lessons learned during the historic drought of 2013-2016. The WSCP will be re-evaluated at least every five years and at the end of each drought period to assess its performance. If deemed necessary, it will be modified and improved based on lessons learned. The Plan may also be updated in the middle of a drought year if needed.

Attachment F Groundwater Management Plan (if applicable)

ATTACHMENT F – GROUNDWATER MANAGEMENT PLAN

Stockton East Water District's equivalent Groundwater Management Plan is the Eastern San Joaquin Groundwater Subbasin Groundwater Sustainability Plan. Due to the size of the document it is not attached. A link to the plan is provided below.

https://www.esjgroundwater.org/Documents/GSP

Attachment G Groundwater Banking Plan (if applicable)

Farmington
Groundwater Recharge Program

Summer 2007 Newsletter

Program Awaits Federal Funding Support

Launched in 2003, the **Farmington Groundwater Recharge & Seasonal Habitat Program** (Program) is a 10-year, $33.5 million effort to begin restoration of the Eastern San Joaquin Groundwater Basin (Basin), a Central California water resource in a state of critical overdraft and threatened by saline intrusion from under the Delta.



The Program is led by Stockton East Water District (SEWD), in partnership with other local water interests, and the Sacramento District of the U.S. Army Corps of Engineers. An award-winning effort, the Program works by partnering with local water interests and landowners to implement conjunctive management strategies for the utilization of available water resources.

When surface water supplies are abundant, the Program's objective is to recharge the Basin through in-lieu irrigation and partnerships with growers who rotate direct recharge activities with other land-uses via short- and long-term agreements.

Since its inception, the Program has evaluated and/or tested more than a dozen candidate recharge sites within the service boundaries of SEWD, North San Joaquin Water Conservation District and Central San Joaquin Water Conservation District.

Direct recharge facilities developed through the Program, and its preceding studies, now contribute more than 11,000 acre-feet per year towards the Program's original recharge goal of 35,000 acre-feet annually.

To date, the Program has been maintained through approximately $1.75 million in allocated Federal funds and more than $10 million in local and State funds. A schedule of continued Federal funding through 2013 was submitted to Congress in February, 2007.

With additional Federal appropriations, Program partners plan to advance selected candidate sites to demonstration facilities; begin evaluation of additional candidate sites; and resume active recruitment and outreach of Program participants.

In This Issue

Farmington Groundwater Recharge & Seasonal Habitat Program *(cover story)*

About the Farmington Program *(page 2)*

Recharge Facilities *(page 4)*

Recharge Site Profiles *(page 4)*

Stakeholder Outreach: Tapping Into Established Awareness *(page 8)*

STOCKTON EAST WATER DISTRICT

US Army Corps of Engineers

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www.farmingtonprogram.org



© Joyce Gross

About the Farmington Program

Faced with limited surface water availability in Eastern San Joaquin County, growers, cities, rural neighborhoods and industries have relied heavily on mining water from underground aquifers. Groundwater use now exceeds nature's ability to self-replenish the aquifer by approximately 150,000 acre-feet per year. The cumulative effects:

- Groundwater is now up to 80 feet below mean sea level
- Intrusion of saline-tainted water from the west
- Municipal and rural wells have closed or failed
- Continually higher groundwater pumping costs
- Accumulated overdraft of more than two million acre-feet

To address this trend, Stockton East Water District (SEWD), with other local water interests, took a lead role in 1996 to work with the U.S. Army Corps of Engineers (Corps) to develop a conjunctive management strategy for Eastern San Joaquin County. The result is the Farmington Groundwater Recharge & Seasonal Habitat Program (Program).

The Program's goal is to provide average annual recharge of 35,000 acre-feet of water through spreading of water on agricultural fields and other recharge facilities, and increasing surface water deliveries in-lieu of groundwater pumping. Each tactic seeks to reduce overdraft and reduce the potential for further saline water intrusion.

For direct groundwater recharge activities, the Program seeks to enroll 25 to 30 parcels totaling up to 1,200 acres in short- and long-term agreements with landowners. Each would be compensated at

Eastern San Joaquin County and the Farmington Groundwater

	1985	1995	1996	1997	1998	2000	2001
Report / Action	Eastern San Joaquin County Groundwater Study	American River Water Resources Investigation	Mokelumne Aquifer Recharge and Storage Project	Stockton Metropolitan Area, California Reconnaissance Report	Conjunctive Use Study	Congressional Action	Farmington Groundwater and Seasonal Habitat Study
Report Conclusion	Concluded that the groundwater basin is overdrafted, saline water intrusion is a problem, and additional surface water supplies are needed	Considered extending the Folsom South Canal to deliver American River water in eastern San Joaquin County and reduce groundwater overdraft	Considered recharge and recovery of Mokelumne River water supplies to support Bay Area needs and reduce groundwater overdraft	Recommended study of Farmington Dam for conjunctive use purpose	Concluded that groundwater recharge is the most cost-effective approach to reducing overdraft	Congress authorized Program and Farmington Groundwater Recharge	Described Program components and general implementation approach

market rates for the use of their land.

The recharge method of choice is field-flooding, a practice where a small perimeter levee is built around fallow farmland to allow winter flooding to a depth of up to 18 inches. In addition to groundwater recharge, this method often provides varying water depths that are ideal for a wide range of migratory waterfowl.

Lands can be cycled in and out of the Program with other traditional land uses, thereby making water a cash crop for enrolled landowners.

For in-lieu recharge, the Program seeks to expand surface water deliveries to the urban area, farms and other major groundwater users via existing and future transmission and distribution systems.

The Program is also investigating the feasibility of conducting direct groundwater recharge via flooding of vineyards when the plant is dormant. Early indications are that this type of field-flooding is an effective pest control for root-damaging nematodes, and has the potential of over 20,000 acre-feet per year of recharge in the region.

FOUR GROUNDWATER RECHARGE METHODS ARE FEATURED IN THE FARMINGTON GROUNDWATER RECHARGE PROGRAM:

Flooded Field

Often the lowest cost to design, engineer, and construct, a flooded field recharge involves pushing up two- to four-foot-tall berms and flooding to a depth of one to three feet. Such facilities can provide temporary habitat for migrating water fowl.

Spreading Basin

Longer lasting and developed to a higher level of design, engineering, and construction, the spreading basin method features a two- to six-foot-deep excavation to a field and berms up to 15 feet high. Water depths range from three to nine feet. To enhance percolation rates and minimize maintenance, SEWD is experimenting with a combination of ridges and furrows graded into the basin bottoms.

Pit Facility

This recharge methods features excavations with minimal to no side slope in the basin. This method is often employed in order to bypass a confining, hardpan or low-permeability soil layer.

In-Lieu

Rather than construct a recharge facility, in-lieu recharge features replacement of groundwater pumping with the delivery of surface water. Such practices reduce pumping stress on the basin and allow groundwater levels to rise through natural replenishment.

Recharge Program Milestones:



Recharge Facilities

	SITE	ACRES	POTENTIAL		STATUS
			Observations	Recharge Volume [1] (acre-feet per year)	
1	Detention Basin No. 2 (Morada Lane)	15	Extensive hardpan and clay soils not suitable for groundwater recharge.	NA	Eliminated from consideration.
2	Petitt	20	Ideal for excavated pit recharge basin facility, with integrate wetlands and aquatic habitat.	4,800	Pending additional study for water supply and site studies.
3	Togninali		Low permeability of soils and remote location away from surface water source.	NA	Eliminated from consideration.
4	Filipelli	15	Limited size and existing land use limits groundwater recharge opportunities.	NA	Eliminated from consideration.
5	Hansen	50	Undulating topography and location well to the east of primary recharge target area.	NA	Eliminated from continued consideration due to site location.
6	Rajkavich		Low permeable soils suggest that groundwater recharge would not be favorable.		Eliminated from consideration.
7	BNSF	60	Deepening of three stormwater retention ponds could enhance recharge potential.	3,600	On-hold pending further dialog with BNSF officers.
8	Mariposa Lakes (Creek Partners LP)	Approx. 200	Soils data provided by candidate indicate some areas suitable for various recharge techniques.	12,000	On-hold pending site evaluation, water supply, and other studies.
9	Hammer	17	Medium to high capacity surface soils, with good percolation rates.	2,000	Site has been pursued by North San Joaquin Water Conservation District.
10	Kautz	25	Medium to high capacity surface soil encountered with good percolation rates.	2,100	Pending - Potential future in-lieu site.
11	Micke Grove Park/ Golf Course	160	In-lieu recharge via supplemental supplies of surface water for irrigation.	610	Pending approval for construction, planning and facility design.
12	Micke Grove Trust	200	Field flooding of vineyards during dormancy for groundwater recharge and pest control.	12,000	Pending further dialog with landowner.
13	SEWD Spreading Basin Facility	60	Three spreading basins filled with Calaveras and/or Stanislaus River water supplies.	7,000 [2]	Completed in 2002.
14	SEWD Northwest	30	Soils suitable for flooded field and spreading basin techniques.	3,000 [2]	Construction pending.
	Peters Pipeline	1,488	Surface water conveyance for agricultural and municipal use.	4,100 [3]	Completed in 2006, with turnouts to 1,488 acres of farmland for in-lieu use.
Total Potential Recharge Volume (acre-feet per year)				52,210 [4]	

[1] Unless noted otherwise, potential recharge volumes based on test data or professional judgement.
[2] Figures represent recharge capacity based on water supplies available four of every seven years through Bellota and Peters Pipelines.
[3] Assumes surface waters available five of every seven years.
[4] Of this potential yearly recharge volume, approximately 11,000 acre-feet per year can be recharged via facilities at SEWD and agricultural lands supplied by Peters Pipeline.

1 Detention Basin No. 2 Site



Highway 99, east of Mosher Dr. Morada, Calif.

Parcel size: 15 acres
Zone: Stockton East Water District
Water: Mosher Creek
Tests (results): Flooded Field (.07 to .1 feet/day)
Findings: Significant layer of hardpan and extensive clay layers contributed to poor infiltration for flooded fields.
Recommendation: Soils at site are not conducive for groundwater recharge.
Status: Eliminated from continued consideration.

2 Petitt Site



East of South Kaiser Road and north of the South Fork of Littlejohns Creek, San Joaquin County, Calif.

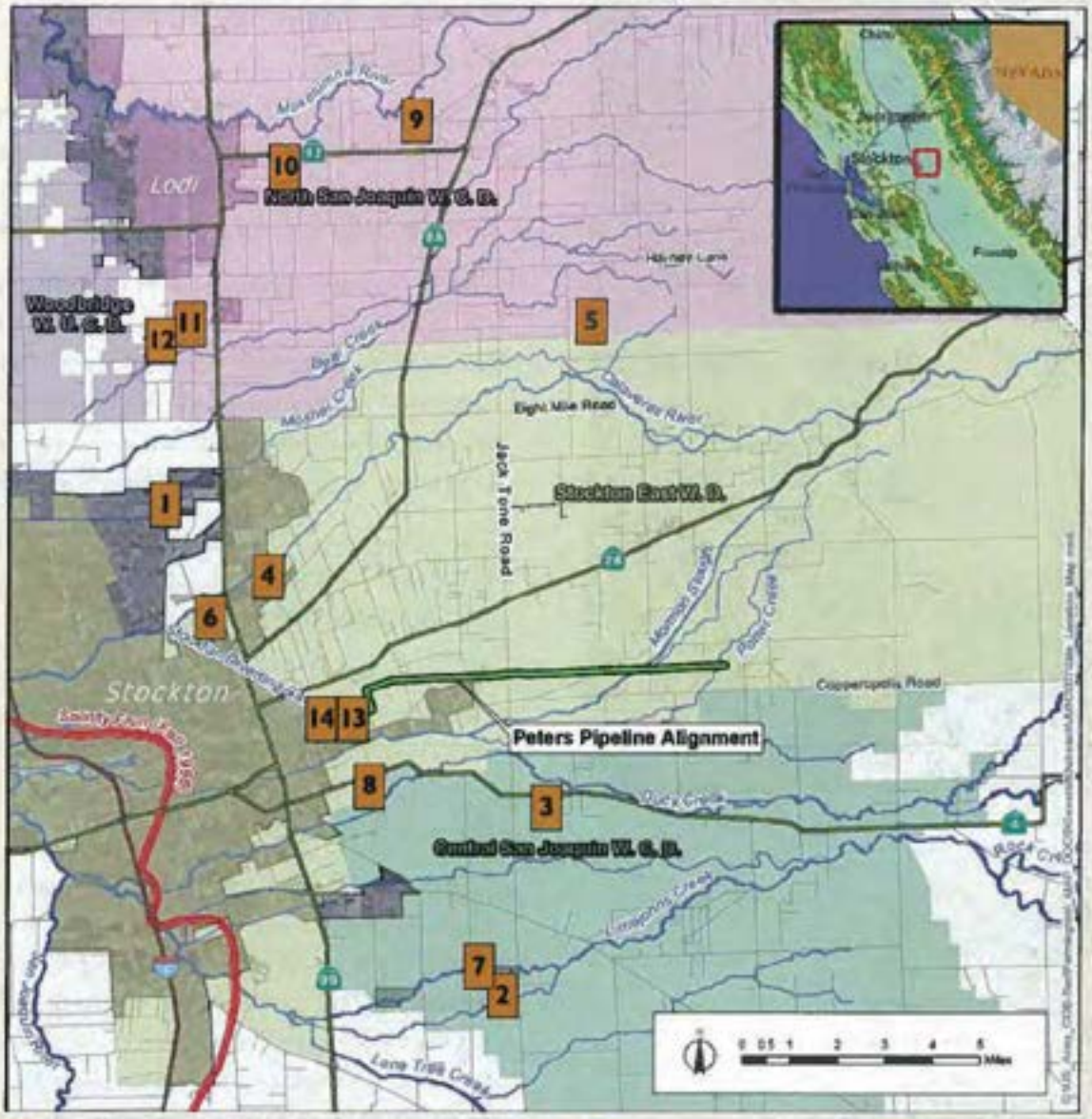
Parcel size: 20 acres
Zone: Central San Joaquin Water Conservation District
Water: South Fork Littlejohns Creek
Tests (results): Flooded Field (.1 to .5 feet/day) and Excavated Pit (10 to 19.2 feet/day)
Findings: Significant layer of hardpan and clay contributed to poor infiltration for flooded fields; however, recharge rates exceeded 10 feet/day when this layer was excavated.
Recommendation: Full-scale, excavated recharge basin facility; opportunity to integrate wetlands and aquatic habitat.
Status: Pending additional study for water supply, site acquisition, and construction cost issues.

10 Kautz Site



Southeas Highway Tree Rd. Lodi, Ca

Parcel size: 25 acres
Zone: North San Joaquin Water Con
Water: Mokelumne River
Tests (results): Flooded Field (.2 to 7 average)
Findings: Medium quality to high pe site; comparable performance to oth
Recommendation: Advance to Demo Testing
Status: Pending - Potenti e i



t Corner of
12 and Locust

lif.

ervation District

.4 feet/day; .7 feet/day

rforming surface for this
er sites in the area.
nstration-Scale Recharge

e.

11 Mickey Grove Park and Golf Course



11793 N Micke Grove Rd.
Lodi, Calif.

Parcel size: 160 acres
Zone: North San Joaquin Water Conservation District
Water: Mokelumne River via Pixley Slough, with backup supply from Woodbridge Irrigation District and/or City of Lodi
Tests (results): In-lieu recharge through construction of a dual groundwater-surface-water system featuring a three-acre park pond.
Findings: Up to 610 acre-feet/year recharge and $23,180/year in energy savings through avoidance of groundwater pumping.
Recommendation: Construct project, including planning, facility design and implementation.
Status: Pending approval

14 SEWD Northwest Site



East Main Street, two miles east of Hwy 99,
Stockton, Calif.

Parcel size: 30 acres
Zone: Stockton East Water District
Water: Calaveras River or Stanislaus River
Tests (results): Flooded Field (.36 feet/day average); Spreading basin (.62 feet/day average)
Findings: Recharge rates for both methods are good. Flooded field the most feasible on a cost per unit basis.
Recommendation: Advance to Demonstration-Scale Recharge Testing for flooded field
Status: Construction pending. A component of an adjacent 60-acre facility named the Water/Environment Project of the Year, 2003, by the American Society of Civil Engineers, Sacramento Section.



Pipeline Expands Recharge Capabilities

Completed in 2006, the Peters Pipeline is a six-mile long, 60-inch diameter pipeline constructed as a direct and in-lieu recharge facility of the Farmington Groundwater Recharge Program.

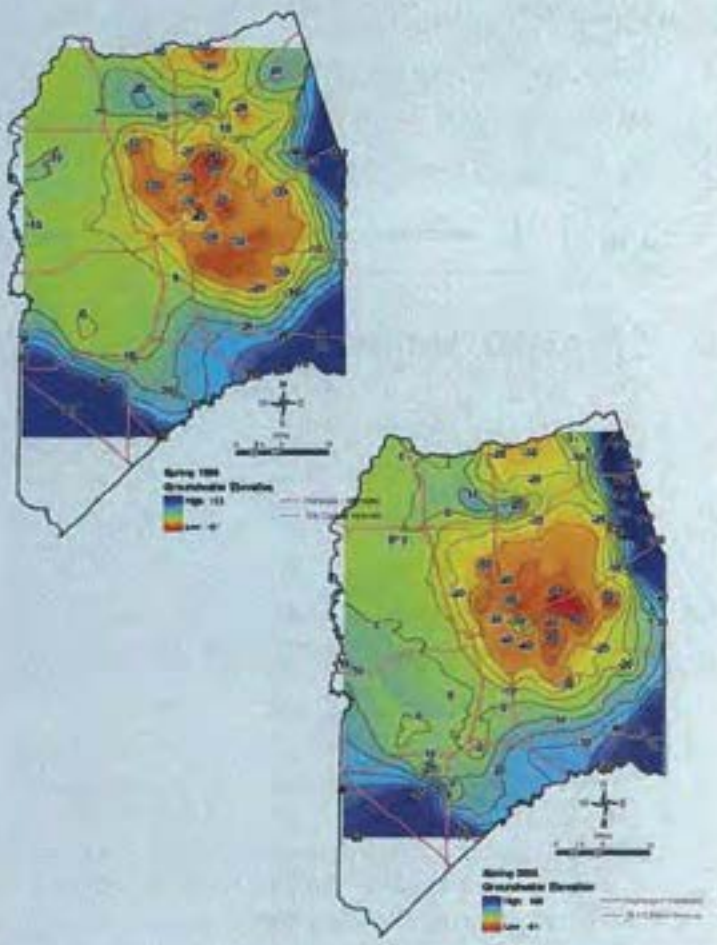
The $7.5 million pipeline was funded through a $3.7 million award from the Proposition 13 Groundwater Recharge Storage Construction Grant and bond funds shared by the City of Stockton, California Water Service Company, San Joaquin County and Stockton East Water District.

The pipeline carries water from the Stanislaus River and Calaveras River to the District's Dr. Joe Waidhofer drinking water treatment plant.

Approximately 1,500 acres of farmland receive wet year surface water supplies from the pipeline, an in-lieu recharge benefit of 4,000 acre-feet. Another 8,500 acres of farmland are eligible for this surface water supply.

The pipeline further enables a 60-acre complex of recharge ponds and fields adjacent to the District's Dr. Joe Waidhofer drinking water treatment plant to operate un-interrupted. Built via the Farmington Program, but funded with State and local money, the recharge facility returns up to 10,000 acre-feet of water annually to the groundwater tables. This stored water can be drawn and delivered to municipal and industrial customers during dry years.

The spreading basins component was awarded the American Society of Civil Engineers Water/ Environmental Project of the Year in 2003, Sacramento Chapter, and the San Joaquin Council of Government Regional Excellence award in 2004.







STAGE 1:
SITE SCREENING

- Is location appropriate for program objectives?
- Are soils appropriate for recharge?
- Are land uses compatible?
- Are water supplies available?
- Is property available?
- Are environmental impact mitigable?

STAGE 2:
FIELD INVESTIGATION

- Geology and soils data collection
- Land use/water conveyance - field confirmation
- Habitat issues - field inspection
- Aerial photo interpretation
- Groundwater conditions
- Confirm site history
- Confirm site suitability for recharge

STAGE 3:
SITE TESTING

- Monitoring well drilling and construction
- Baseline soil and water quality testing
- Site preparation
- Groundwater level monitoring
- Groundwater quality monitoring
- Conveyance water quality monitoring

STAGE 4:
LONG-TERM OPERATION & MAINTENANCE

- Continued management of recharge basins to maximize percolation

Stakeholder Outreach: Tapping Into Established Awareness

For many rural and family farmers in Eastern San Joaquin County, a reminder that groundwater levels continue to inch lower and lower arrives from PG&E.

Contained within the monthly electric bill, customers can track a well's energy consumption. If groundwater pumping hasn't changed, but the bill went up, then the water level must have dropped.

Tapping into this pocket-book reality has been a component of a proactive stakeholder outreach and involvement program conducted by the Program partners.

The main focus of outreach is to support communication among landowners to the issue of overdraft and rising pumping costs, and offer the Program as a viable solution. A particular focus has been to involve respected landowners in outreach activities.

Elements supporting this grassroots-oriented effort include:

- A comprehensive Program website (www.farmingtonprogram.org), including current and historical information, testimonials, and news articles.
- Informational materials distributed by mail, on-line and public counters.
- Program information kit tailored to participants, legislators, media and other interested parties.
- Comprehensive database of lands 20 acres and larger.
- An information booth at the Stockton Ag Expo, public meetings, and an active speakers bureau.
- Outreach to consumer and trade media outlets, including editorial board briefings.
- A water cost calculator for landowners (www.sewd.net) to determine the cost savings



November 2003 ribbon cutting ceremony for SEWD Recharge Basins

Farmington
Groundwater Recharge Program

A Program of

United States Army Core of Engineers

Stockton East Water District

Program Supporters

California Water Service Company
Central and South Delta Water Agencies
Central San Joaquin Water Conservation District
City of Lodi
City of Stockton
Ducks Unlimited
Natural Heritage Institute
North San Joaquin Water Conservation District
San Joaquin County
San Joaquin County Flood Control and Water Conservation District
San Joaquin Farm Bureau Federation
Woodbridge Irrigation District

Attachment H Annual Water Quality Report

Attachment H.1. Annual Potable Water Quality Reports - Urban



2023 Drinking Water Quality Report

City of Stockton Municipal Utilities Department

This report contains important information about your drinking water. Please contact the City of Stockton at (209) 937-8762 for assistance in non-English languages.

The City of Stockton Municipal Utilities Department (MUD) has prepared its annual drinking water quality report, also known as a Consumer Confidence Report, to inform our customers about the quality of our drinking water delivered throughout our service area.

We provide the highest quality water available while meeting all State and Federal drinking water standards. This report includes a detailed water quality summary, monitoring and testing results, as well as the steps we take to protect health and safety.

From all of us here at the MUD, it is a privilege to serve you. If you have any questions about this report, please call (209) 937-8762 or email WaterFacts@stocktonca.gov.

C. Mel Lytle, Ph.D.
Director

Water Sources

To meet the needs of the City's approximately 52,000 customers in north and south Stockton, we use a combination of water sources including:

- Water from the Sacramento - San Joaquin Delta and Mokelumne River treated at the City's Delta Water Treatment Plant.
- Water from the Stanislaus River via New Melones Reservoir and the Calaveras River via New Hogan Reservoir which is treated and delivered by Stockton East Water District.
- Local groundwater from wells owned and operated by the City.

What is in Your Water

Our area watersheds and groundwater wells provide raw water supplies to the City. As water flows over the land or through the groundwater aquifer, naturally occurring minerals can dissolve in it and, in some cases, contaminant materials can also be picked up from animal or human activities.

Contaminants That May Be Present in the Source Water Include:

- Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- Radioactive contaminants that can be naturally-occurring or be the result of oil and gas production and mining activities.



The Sierra Nevada watershed provides water to millions of Californians

To ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board (State Water Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Information About Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water derives primarily from materials and components associated with service lines and home plumbing. The City of Stockton is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose such as watering plants. If you are concerned about lead in your water, you may wish to have it tested. Information about lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/lead.

Lead and Copper Rule

The "lead and copper rule," or LCR, was introduced by the U.S. Environmental Protection Agency (U.S. EPA) in 1991 to limit the concentration of lead and copper allowed in public drinking water at the consumer's tap as well as to limit the corrosivity due to the water itself. On January 15, 2021, US EPA issued revisions to federal LCR. Under the Lead and Copper Rule Revisions (LCRR), water systems are required to prepare and maintain an inventory of service line materials by October 16, 2024. More information about the Lead and Copper Rule for Drinking Water is available at https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/leadandcopperrule.html

The City of Stockton Municipal Utilities Department monitors drinking water for specific contaminants, including lead and copper, on a regular basis. On October 19, 2023, the City received Citation 01-10-23C-021 for failing to collect the required number of lead and copper analytical samples for 2023. Only 13 samples were collected before the September 30, 2023, due date. The State Water Board determined that the City failed to comply with CCR, Title 22, Section 64675 during 2023 for monitoring of lead and copper.

The system was directed to collect 50 lead and copper samples between June 1 to September 30, 2024. The system was also required to notify the public of the violation by December 31, 2024, and to include the violation in the 2023 Drinking Water Quality Report.

We regret this oversight and apologize for any inconvenience this may cause. We have corrected and updated our work order system and will meet any future lead and copper testing requirements. The lead and copper sample results meet drinking water standards for all 13 homes.

A Note for Sensitive Populations

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Monitoring of Per- & Polyfluoroalkyl Substances (PFAS)

The State Water Board established drinking water guidelines in 2019 for water agencies to follow in detecting and reporting the presence of PFAS, including the chemicals perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). PFOA and PFOS are chemicals that were used in many consumer products for their non-stick and grease- and stain-resistant properties. Found at or near manufacturing sites, landfills, and firefighting training sites (where they were used in firefighting foams), such as airports and military bases, these chemicals may enter the water cycle through runoff and wastewater, leading to elevated levels in wastewater discharges and groundwater. Contamination of drinking water is usually associated with a specific drinking water facility and its relative location to where these chemicals were used or produced. The City is required to monitor and inform its governing body and all State and Federal regulatory agencies of detected concentrations of PFAS that exceed notification levels. A notification level is the concentration level that, based on available scientific information, does not pose a significant health risk but warrants informing the public of its presence. More information on PFAS, PFOA, and PFOS is available from the State Water Board at https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/PFOA_PFOS.html.



Raw Water Pump Station

Drinking Water Source Assessment & Protection Program

Drinking Water Source Assessments for the City's water system were completed in 2015 and 2021. The water sources were considered most vulnerable to activities which were associated with contaminants found in the water supply, including urban stormwater, septic tanks and sewage spills, mining, construction, metal plating, electronics manufacturing, National Pollution Discharge Elimination System permitted discharges, dairy waste, and agricultural operations. The water sources were considered most vulnerable to the following activities, which were not associated with contaminants detected in the water supply: illegal activities/dumping, recreation, leaking underground storage tanks, vehicle fueling and maintenance and chemical/petroleum/plastics processing and storage. You may request assessment summaries by contacting Robert Lapp at the State Water Resources Control Board at (209) 948-3816.





2023 Water Quality Analysis Results

Your water meets or exceeds all federal and state drinking water standards.

In 2023, we delivered about 8 billion gallons of treated water to more than 180,000 community members in north and south Stockton, enough to fill nearly 160 million bathtubs.

The City of Stockton tests your drinking water for several regulated and unregulated contaminants. Only those contaminants that were detected are listed. The following tables divide water quality test results into three main sections: **1) Primary Drinking Water Standards, 2) Secondary Drinking Water Standards,** and **3) Unregulated Compounds.** Primary standards protect public health by limiting levels of certain constituents in drinking water. Secondary standards are set for substances that could affect drinking water taste, odor, or clarity. Unregulated substances are listed for your information. Data in the table represents sampling from 2023, unless otherwise noted.

Primary Drinking Water Standards				Groundwater		Surface Water		Meets Regulation?	Source of Constituent
Constituent	Units	Primary MCL	PHG (MCLG)	Range	Average	DWTP Average	SEWD Average		
Aluminum	mg/L	1	0.6	<0.05	<0.05	<0.05	<0.05	Yes	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic	µg/L	10	0.004	<2.0 – 6.1	4.28	<2.0	<10.0	Yes	Erosion of natural deposits; runoff from orchards, and glass and electronics production wastes
Barium	mg/L	1	2	<0.1 – 0.26	<187	<1.0	<1.0	Yes	Discharges of oil and drilling wastes and metal refineries; erosion of natural deposits
Chromium, Total	µg/L	10	50	<10-12	10.2	<10	<50	Yes	Discharge from electroplating facilities; erosion of natural deposits
Fluoride	mg/L	2.0	1	<0.1	<0.1	<0.1	<2.0	Yes	Erosion of natural deposits; discharge from fertilizer and aluminum factories
Nitrate (as N)	mg/L	10	10	0.65– 6.2	3.53	<0.4	<0.1	Yes	Runoff/leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Alpha Activity, Gross (1)	pCi/L	15	(0)	1.50 – 8.13	4.17	NR	NR	Yes	Erosion of natural deposits
Radium 228 (1, 3)	pCi/L		0.019	0.0 – 1.71	0.50	NR	NR	Yes	Erosion of natural deposits
Uranium (1)	pCi/L	20	0.43	1.03 – 5.80	3.93	NR	NR	Yes	Erosion of natural deposits
	Units	MCL	PHG (MCLG)	Highest Level	Lowest Monthly % (5)	Highest Level	Lowest Monthly % (6)	Meets Regulation?	Source of Constituent
Turbidity	NTU	TT	N/A	0.63	98.5	0.09	100%	Yes	Soil runoff
	Units	MCL (MRDL)	MCLG (MRDLG)	Distribution System				Meets Regulation?	Source of Constituent
				Range		Average			
Total Coliform Bacteria	% positive samples	5%	0	0 – 0.6		0.1		Yes	Naturally present in the environment
Chlorine as Cl_2	mg/L	(4.0)	(4.0)	0.06 – 2.28		1.16		Yes	Drinking water disinfectant added for treatment
Total Trihalomethanes (TTHM) (8)	µg/L	80	N/A	3.9 – 95.8		40.2		Yes	By-product of drinking water disinfection
Haloacetic Acids 5 (HAA5) (8)	µg/L	60	N/A	0 – 73.3		22.4		Yes	By-product of drinking water disinfection
	Units	Action Level (AL)	PHG	Level Detected at the 90th percentile		Samples exceeding the AL		Meets Regulation?	Source of Constituent
Copper (9)	mg/L	1.3	0.3	0.000		0 of 50		Yes	Internal corrosion of household plumbing systems
Lead (9)	µg/L	15	0.2	0.130		0 of 50		Yes	Internal corrosion of household plumbing systems

(1) The compliance cycle for monitoring this constituent can vary from three to nine years; some data may be from before 2010.
(2) Compliance may be based on average values for four quarters.
(3) Radium 228 testing was conducted for initial monitoring required by new regulations.
(4) The MCL is based on Combined Radium (Radium 226 + Radium 228). Radium 226 and Radium 228 do not have individual MCLs. The MCL for Combined Radium is 5 pCi/L. Radium 226 was not detected.
(5) For surface water systems, the Treatment Technique requires that each month the turbidity level of the filtered water for Membrane Filtration facilities is less than or equal to 0.1 NTU in 95% of the measurements and shall not exceed 1.0 NTU at any time. Turbidity is a measure of the cloudiness of the water. It is monitored as a good indicator of the effectiveness of the filtration system.
(6) For surface water systems, the Treatment Technique requires that each month the turbidity level of the filtered water is less than or equal to 0.3 NTU in 95% of the measurements, and shall not exceed 1.0 NTU at any time. Turbidity is a measure of the cloudiness of the water. It is monitored as a good indicator of the effectiveness of the filtration system.
(7) Presence of coliform bacteria in no more than 5% of monthly samples.
(8) Compliance is based on the quarterly Running Annual Average. The highest level reported in the range is the result of an individual sample.
(9) Lead and copper are required to be monitored every three years. This data is from 2020.

Units

mg/L	Milligrams per Liter
µg/L	Micrograms per Liter
µS/cm	Micro-siemens per centimeter
ng/L	Nanograms per Liter
pCi/L	Picocuries per Liter
NTU	Nephelometric Turbidity Unit
N/A	Not Applicable
NR	Testing not required

Key Terms and Abbreviations

(AL) Regulatory Action Level	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
(MCL) Maximum Contaminant Level	The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste and appearance of drinking water.
(MCLG) Maximum Contaminant Level Goal	The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.
(MRDL) Maximum Residual Disinfectant Level	The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
(MRDLG) Maximum Residual Disinfectant Level Goal	The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
(PDWS) Primary Drinking Water Standard	MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.
(PHG) Public Health Goal	The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.
(TT) Treatment Technique	A required process intended to reduce the level of a contaminant in drinking water.

Secondary Drinking Water Standards			Groundwater		Surface Water				Source of Constituent
					DWTP		SEWD		
Constituent	Units	MCL	Range	Average	Range	Average	Range	Average	
Chloride	mg/L	500	6.9 - 95	33.0	-	4.6	-	5	Runoff/leaching from natural deposits; seawater influence
Manganese	µg/L	50	< 20 - 34	< 22.8	< 20-34	< 22	-	< 5	Leaching from natural deposits
Odor	units	3	< 1.0 - 2.0	1.1	< 1.0 – 5.7	< 1.6	-	< 1.0	Naturally occurring organic materials
Specific Conductance	µS/cm	1,600	290 - 730	552	47 – 336	135	197 - 209	203	Substances that form ions when in water; seawater influence
Sulfate	mg/L	500	15 - 49	33	-	1.5	-	9.2	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids	mg/L	1,000	210 - 500	373	36 – 220	87	100 – 110	107	Runoff/leaching from natural deposits

Unregulated Compounds			Groundwater		Surface Water	
					DWTP	SEWD
Constituent	Units		Range	Average	Average	Average
Total Hardness (as $CaCO_3$) (1)	mg/L		119 - 321	254	18	72
Boron	µg/L		< 100 – 130	< 103	< 100	< 100
Sodium	mg/L		4.9 – 36	20.7	5.1	7
Vanadium	µg/L		16 - 32	25	< 3.0	< 3.0

Other Compounds			Groundwater		Surface Water	
					DWTP	SEWD
Constituent	Units		Range	Average	Average	Average
Total Alkalinity	mg/L		120 – 300	196	19	30
Calcium	mg/L		25 – 76	59.1	3.8	8
Magnesium	mg/L		14 – 39	26.3	1.2	3
Potassium	mg/L		3.9 – 17	6.2	< 1.0	1

(1) Conversion: hardness (gains per gallon) = hardness as CaCO3 (mg/L) multiplied by 0.0584.

Unregulated Contaminant Monitoring Rule (UCMR3) Contaminants Monitored in 2023 (1), (2)		Surface Water - DWTP		Distribution System		
Constituent	Units	Range	Average	Range	Average	Health Based Reference Values
Lithium	µg/L	< 9.00	< 9.00	< 9.00	< 9.00	10
Hexafluoropropylene Oxide Dimer Acid (HFPODA) (GenX Chemicals)	µg/L	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.01
Perfluorobutanesulfonic Acid (PFBS)	µg/L	< 0.0030	< 0.0030	< 0.0030	< 0.0030	2
Perfluorooctanesulfonic Acid (PFOS)	µg/L	< 0.0040	< 0.0040	< 0.0040	< 0.0040	-
Perfluorooctanoic Acid (PFOA)	µg/L	< 0.0040	< 0.0040	< 0.0040	< 0.0040	-
All Other Polyfluoroalkyl Substances	µg/L	< 0.0050	< 0.0050	< 0.0050	< 0.0050	-

Unregulated Contaminant Monitoring Rule (UCMR4) Contaminants Monitored in 2019 (1), (3)									
Constituent	Units	Groundwater		Surface Water - DWTP		Distribution System		DWTP Sources	
		Range	Average	Range	Average	Range	Average	Range	Average
Manganese	µg/L	< 0.40 – 77	12	1.6 – 15	6.1				
HAA-6	µg/L					<2.0 – 34.0	11.5		
HAA-9	µg/L					2.8 – 79.3	39.5		
Bromide	µg/L							< 20 – 150	37
TOC	µg/L							1500 – 5300	2375

(1) Once every five years, the U.S. Environmental Protection Agency (EPA) issues a list of unregulated contaminants to be monitored by public water systems. The UCMR provides the EPA and other interested parties with scientifically valid data on the occurrence of certain contaminants in drinking water. An MCL for these contaminants listed above does not exist. The UCMR program examines what is in the drinking water, but additional health information is needed to know whether these contaminants pose a health risk. Further information on UCMR3 can be found at www.epa.gov/dwucmr/fact-sheets-about-third-unregulated-contaminant-monitoring-rule-ucmr-3, or contact the Safe Drinking Water Hotline (1-800-426-4791).

(2) Of the 30 unregulated contaminants tested for in UCMR3, only 6 were detected in the drinking water produced in 2023.

(3) Of the 30 unregulated contaminants tested for in UCMR4, only one chemical analyte was detected. Within the HAA-6 and HAA-9 groups, 9 of the 30 analytes were detected. No cyanotoxins were detected in the drinking water produced in 2019.



A family of owls nesting at the Delta Water Treatment Plant

To Report a Water Concern, Contact

City of Stockton, 24-Hour Emergency Service Center
(209) 937-8341
Please report broken pipes, malfunctioning sprinklers, street flooding, illegal dumping, sewer backups via phone for immediate assistance.

For Questions About This Report, Contact

City of Stockton Municipal Utilities Department
(209) 937-8762 or WaterFacts@stocktonca.gov

Additional Water Quality Information is Available

www.stocktonca.gov/water
U.S. EPA Safe Drinking Water Hotline
1-800-426-4791
http://epa.gov/ground-water-and-drinking-water

Potability Statement

The City of Stockton water supply meets all potability requirements as set forth by the United States Environmental Protection Agency (USEPA) and the California Safe Drinking Water Act, Title 22. This certification relates to City of Stockton water that is provided up to the property line or backflow preventer, whichever comes first.

Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse City of Stockton a (209) 937-5001 para asistirlo en español.

ETsab ntawv no muaj cov ntsiab lus tseem ceeb txog koj cov dej haus. Thov hu rau City of Stockton ntawm (209) 937-5001 rau kev pab hauv lus Askiv.

Ang pag-uulat na ito ay naglalaman ng mahalagang impormasyon tungkol sa inyong inuming tubig. Mangyaring makipag-ugnayan sa City of Stockton o tumawag sa (209) 937-5001 para matulungan sa wikang Tagalog.

ਐੱਸ ਰਿਪੋਟ ਵਿਚ ਤੁਵਾੜੇ ਪੀਣੇ ਦੇ ਵਾਰੇ ਮਹੱਤਵਪੂਰਨ ਸੂਚਨਾ ਹੈ। ਪੰਜਾਬੀ ਵਿਚ ਮਦਦ ਲਈ, City of Stockton ਨੂੰ 11373 N. Lower Sacramento Road, Lodi, CA 95242 ਜਾਂ (209) 937-5001 ਤੇ ਸੰਪਰਕ ਕਰੋ |

ÅBáo cáo này chứa thông tin quan trọng về nước uống của bạn. Xin vui lòng liên hệ City of Stockton tại (209) 937-5001 để được trợ giúp bằng tiếng Việt.

Stay Connected!
Visit: www.stocktonca.gov/water

www.facebook.com/CityofStockton

www.twitter.com/StocktonUpdates



Egret Flying Over Drying Basin

2023

WATER QUALITY REPORT

STOCKTON DISTRICT



Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

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California Water Service (Cal Water) is committed to providing a reliable supply of safe, clean water to our customers and communities, 24 hours per day, 7 days per week, 365 days per year. As water quality regulations have become more stringent, we have added or adjusted treatment to confirm that the water we deliver continues to meet or surpass all standards—because protecting our customers' health and safety is our highest priority.

IN THIS SYSTEM IN 2023, WE CONDUCTED 29,697 TESTS ON 3,786 WATER SAMPLES FOR 246 CONSTITUENTS. WE ARE PLEASED TO CONFIRM THAT WE MET EVERY PRIMARY AND SECONDARY FEDERAL AND STATE WATER QUALITY STANDARD LAST YEAR.

But, our promise to provide quality, service, and value means more than just treating and testing water. It means having expert professionals available to assist with routine services safely and efficiently. It means having personnel available to handle emergencies around the clock. It means maintaining and upgrading the infrastructure needed to transport water from its source through a network of pumps, tanks, and pipes to your tap. It also means that, even with costs increasing across the country, we do everything we can to operate as efficiently as possible to keep your water service affordable.

I encourage you to read this year's water quality report, also called your Consumer Confidence Report, as it details any constituents detected in your water supply in 2023 and shows how your water compares to federal and state standards. It also provides information on hot topics and steps we take to protect your health and safety.

If you have any questions, we are here to help. You can contact your local office by phone or by using the Contact Us form at **www.calwater.com**. You can also get water service news on our web site and via our Facebook, X (formerly Twitter), and Instagram pages. If you're an account holder, you can find updates in your monthly bill and should keep your contact information up to date by visiting **ccu.calwater.com** to make sure you receive emergency and other important information.

Sincerely,
Tony Carrasco, Interim District Manager, Stockton District

Stockton District
1505 East Sonora Street
Stockton, CA 95205
(209) 547-7900

ACTION ITEMS

There were no significant issues in your water system in 2023, and we have no recommended action items for our customers in this area.



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YOUR WATER SYSTEM



YOUR WATER

Cal Water has provided high-quality water utility services in Stockton since 1927. To meet the needs of our customers, we use a combination of local groundwater and water purchased from the Stockton East Water District, which is obtained from the New Melones and New Hogan Reservoirs. The Stockton system includes 25 active wells, 11 booster pumps, and 6 storage tanks.

Our company-wide water quality assurance program includes vigilant monitoring throughout our systems and testing at our state-of-the-art laboratory. Additionally, we proactively maintain and upgrade our facilities to provide a reliable, high-quality supply.

CHLORINATION

Chlorination is the addition of chlorine to drinking water systems. It is the most common type of drinking water disinfection, killing bacteria, viruses, and other microorganisms that cause disease or immediate illness. Chlorine is effective and continues to keep water safe as it travels through pipelines to the consumer's tap.

WATER RESOURCE SUSTAINABILITY

Cal Water helps our customers conserve water by offering programs and incentives to reduce indoor and outdoor water use, develop more efficient habits, and educate the next generation about the importance of managing water resources sustainably. We also continue to invest diligently in our infrastructure to reduce the amount of water lost to pipeline leaks and, in 2022, completed an updated assessment of the impacts of climate change on water supply and demand. Whether in wet or dry years, it's important that we make saving water every day a way of life. Using water wisely will ensure that we have enough water in periods of drought and for generations to come.

Visit **www.calwater.com/conservation** for details.

If you have any questions or concerns, please contact our local office by phone at (209) 547-7900 or through the Contact Us link at www.calwater.com.

WATER QUALITY

THE WATER QUALITY LAB

Water professionals collect samples from throughout the water system for testing at our newly upgraded, state-of-the-art water quality laboratory, which is certified each year through the stringent Environmental Laboratory Accreditation Program (ELAP).

Our laboratory team tests the water for 326 constituents with equipment so sensitive it can detect levels as low as one part per trillion. In order to maintain the ELAP certification, all of our scientists must pass blind-study proficiency tests for every water quality test performed. Water quality test results are entered into our Laboratory Information Management System (LIMS), a sophisticated software program that enables us to react quickly to changes in water quality and analyze water quality trends in order to plan effectively for future needs.

CROSS-CONNECTION CONTROL

So that the high-quality water we deliver is not compromised in the distribution system, Cal Water has a robust cross-connection control program in place. Cross-connection control is critical to making sure that activities on customers' properties do not affect the public water supply. Our cross-connection control specialists ensure that all of the existing backflow prevention assemblies are tested annually, assess all connections, and enforce and manage the installation of new commercial and residential assemblies.

Backflow can occur when certain pressure conditions exist either in our distribution system or within the customer's plumbing, so our customers are our first line of defense. A minor home improvement project—without the proper protections—can create a potentially hazardous situation, so careful adherence to plumbing codes and standards will keep the community's water supply remains safe. Please be sure to utilize the advice or services of a qualified plumbing professional.

Many water-use activities involve substances that, if allowed to enter the distribution system, would be aesthetically displeasing or could even present health concerns.

Some common cross-connections are:

- Garden hoses connected to a hose bib without a simple hose-type vacuum breaker (available at a home improvement store).
- Improperly installed toilet tank fill valves that do not have the required air gap between the valve or refill tube.
- Landscape irrigation systems that do not have the proper backflow prevention assembly installed on the supply line.

The list of materials that could potentially contaminate the water system is vast. According to the United States Environmental Protection Agency (EPA), a wide variety of substances have contaminated drinking water systems throughout the country as a result of poor cross-connection control. Examples include:

- Antifreeze from a heating system.
- Lawn chemicals from a garden hose or sprinkler head.
- Blue water from a toilet tank.
- Carbonated water from a soda dispenser.

Customers must ensure that all plumbing is in conformance with local plumbing codes. Additionally, state law requires certain types of facilities to install and maintain backflow prevention assemblies at the water meter. Cal Water's cross-connection control staff will determine whether you need to install a backflow prevention assembly based on water uses at your location.

DWSAPP

By the end of 2002, Cal Water had submitted to the Division of Drinking Water (DDW) a Drinking Water Source Assessment and Protection Program (DWSAPP) report for each water source in the water system. The DWSAPP report identifies possible sources of contamination to aid in prioritizing cleanup and pollution prevention efforts. All reports are available for viewing or copying at our office.

We encourage customers to join us in our efforts to prevent water pollution and protect our most precious natural resource.

The water sources in your district are considered most vulnerable to the following activities associated with contaminants detected in the water supply:

- Sewer collection systems
- Agricultural drainage
- Irrigated crops
- Fertilizer/pesticide/herbicide applications
- Pesticide/fertilizer/petroleum storage and transfer areas
- Appliance/electronic repair
- Junk/scrap/salvage yards
- Machine shops
- Metal plating/finishing/fabricating
- Golf courses
- Septic tanks
- Historic railroad right-of-ways
- Chemical/petroleum processing or storage
- Farm chemical distributor/application service
- Farm machinery repair
- Automobile body and repair shops
- Fleet/truck/bus terminals
- Car washes
- Road right-of-ways
- Wells (water supply)
- Parks
- RV parks
- Medical/dental offices/clinics
- Hospitals
- Lumber processing/manufacturing
- Electrical/electronic manufacturing
- Hardware/lumber/parts stores

The water sources are considered most vulnerable to the following activities, for which no associated contaminant has been detected:

- Gas stations
- Underground storage tanks (confirmed leaking tanks)
- Dry cleaners
- Railroad yards/maintenance/fueling areas
- Recreational areas (surface water source)
- Wells (agricultural)
- Photo processing/printing
- Storm drain discharge points

YOUR 2023 RESULTS

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FLUORIDE

State law requires Cal Water to add fluoride to drinking water if public funding is available to pay for it, and it is a practice endorsed by the American Medical Association and the American Dental Association to prevent tooth decay. In this area, low levels of fluoride occur naturally, and Cal Water doesn't add any to the water supply. Show the table in this report to your dentist to see if he or she recommends giving your children fluoride supplements.

WATER HARDNESS

Hardness is a measure of the magnesium, calcium, and carbonate minerals in the water. Water is considered soft if its hardness is less than 75 parts per million (ppm), moderately hard at 75 to 150 ppm, hard between 150 and 300 ppm, and very hard at 300 ppm or higher.

Hard water is generally not a health concern, but it can have an impact on how well soap lathers and is significant for some industrial and manufacturing processes. Hard water may also lead to mineral buildup in pipes or water heaters.

Some people with hard water opt to buy a water softener for aesthetic reasons; however, some water softeners add salt to the water, which can cause problems at wastewater treatment plants. Additionally, people on low-sodium diets should be aware that some water softeners increase the sodium content of the water.

For more information on water hardness, visit **www.calwater.com/video/hardness**.



More information about fluoridation, oral health, and related issues can be found on the DDW web site.

For general information on water fluoridation, visit us online at www.calwater.com.

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POSSIBLE CONTAMINANTS

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline at (800) 426-4791.

The sources of drinking water (both tap and bottled) include rivers, lake, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals—and in some cases radioactive material—and can pick up substances resulting from the presence of animals or human activities. Prior to entering the distribution system, source water with constituents over maximum contaminant levels is treated to reduce levels to meet standards set by public health experts.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic compounds, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems.
- Radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities.

In order to keep tap water safe to drink, the EPA and DDW prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised people, such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, and those with HIV/AIDS or other immune system disorders; some elderly people; and infants can be particularly at risk from infections. These people should seek advice from their health care providers about drinking water contaminants. EPA and Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline.

ABOUT LEAD

As the issue of lead in water continues to be top of mind for many Americans, Cal Water wants to assure you about the quality of your water. We are compliant with health and safety codes mandating use of lead-free materials in water system replacements, repairs, and new installations. We have no known lead service lines in our systems. We test and treat (if necessary) water sources to confirm that the water delivered to customer meters meets all water quality standards and is not corrosive toward plumbing materials.

The water we deliver to your home meets lead standards. However, if present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing (for example, lead solder used to join copper plumbing, and brass and other lead-containing fixtures).

Cal Water is responsible for providing high-quality drinking water to our customers' meters, but cannot control the variety of materials used in properties' plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking.

If you are concerned about lead in your water, you may wish to have your water tested by a certified lab. More information about lead in drinking water can be found through the Safe Drinking Water Hotline (1-800-426-4791) or at www.epa.gov/safewater/lead.

TESTING FOR LEAD IN SCHOOLS

The State of California required that all public schools built before 2010 test for lead in their drinking water by July 1, 2019. We are committed to supporting our school districts' efforts to protect students and ensure that the drinking water at their school sites are below regulatory limits. We worked with all school districts in our service area that serve kindergarten through 12th grade to develop sampling plans, test samples, and conduct follow-up monitoring, if needed, for corrective actions.

Please see our **Testing for Lead in Schools** web page for more information. For specific information regarding local school data, see the **state web portal lead sampling in schools page**.

LEAD AND COPPER RULE

The Lead and Copper Rule requires us to test water inside a representative number of homes that have plumbing most likely to contain lead and/or lead solder to determine the presence of lead and copper or any action level exceedance. An action level is the concentration of a contaminant which, when exceeded, triggers corrective actions before it becomes a health concern. If action levels are exceeded, either at a customer's home or system-wide, we work with the customer to investigate the issue and/or implement corrosion control treatment to reduce lead levels.

LEAD SERVICE LINE INVENTORY (LSLI)

Protecting our customers' health and safety is our highest priority. As part of this commitment, we have been working to identify and replace any old customer water service lines and fittings that may contain lead. California Senate Bill (SB) 1398 required all water utilities in California to develop an inventory of all distribution service line materials, and submit a list of known lead service lines to the state by 2018. A list of unknown service lines that may contain lead, along with a plan for replacement, was due to the state by July 1, 2020. Known lines must be replaced as soon as possible.

More information regarding LSLI and specific data for each water system can be found on the **health and safety code page of the state web site**.

In your system, results from our lead monitoring program, conducted in accordance with the Lead and Copper Rule, were below the action level for the presence of lead.

PFAS

In April 2024, the EPA adopted the final water quality regulation for certain per- and polyfluoroalkyl substances (PFAS):

- MCL of 4 ppt for PFOS and PFOA.
- MCL of 10 ppt for PFHxS, PFNA, and GenX.
- Hazard Index of 1.0 combined for PFHxS, PFNA, PFBS, and GenX.

Water systems must begin monitoring for these PFAS within three years (2027), and must comply with the regulation within five years (2029).

At Cal Water, protecting our customers' health and safety is our highest priority, and we are committed to complying with all requirements set by the public health experts. We have been preparing for the EPA regulation and its potential impact on—and any treatment needed in—our systems, and already evaluated the impact of the proposed regulation so that we could be better prepared to comply with the final MCLs.

We also have protocols to test our water sources for compliance with the new MCLs. We have long followed recommendations from DDW, and even went beyond by testing every active source in our California systems years ago. Although not required at the time, we believed it was the right thing to do. In any cases across our service areas where detections were above the levels at which state public health experts have recommended water suppliers take action (the previous response level), we took the affected sources out of service until treatment was/can be installed.

Our active water sources are in compliance with current California response levels, based on the running annual average at each site. The response level, which is the level at which a water system should make operational changes to reduce the concentration of a compound, is set with a margin of protection for all people (including sensitive populations) over a lifetime of exposure.

Additionally, we believe a comprehensive approach is needed to properly address the situation. We urged the EPA to establish a consistent, science-based standard as quickly as feasible, and strongly supported state legislation that will prohibit the sale and use of certain products that contain PFAS, require the certification of accurate testing methods for PFAS, and establish a publicly accessible database that houses the sources of PFAS entering water supplies. We have also filed lawsuits to hold PFAS manufacturers responsible—and ultimately prevent our customers from bearing the costs of treatment, to the extent possible—and are pursuing grants where available to further offset customer cost impacts.

As background, PFAS are manmade compounds that have been used to make carpets, clothing, fabrics for furniture, paper packaging for food, and other materials (e.g., cookware) that are resistant to water, grease, or stains. These compounds are also used for firefighting at airfields, which is one way they have found their way into groundwater in certain areas.

Studies indicate that long-term exposure to PFAS over certain levels could have adverse health effects, including developmental effects to fetuses during pregnancy or infants; cancer; or impacts on liver, immunity, thyroid, and other functions. Potential health effects related to PFAS are still being studied, and research is still evolving on this issue.

More information on PFAS is available on the DDW web site.

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KEY DEFINITIONS

IN COMPLIANCE: Does not exceed any applicable MCL, SMCL, or action level, as determined by DDW. For some compounds, compliance is determined by averaging the results for one source over a one-year period.

LEVEL 1 ASSESSMENT: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in the system.

LEVEL 2 ASSESSMENT: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in the system on multiple occasions.

MAXIMUM CONTAMINANT LEVEL (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs (SMCLs) are set to protect the odor, taste, and appearance of drinking water.

MAXIMUM CONTAMINANT LEVEL GOAL (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

MAXIMUM RESIDUAL DISINFECTANT LEVEL (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MAXIMUM RESIDUAL DISINFECTANT LEVEL GOAL (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NOTIFICATION LEVEL (NL) AND RESPONSE LEVEL (RL): Health-based advisory levels for unregulated contaminants in drinking water. They are used by DDW to provide guidance to drinking water systems.

PRIMARY DRINKING WATER STANDARDS (PDWS): MCLs, MRDLs, and TTs for contaminants that affect health along with their monitoring, reporting, and water treatment requirements.

PUBLIC HEALTH GOAL (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency without regard to technological or economic feasability.

REGULATORY ACTION LEVEL (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

TREATMENT TECHNIQUE (TT): A required process intended to reduce the level of a contaminant in drinking water.

VARIANCES AND EXEMPTIONS: Permissions from the State Water Resources Control Board (State Board) to exceed an MCL or not comply with a treatment technique under certain conditions.

STANDARD ABBREVIATIONS

AL	Action level
Max	Maximum
MFL	Million fibers per liter
Min	Minimum
N/A	Not applicable
ND	Constituent not detected
NL	Notification level
NTU	Nephelometric turbidity unit
pCi/L	Picocuries per liter (a measure of radiation)
ppb	Parts per billion or micrograms per liter (µg/L)
ppm	Parts per million or milligrams per liter (mg/L)
ppq	Parts per quadrillion or picogram per liter (pg/L)
ppt	Parts per trillion or nanograms per liter (ng/L)
RAA	running annual average
µS/cm	Microsiemens/centimeter

TABLE INTRODUCTION

Every year, Cal Water performs hundreds of thousands of tests to monitor the quality of our water. If any contaminants are detected, they are included in this annual water quality report. However, most of the contaminants we test for are not detected, so they are not listed.

See the Potential Contaminants web page for a complete list of contaminants we test for.

In the table, water quality test results are divided into four major sections: “Primary Drinking Water Standards,” “Secondary Drinking Water Standards,” “State-Monitored Contaminants with Notification Levels,” and “Unregulated Compounds.” Primary standards protect public health by limiting the levels of certain constituents in drinking water. Secondary standards are set for substances that don’t impact health but could affect the water’s taste, odor, or appearance. Some unregulated substances (hardness and sodium, for example) are included for your information. The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

SUBSTANCE SOURCES

DI	Byproduct of drinking water disinfection
DS	Drinking water disinfectant added for treatment
EN	Naturally present in the environment
ER	Erosion of natural deposits
FE	Human and animal waste
FL	Water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
FR	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage
IC	Internal corrosion of household plumbing systems
IM	Discharge from industrial manufacturers
IO	Substances that form ions when in water
IW	Industrial waste
OC	Runoff from orchards; glass and electronics production waste
OD	Discharges of oil-drilling waste and from metal refineries
OM	Naturally occurring organic materials
RU	Runoff/leaching from natural deposits
RS	Residue from some surface water treatment processes
SO	Soil runoff
SP	Discharge from steel and pulp mills and chrome plating
SW	Seawater influence
VA	Various natural and manmade sources
WD	Leaching from wood preservatives
UR	Unregulated constituents with no source listed and that do not have standardized “source of substance” language

Our testing equipment is so sensitive, it can detect constituents as small as 1 part per trillion. That is equivalent to 1 inch over 15 million miles.



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2023 WATER QUALITY

PRIMARY DRINKING WATER STANDARDS

Microbiological	Year Tested	Unit	MCL	PHG (MCLG)	In Compliance	Distribution System-Wide Highest Monthly	Source
Fecal coliform and E. coli	2023	Positive Samples	0[1]	(0)	**Yes**	0	FE

Radiological	Year Tested	Unit	MCL	PHG (MCLG)	In Compliance	Groundwater Range	Groundwater Average	SEWD[2] Range	SEWD[2] Average/Result	Source
Gross alpha particle activity	2015–2023	pCi/L	15	(0)	**Yes**	ND–12	ND	N/A	N/A	ER
Uranium	2015–2023	pCi/L	20	0.43 (0)	**Yes**	ND–5.8	1.9	N/A	ND	ER

Inorganic Chemicals	Year Tested	Unit	MCL	PHG (MCLG)	In Compliance	Groundwater Range	Groundwater Average	SEWD Range	SEWD Average/Result	Source
Arsenic[3]	2021–2023	ppb	10	0.004 (0)	**Yes**	ND–6.4	4.2	N/A	ND	ER, OC
Barium	2021–2023	ppm	1	2 (2)	**Yes**	ND–0.29	0.15	N/A	ND	ER, OD
Chromium (total)	2021–2023	ppb	50	(100)	**Yes**	ND–10	ND	N/A	ND	ER, SP
Fluoride	2021–2023	ppm	2	1 (4.0)	**Yes**	ND–0.12	ND	N/A	ND	ER, FL
Nitrate as N[4]	2023	ppm	10	10 (10)	**Yes**	ND–7.3	2.2	N/A	ND	ER, FR

Lead and Copper	Year Tested	Unit	AL	PHG (MCLG)	In Compliance	Distribution System-Wide 90th Percentile	Distribution System-Wide Samples > AL	Source
Copper	2021	ppm	1.3	0.3	**Yes**	ND	0 of 50	IC, ER, WD
Lead	2021	ppb	15	0.2	**Yes**	ND	0 of 50	IC, IM, ER

[1] Exceeds if routine and repeat samples are total coliform-positive and either is E. coli-positive, system fails to take repeat samples following E. coli-positive routine sample, or system fails to analyze total coliform-positive repeat sample for E. coli.

[2] A part of Stockton's water supply is purchased from Stockton East Water District (SEWD).

[3] The average arsenic level was 4.2 ppb, with a maximum level of 6.4 ppb. While your drinking water meets the federal and state standards for arsenic, it does contain low levels of arsenic. The arsenic standards balance the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects, such as skin damage and circulatory problems.

[4] The average nitrate as N level was 2.2 ppm, with a maximum level of 7.3 ppm. We are closely monitoring the nitrate levels. Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of an infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 ppm may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant or you are pregnant, you should seek advice from your health care provider.

2023 WATER QUALITY

						Distribution System-Wide		
Disinfection Byproducts	Year Tested	Unit	MCL	PHG (MCLG)	In Compliance	Range	Highest Annual Average	Source
Total haloacetic acids (THAA)	2023	ppb	60	N/A	**Yes**	7.9–61	31	DI
Total trihalomethane (TTHM)[1]	2023	ppb	80	N/A	**Yes**	17–88	73	DI

						Distribution System-Wide		
Disinfectants	Year Tested	Unit	MRDL	MRDLG	In Compliance	Range	Average	Source
Free chlorine	2023	ppm	4	4	**Yes**	ND–1.5	0.91	DS

						Groundwater		SEWD		
Turbidity and TOC	Year Tested	Unit	MCL	PHG (MCLG)	In Compliance	Range	Average	Highest Level	Lowest Monthly Percent	Source
Turbidity[2]	2023	NTU	TT	N/A	**Yes**	—	—	0.08	100%	VA

	Year Tested	Unit	MCL	PHG (MCLG)	In Compliance	Highest Level	Lowest Monthly Percent Removal Ratio	Source
Total organic carbon[3]	2023	ppm	TT	N/A	**Yes**	2.8	1.00	VA

[1] The locational running annual average (LRAA) for TTHM levels was 73 ppb, with a maximum level of 88 ppb. The MCL is calculated using the LRAA, the average of analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer.

[2] For surface water systems, the TT dictates that the turbidity level of the filtered water be less than or equal to 0.3 NTU in 95% of the measurements taken each month and not exceed 1 NTU at any time. Turbidity is a measurement of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

[3] TOC has no health effects; however, TOC provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes and haloacetic acids. The TT dictates that a removal ratio of 1 or higher must be achieved. Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects such as liver, kidney, or nervous system problems, and may lead to an increased risk of cancer. Concerns regarding disinfection byproducts are based upon exposure over many years.

2023 WATER QUALITY

SECONDARY DRINKING WATER STANDARDS

						Groundwater		SEWD		
Contaminants	Year Tested	Unit	SMCL	PHG (MCLG)	In Compliance	Range	Average	Range	Average/Result	Source
Aluminum	2021–2023	ppb	200	600	**Yes**	ND–53	ND	N/A	ND	ER, RS
Chloride	2021–2023	ppm	500	N/A	**Yes**	7.1–29	17	N/A	5	RU, SW
Color	2018–2023	UNITS	15	N/A	**Yes**	ND–5.0	ND	N/A	ND	OM
Specific conductance	2021–2023	µS/cm	1600	N/A	**Yes**	260–660	436	N/A	101	SW, IO
Iron	2021–2023	ppb	300	N/A	**Yes**	ND–120	ND	N/A	ND	RU, IW
Manganese[1]	2021–2023	ppb	50	N/A	**Yes**	ND–56	ND	N/A	ND	RU
Odor	2018–2023	T.O.N.	3	N/A	**Yes**	ND–1.3	ND	N/A	ND	OM
Sulfate	2021–2023	ppm	500	N/A	**Yes**	2.7–32	19	N/A	9.2	RU, IW
Total dissolved solids	2021–2023	ppm	1000	N/A	**Yes**	200–460	288	N/A	70	RU
Turbidity (groundwater)	2018–2023	NTU	5	N/A	**Yes**	ND–0.79	0.21	N/A	N/A	SO

STATE-REGULATED CONTAMINANTS WITH NOTIFICATION LEVELS

						Groundwater		SEWD		
Contaminants	Year Tested	Unit	NL	PHG (MCLG)	In Compliance	Range	Average	Range	Average/Result	Source
Dichlorodifluoromethane (freon 12)	2021–2023	ppb	1000	N/A	**Yes**	ND–3.3	ND	N/A	ND	UR
Perfluorhexanesulfonic acid (PFHxS)[2]	2020–2023	ppt	3	N/A	**Yes**	ND–6.8	0.30	N/A	ND	UR
Perfluorooctanesulfonic acid (PFOS)[2]	2020–2023	ppt	6.5	N/A	**Yes**	ND–21	1.5	N/A	ND	UR
Vanadium	2020–2023	ppb	50	N/A	**Yes**	ND–33	20	N/A	ND	UR

[1] Manganese was present at levels that exceed the SMCL at one of our wells between February and August 2023. Compliance with the SMCL is based on a RAA and the RAA for that well was 52.5 ppb. The well has been taken offline, and we are looking to conduct further testing at this well for treatment evaluation. Our system average for manganese is ND. The SMCL was set to protect you against unpleasant aesthetic effects, such as color, taste, odor, and the staining of plumbing fixtures and clothing when washed. Exceeding the SMCL does not pose a health risk.

[2] Per-and polyfluoroalkyl substances (PFAS) are a broad class of chemicals, which includes perfluorooctanic acid (PFOA) and PFOS, perfluorobutanesulfonic acid (PFBS), and PFHxS. NLs have been established for these four compounds. NLs are non-regulatory, health-based advisory levels established for constituents that may be candidates for regulation in the future. Studies indicate that long-term exposure to PFOS/PFOA/PFHxS over certain levels could have adverse health effects, including developmental effects to fetuses during pregnancy or breastfed infants; cancer; or liver, immunity, thyroid, and other effects. Cal Water is working closely with DDW and EPA to conduct extensive monitoring and identify the best available treatment technology for treatment of PFAS.

UNREGULATED COMPOUNDS AND UNREGULATED CONTAMINANT MONITORING RULE (UCMR)

						Groundwater		SEWD		
Constituents	Year Tested	Unit	NL	PHG (MCLG)	In Compliance	Range	Average	Range	Average/Result	Source
Alkalinity (total)	2021–2023	ppm	N/A	N/A	N/A	120–270	170	N/A	30	UR
Calcium	2018–2023	ppm	N/A	N/A	N/A	5.5–61	33	N/A	8	UR
Hexavalent chromium[1]	2015–2023	ppb	N/A	0.02	N/A	ND–7.8	2.4	N/A	N/A	UR
Germanium	2019–2020	ppb	N/A	N/A	N/A	ND–2.5	0.35	N/A	N/A	UR
Haloacetic acids five	2019	ppb	N/A	N/A	N/A	ND–4.1	ND	N/A	N/A	UR
Haloacetic acids nine	2019	ppb	N/A	N/A	N/A	9.2–25	17	N/A	N/A	UR
Haloacetic acids six brominated	2019	ppb	N/A	N/A	N/A	ND–4.0	ND	N/A	N/A	UR
Hardness (total)	2018–2023	ppm	N/A	N/A	N/A	21–290	148	N/A	32.3	UR
Magnesium	2018–2023	ppm	N/A	N/A	N/A	1.8–34	16	N/A	3	UR
Perfluorohexanoic acid (PFHxA)	2020–2023	ppt	N/A	N/A	N/A	ND–2.3	0.13	N/A	ND	UR
Perfluoropentanoic acid	2023	ppt	N/A	N/A	N/A	ND–2.8	0.20	N/A	ND	UR
pH	2019–2023	Units	N/A	N/A	N/A	6.9–9.4	8.0	N/A	8.1	UR
Potassium	2018–2023	ppm	N/A	N/A	N/A	0.71–7.2	4.9	N/A	1	UR
Sodium	2018–2023	ppm	N/A	N/A	N/A	5.6–41	23	N/A	7	UR

[1] The previous MCL of 0.010 mg/L (10 ppb) for hexavalent chromium was withdrawn on September 11, 2017, and there was no MCL in effect in 2023. The State recommended that any hexavalent chromium results above the detection limit of 1 ppb still be reported. In April 2024, the State adopted a new MCL of 10 ppb.

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Thanks for taking the time to learn more about your water quality.

Even more information awaits you at calwater.com.

Visit our web site to get information about your account, water-use history, water rates, and water system. You will also find water-saving tips and news about water conservation programs and rebates available in your area.

- Conservation resources
- Lead in water
- Water treatment and disinfection
- Protecting the water supply

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Attachment H.2. Annual Irrigation Water Quality Reports - Agricultural

INORGANIC CHEMICALS ANALYSIS

Date of Report : July 3, 2023
Sample ID : STK2337401-001

Laboratory Name : **FGL Environmental**
Sampled On : 06/06/2023-09:10
Received On : 06/06/2023-13:30
Completed On : 07/03/2023-07:52

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S. Title: Laboratory Director Date: 2023-07-03

Sampled By : QF
Employed By : Stockton East Water

Sample Point Information **EDT**

PS Code : CA3910006_005_005
Sample Point Name : CALAVERAS RIVER AT BELLOTA - RAW
Water System Name : STOCKTON EAST WATER DISTRICT

GENERAL MINERAL & PHYSICAL

Method Code	Chemicals	Analyte Code	Result	Units	MCL	DLR	ELAP
EPA 200.7	Total Hardness (as CaCO3)	1915	66.2	mg/L		1	1573
EPA 200.7	Calcium (Ca)	1919	15	mg/L		1	1573
EPA 200.7	Magnesium (Mg)	1031	7	mg/L		1	1573
EPA 200.7	Sodium (Na)	1052	5	mg/L		1	1573
EPA 200.7	Potassium (K)	1042	2	mg/L		1	1573
	Total Cations		1.6	meq/L			1573
SM 2320 B	Total Alkalinity (as CaCO3)	1927	50	mg/L		10	1573
SM 2320 B	Hydroxide (OH)	1021	ND	mg/L		10	1573
SM 2320 B	Carbonate (CO3)	1929	ND	mg/L		10	1573
SM 2320 B	Bicarbonate (HCO3)	1928	60	mg/L		10	1573
EPA 300.0	Sulfate (SO4)	1055	8.8	mg/L	* [2]	0.5	1573
EPA 300.0	Chloride (Cl)	1017	3	mg/L	* [2]	1	1573
	Nitrate (NO3)		ND	mg/L	45	2	1573
EPA 300.0	Fluoride (F)	1025	ND	mg/L	2	0.1	1573
	Total Anions		1.3	meq/L			1573
SM 4500-H+B	pH	C253	8.1	Std Units			1573
SM 2510 B	Specific Conductance (E.C.)	1064	215	umhos/cm2	** [2]	1	1573
SM 2540 C	Total Filterable Residue	1930	90	mg/L	*** [2]	40	1573
SM 2120 B	Apparent Color (Unfiltered)	1905	20	Units	15 [2]	5	1563
SM 2150 B	Odor Threshold at 60 C	1920	ND	TON	3 [2]	1	1563
SM 2130 B-01	Lab Turbidity	0100	2.4	NTU	5 [2]	0.1	1563
SM 5540 C-00	MBAS	2905	ND	mg/L	0.5 [2]	0.05	1573
SM 4500-H+B	pH, Field	C253	8.1	Std Units			1563

MCL - Maximum Contaminant Level, DLR - Detection Limit for Reporting Purpose, ND - Not Detected at or above DLR
[2]Indicates Secondary Drinking Water Standards (Recommended-Upper-Short-Term)

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INORGANIC CHEMICALS ANALYSIS

Date of Report : July 3, 2023
Sample ID : STK2337401-002

Laboratory Name : **FGL Environmental**
Sampled On : 06/06/2023-10:15
Received On : 06/06/2023-13:30
Completed On : 07/03/2023-07:52

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S. Title: Laboratory Director Date: 2023-07-03

Sampled By : QF
Employed By : Stockton East Water

Sample Point Information **EDT**

PS Code : CA3910006_006_006
Sample Point Name : STANISLAUS RIVER, END OF PIPELINE - RAW
Water System Name : STOCKTON EAST WATER DISTRICT

GENERAL MINERAL & PHYSICAL

Method Code	Chemicals	Analyte Code	Result	Units	MCL	DLR	ELAP
EPA 200.7	Total Hardness (as CaCO3)	1915	29.8	mg/L		1	1573
EPA 200.7	Calcium (Ca)	1919	7	mg/L		1	1573
EPA 200.7	Magnesium (Mg)	1031	3	mg/L		1	1573
EPA 200.7	Sodium (Na)	1052	3	mg/L		1	1573
EPA 200.7	Potassium (K)	1042	1	mg/L		1	1573
	Total Cations		0.8	meq/L			1573
SM 2320 B	Total Alkalinity (as CaCO3)	1927	30	mg/L		10	1573
SM 2320 B	Hydroxide (OH)	1021	ND	mg/L		10	1573
SM 2320 B	Carbonate (CO3)	1929	ND	mg/L		10	1573
SM 2320 B	Bicarbonate (HCO3)	1928	40	mg/L		10	1573
EPA 300.0	Sulfate (SO4)	1055	2.9	mg/L	* [2]	0.5	1573
EPA 300.0	Chloride (Cl)	1017	1	mg/L	* [2]	1	1573
	Nitrate (NO3)		ND	mg/L	45	2	1573
EPA 300.0	Fluoride (F)	1025	ND	mg/L	2	0.1	1573
	Total Anions		0.8	meq/L			1573
SM 4500-H+B	pH	C253	7.9	Std Units			1573
SM 2510 B	Specific Conductance (E.C.)	1064	70	umhos/cm2	** [2]	1	1573
SM 2540 C	Total Filterable Residue	1930	50	mg/L	*** [2]	40	1573
SM 2120 B	Apparent Color (Unfiltered)	1905	10	Units	15 [2]	5	1563
SM 2150 B	Odor Threshold at 60 C	1920	1	TON	3 [2]	1	1563
SM 2130 B-01	Lab Turbidity	0100	5.5	NTU	5 [2]	0.1	1563
SM 5540 C-00	MBAS	2905	ND	mg/L	0.5 [2]	0.05	1573
SM 4500-H+B	pH, Field	C253	7.9	Std Units			1563

MCL - Maximum Contaminant Level, DLR - Detection Limit for Reporting Purpose, ND - Not Detected at or above DLR
[2]Indicates Secondary Drinking Water Standards (Recommended-Upper-Short-Term)

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INORGANIC CHEMICALS ANALYSIS

Date of Report : July 3, 2023
Sample ID : STK2337401-003

Laboratory Name : **FGL Environmental**
Sampled On : 06/06/2023-11:10
Received On : 06/06/2023-13:30
Completed On : 07/03/2023-07:52

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S. Title: Laboratory Director Date: 2023-07-03

Sampled By : QF
Employed By : Stockton East Water

Sample Point Information **EDT**

PS Code : CA3910006_002_002
Sample Point Name : TREATMENT PLANT - FINAL TREATED-SA5
Water System Name : STOCKTON EAST WATER DISTRICT

GENERAL MINERAL & PHYSICAL

Method Code	Chemicals	Analyte Code	Result	Units	MCL	DLR	ELAP
EPA 200.7	Total Hardness (as CaCO3)	1915	32.3	mg/L		1	1573
EPA 200.7	Calcium (Ca)	1919	8	mg/L		1	1573
EPA 200.7	Magnesium (Mg)	1031	3	mg/L		1	1573
EPA 200.7	Sodium (Na)	1052	7	mg/L		1	1573
EPA 200.7	Potassium (K)	1042	1	mg/L		1	1573
	Total Cations		1.0	meq/L			1573
SM 2320 B	Total Alkalinity (as CaCO3)	1927	30	mg/L		10	1573
SM 2320 B	Hydroxide (OH)	1021	ND	mg/L		10	1573
SM 2320 B	Carbonate (CO3)	1929	ND	mg/L		10	1573
SM 2320 B	Bicarbonate (HCO3)	1928	40	mg/L		10	1573
EPA 300.0	Sulfate (SO4)	1055	9.2	mg/L	* [2]	0.5	1573
EPA 300.0	Chloride (Cl)	1017	5	mg/L	* [2]	1	1573
	Nitrate (NO3)		ND	mg/L	45	2	1573
EPA 300.0	Fluoride (F)	1025	ND	mg/L	2	0.1	1573
	Total Anions		1.0	meq/L			1573
SM 4500-H+B	pH	C253	8.1	Std Units			1573
SM 2510 B	Specific Conductance (E.C.)	1064	101	umhos/cm2	** [2]	1	1573
SM 2540 C	Total Filterable Residue	1930	70	mg/L	*** [2]	40	1573
SM 2120 B	Apparent Color (Unfiltered)	1905	ND	Units	15 [2]	5	1563
SM 2150 B	Odor Threshold at 60 C	1920	ND	TON	3 [2]	1	1563
SM 2130 B-01	Lab Turbidity	0100	0.12	NTU	5 [2]	0.1	1563
SM 5540 C-00	MBAS	2905	ND	mg/L	0.5 [2]	0.05	1573
SM 4500-H+B	pH, Field	C253	8.1	Std Units			1563

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Attachment I Notices of District Education Programs Available to Customers

STOCKTON EAST WATER DISTRICT

Newsletter & AG Water Report

2024/2025 Fall & Winter

SUSTAINABLE GROUNDWATER MANAGEMENT ACT (SGMA) UPDATES

The Eastern San Joaquin Groundwater Authority (GWA) is currently working on the five-year Groundwater Sustainability Plan (GSP) update, due in January 2025. The draft five-year GSP update will be available for public review beginning October 1. The GWA also adopted a Domestic Well Mitigation Program to help well owners impacted by declining groundwater levels. For more information about the GSP update and Domestic Well Mitigation Program, please visit **www.esjgroundwater.org**

The good news in the five-year GSP update is many Groundwater Sustainability Agencies (GSAs), like SEWD, are completing projects that help progress the groundwater basin towards sustainability. Since implementing the GSP, the District has reduced groundwater demand by more than 12,000 acre feet annually by providing surface water. The bad news is the Department of Water Resources is requiring development of a demand reduction (curtailment) program to decrease groundwater pumping if groundwater levels reach a certain threshold. Current modeling estimates the basin-wide reduction between 56,000 and 166,000 acre-feet annually, depending on the modeling scenario. Thankfully, the District has surface water supplies and programs available for our customers to minimize potential impacts of demand reduction. The District offers a cost recovery program to growers converting to surface water and is working on securing Federal grant funding to support construction of new surface water divisions. We also off compensation to growers that recharge flood water during the non-irrigation season. Please reach out to our office for more information about connecting to surface water and/or recharging flood water. Additional information is available on our website **www.sewd.net/sewd-sgma**.

2024 Dam Removal Schedule

Begin Date Wednesday, October 9, 2024

2024			
System	Site	Begin Date	End Date
Calaveras River	Bellota Weir	10/9/2024	10/11/2024
Mormon Slough	Motoike Dam	10/15/2024	10/15/2024
Mormon Slough	Fine Road Dam		
Mormon Slough	Avansino Dam	10/16/2024	10/16/2024
Mormon Slough	Hosie Dam		
Mormon Slough	Bonomo Dam		
Mormon Slough	Piazza Dam		
Mormon Slough	Prado Dam	10/17/2024	10/17/2024
Mormon Slough	Fuginaka Dam		
Mormon Slough	Lovagi Dam		
Mormon Slough	Panella		
Mormon Slough	Main St. Dam	10/18/2024	10/18/2024
Duck Creek	Duck Creek		
Potter Creek	Lagorio Dam		
Old Calaveras River	Clements Dam	10/21/2024	10/21/2024
Old Calaveras River	Tully Dam		
Mosher Creek	Tully Mosher Dam	10/22/2024	10/22/2024
Mosher Creek	Lyons Dam		
Mosher Creek	Bear Creek Dam	10/23/2024	10/23/2024
Old Calaveres River	8 Mile Dam	10/24/2024	10/24/2024
Mormon Slough	8000 Pump		
Old Calaveras River	Murphy Dam	10/25/2024	10/25/2024
Old Calaveras River	Pezzi Dam		
Old Calaveras River	Solari Dam		
Old Calaveras River	McAllen Rd. Dam	10/28/2024	10/28/2024
Potter Creek	Cherryland dam		
Potter Creek	Moitoike Dam #2		
Potter Creek	Billingmeier Dam	10/29/2024	10/29/2024
Potter Creek	Drais Rd. dam	10/29/2024	10/29/2024

In accordance with the District's Habitat Conservation Plan (HCP) all New Hogan system dams will be removed in downstream order.

Updates to this tentative schedule will be posted online at *www.sewd.net*

The last day for New Melones water is September 30th.

CALAVERAS HCP

As part of this long-term agreement, NOAA fisheries has issued a 50-year Incidental Take Permit (ITP) for the operations and maintenance of SEWD facilities on the Calaveras River. In turn, SEWD has committed to an array of conservation actions to benefit fish populations on the Calaveras River over that time period. The Calaveras HCP allows for an adaptive management plan that would support future studies of the fish community below New Hogan Dam. The HCP was approved in August 2020 and has been implemented for three full years. The District has made considerable progress towards design completion for a new fish screening, fish passage, and fish exclusion facility at Bellota, in addition to designing four other fish barrier removal projects. The District is also eager to partner with surface water diverters to install fish screens on pump intakes and will assist customers with pursuit of grant funding. Any stakeholders interested in implementation of the HCP are encouraged to visit the District website at **www.sewd.net/habitat-conservation-plan/.**

More information about the plan, including monthly reports and videos are available on the District's website "HCP" page

BOARD OF DIRECTORS

The District's Board of Directors meet regularly every Tuesday at 12:30 p.m. located at 6767 East Main Street Stockton, CA 95215

DIVISION 1—Richard Atkins, President

DIVISION 2—Andrew Watkins

DIVISION 3—Alvin Cortopassi

DIVISION 4—Melvin Panizza

DIVISION 5—Paul Sanguinetti

DIVISION 6—Paul Nakaue

DIVISION 7—Thomas McGurk, Vice President

SAWS Water Education Program: H2O to Go!

The Stockton East Water District is a member of the Stockton Area Water Suppliers (SAWS), an alliance of Stockton area water agencies that includes the City of Stockton, San Joaquin County, California Water Service Company, and SEWD. SAWS sponsors the SAWS Water Education Program, which provides six standards-based, in-class water education presentations along with special event programs and facility tours. The SAWS Water Education Program connects content and Next Generation Science Standards (NGSS) to water education to raise water awareness in our youth. Any school with a Stockton address is eligible for this fun, free, science-based educational program.



Pictured on the left are the SAWS "Water Ladies" - Miss Sue, Mrs. Coon, Mrs. To-Cowell and Miss Blair. Visiting over 300 Stockton area K-6 classrooms every year to teach water science and water awareness, all SAWS instructors are approved for entry into the classroom by the four school districts serving the area. To learn more about the SAWS Water Education Program, visit SEWD's web page at **https://www.sewd.net/conservation-education**

Progress Bill

In accordance with the District Act, the 2024 Progress Bill payment is due on or before October 31, 2024. Penalties will apply if not paid by this date.

We are pleased to announce that we have adopted a new solution that allows customers to submit credit/debit card payments online via a secure portal. The transaction is simple! To make a payment, scan the QR Code (at right) or click on the link available on the District website. You can also make a credit/debit card payment in-person at the District Office.

The District will continue to accept cash and check payments by mail and in-person at the District Office. If you have any questions, please call Akaash Sharma, Accounting Technician at **(209) 948-0333.**

WATER QUALITY

To view the latest Irrigation Water Quality Report, or if you have any questions, please refer to the District's website at www.sewd.net/water-quality. Alternatively, from the Home Page, scroll to the Departments tab, then scroll down to Operations tab from then scroll-down the menu, and finally click on Water Quality from the pop-up.

2024 WATER RATES

For quick reference, the Water Rates are listed below and are also available online at www.sewd.net.

- AG Groundwater Assessment is $6.39/per acre-foot of water;
- AG Surface Water Rate is $23.00/per acre-foot of water;
- Domestic Groundwater Assessment is $54.00/per Domestic Use Unit (occupied or not);
- Out-of-District Water Rate shall be the cost of water designated under the purchase contract PLUS a charge up to the New Melones Conveyance System Wheeling Rate of $27.81/per acre-foot of water;
- Total Municipal Groundwater Assessment Rate is $462.87 per acre-foot of water ($3.60 base Groundwater Production Assessment + $459.27 Rate Equalization).
- The rate for sales of Non-Agricultural stream-delivered water shall be $60 per acre-foot of water.

District Revised Ordinance
Adopted by the Board, 04/02/24

2024 WATER SUPPLY OUTLOOK

Both of the District's surface water supply reservoirs are projected to end the current irrigation season with a good amount of storage. New Hogan reservoir storage is estimated at approximately 170,000 acre-feet, which is 18,000 acre-feet over the December 1 top of conservation for storage. We estimate the release of 3,000 to 18,000 acre-feet for fish pulse flows and to meet flood space requirements. The District will be working with the U.S. Army Corps of Engineers to maximize carry over storage and New Hogan reservoir should have enough storage for a normal supply next year.

New Melones Reservoir has 1.86 million acre-feet as of September 4. We received a full allocation for the current water year and expect to receive a preliminary allocation for October through January of next water year. Although the New Melones Reservoir has lots of stored water, the District's 2025 allocation is solely dependent upon the San Joaquin River Index. Unfortunately, the National Oceanic and Atmospheric Administration (NOAA) is predicting development of La Nina conditions between now and October, the same conditions present between 2020-2022. An official allocation for the 2024-2025 water year won't be determined until May 2025, making water supply planning difficult, but the District will continue to work with the U.S. Bureau of Reclamation to receive a portion of the large volume stored in New Melones Reservoir.

CALIFORNIA WATER PROFESSIONALS APPRECIATION WEEK
OCTOBER 5th - 13th

2024 Wellness Grant

Stockton East Water District was awarded a $1,920.00 Wellness Grant by ACWA/JPIA on July 10, 2024, for our application submission. Our 2024 plans for the Health & Wellness Program have begun to take shape & our employees are excited! The District is dedicated to educating, promoting, and enhancing our employees' lifestyles both in the office and at home, ensuring they thrive in all areas of their lives.

District Staff

ADMINISTRATION DEPARTMENT
Justin M. Hopkins, General Manager

FINANCE DEPARTMENT
Priya Ram, Director of Finance & Administration
Alejandra Rangel, Accountant

OPERATIONS DEPARTMENT
Juan M. Vega Assistant General Manager
Jim Wunderlich, Water Operations Manager
Kyle Brothers, Chief Plant Operator

ENGINEERING DEPARTMENT
Darrel Evensen, District Engineer

MAINTENANCE DEPARTMENT
David Higares, Maintenance Manager
Aaron Riojas, Maintenance Supervisor

WATER SUPPLY DEPARTMENT
Chris Donis, Water Supply Manager
Stephen Bonnesen, Water Supply Supervisor

WATER CONSERVATION
Kristin Coon, Water Conservation Coordinator

CONTACT US

(209) 948-0333	Administration
(209) 948-0537	Treatment Plant
(209) 469-3335	Ag Water Order
(209) 444-3126	Water Conservation
(209) 948-0423	Fax
www.sewd.net	District Website
sewd@sewd.net	District Email

6767 East Main Street
Stockton, CA 95215

Post Office Box 5157
Stockton, CA 95205

"Our Mission is to ensure sustainable groundwater, high-quality drinking water, and supplemental surface water for agricultural use."

Attachment J District Agricultural Water Order Form (if Applicable)

Pay My Bill Online Dismiss
(https://allpaid.com/plc/a005ki)
To make a secure online payment, please click here.
(https://allpaid.com/plc/a005ki)



(https://www.sewd.net/)

Contact Us (/contact-us)

Search... Go!

DEPARTMENTS

(/DEPARTMENTS)

- ENGINEERING (/ENGINEERING)
- FINANCE (/FINANCE)
- HUMAN RESOURCES (/HUMAN-RESOURCES)
- OPERATIONS (/OPERATIONS)
- WATER RESOURCES & EDUCATION (/WATER-RESOURCES-EDUCATION)
- WATER SUPPLY (/WATER-SUPPLY)
  - AG WATER ORDER FORM (/AG-WATER-ORDER-FORM)
  - ANNUAL CROP REPORT (/ANNUAL-CROP-REPORT)
  - CALIFORNIA IRRIGATION MANAGEMENT INFORMATION SYSTEM (CIMIS) (/CALIFORNIA-IRRIGATION-MANAGEMENT-INFORMATION-SYSTEM-CIMIS)
  - CAL POLY IRRIGATION TRAINING & RESEARCH CENTER (ITRC) (/CAL-POLY-IRRIGATION-TRAINING-RESEARCH-CENTER-ITRC)
  - IRRIGATION DAM SCHEDULE (/IRRIGATION-DAM-SCHEDULE)

Privacy - Terms

PHYTOPHTHORA STUDY (/PHYTOPHTHORA-STUDY)

REQUEST A PUMP EFFICIENCY TEST (/REQUEST-A-PUMP-EFFICIENCY-TEST)

RULES AND REGULATIONS (/RULES-AND-REGULATIONS)

AG Water Order Form

Please provide us with the following information.

PUMP OPERATOR

Operator First Name (required)

Operator Last Name (required)

Operator Phone (required)

Operator Email (required)

PUMP OWNER (If same as Operator leave blank)

Owner First Name

Owner Last Name

Owner Phone

Owner Email

IRRIGATION SCHEDULE

Pump ID # (required)

Diversion Rate: (in gpm) (required)

Start Date (required)

Start Time (required)

End Date (required)

End Time (required)

Run Time (hrs per day)

Comments/Notes

Submit

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6767 EAST MAIN STREET, STOCKTON CA 95215

TELEPHONE (209) 948-0333

PRIVACY POLICY (/PRIVACY-POLICY)

(HTTPS://WWW.YOUTUBE.COM/@STOCKTONEASTWATERDISTRICT)

(HTTPS://WWW.LINKEDIN.COM/COMPANY/STOCKTON-EAST-WATER-DISTRICT)

WEBSITE ACCESSIBILITY STATEMENT

DISTRICT TRANSPARENCY (TRANSPARENCY.HTML)

POWERED BY STREAMLINE (HTTP://WWW.GETSTREAMLINE.COM/) | SIGN IN (HTTPS://WWW.SEWD.NET/USERS/SIGN_IN?DESTINATION=%2FAG-WATER-ORDER-FORM)

Attachment K Drainage Problem Area Report (if Applicable)

Attachment K – Drainage Problem Area Report is not applicable to Stockton East Water District since they do not have drainage impacted lands.

Attachment L SEWD/ USBR and SEWD/CCWD Contract for New Hogan Project Water Supply

R.O. Draft 7/6-1970
Rev. W.O. 7/20-1970
Rev. R.O. 8/13-1970

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
New Hogan Project, California

Contract No.
14-06-200-5057A

CONTRACT BETWEEN THE UNITED STATES OF AMERICA AND STOCKTON AND EAST SAN JOAQUIN WATER CONSERVATION DISTRICT AND CALAVERAS COUNTY WATER DISTRICT PROVIDING FOR REPAYMENT AND CONSERVATION USE OF NEW HOGAN PROJECT

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
New Hogan Project, California

Contract No.
14-06-200-5057A

CONTRACT BETWEEN THE UNITED STATES OF AMERICA
AND STOCKTON AND EAST SAN JOAQUIN WATER CONSERVATION DISTRICT
AND CALAVERAS COUNTY WATER DISTRICT PROVIDING FOR
REPAYMENT AND CONSERVATION USE OF NEW HOGAN PROJECT

THIS CONTRACT, made this 25th day of August, 1970, in pursuance generally of the Act of June 17, 1902 (32 Stat. 388, 43 U.S.C. 391), and acts amendatory thereof and supplementary thereto, all collectively hereinafter referred to as the Federal reclamation laws, between THE UNITED STATES OF AMERICA, hereinafter referred to as the United States, and the STOCKTON AND EAST SAN JOAQUIN WATER CONSERVATION DISTRICT and the CALAVERAS COUNTY WATER DISTRICT, hereinafter collectively referred to as Districts and individually as District, political subdivisions of the State of California, duly organized, existing, and acting pursuant to the laws thereof, with their principal place of business in Stockton and San Andreas, California, respectively,

WITNESSETH, That:

EXPLANATORY RECITALS

WHEREAS, pursuant to the Act of December 22, 1944 (58 Stat. 887), the United States Army Corps of Engineers constructed the

New Hogan Project on the Calaveras River in the State of California primarily for flood control and secondarily for irrigation and other water use purposes; and

WHEREAS, under the terms of Contract No. 14-06-200-8213, dated March 2, 1960, hereinafter referred to as the 1960 contract, between the United States and the State of California, which contract provides for repayment of that portion of the cost of the Project allocated to conservation purposes, the United States may enter into a contract or contracts pursuant to Section 9 of the Reclamation Project Act of 1939 with other organizations for repayment of the New Hogan Project; and

WHEREAS, this contract is made pursuant to said Act and in accordance with the provisions of the 1960 contract;

NOW, THEREFORE, in consideration of the covenants herein contained, it is agreed as follows:

DEFINITIONS

1. When used herein, unless otherwise distinctly expressed or manifestly incompatible with the intent hereof, the term:

(a) "Secretary" or "Contracting Officer" shall mean the Secretary of the United States Department of the Interior or his duly authorized representative;

--Explanatory Recitals
Definitions--

(b) "District Engineer" shall mean the District Engineer, Sacramento District, United States Army, Corps of Engineers, or his duly authorized representative;

(c) "Calaveras District" shall mean the Calaveras County Water District, and "Stockton District" shall mean the Stockton and East San Joaquin Water Conservation District;

(d) "New Hogan" shall mean the New Hogan Project;

(e) "agricultural water" shall mean water used primarily in the commercial production of agricultural crops or livestock, including domestic use incidental thereto, on tracts of land operated in units of more than two (2) acres;

(f) "municipal, industrial, and domestic water" shall mean water used for other than agricultural purposes;

(g) "year" shall mean the period from April 1 to March 31;

(h) "conservation storage space" shall mean that space in New Hogan which may be utilized, subject to flood control requirements, for agricultural and municipal, industrial, and domestic water use. It shall be limited to a maximum of three hundred and ten thousand (310,000) acre-feet at any one time and shall not include the storage space in New Hogan actually used for sediment and flood control; and

(i) "water released from New Hogan" shall mean water released from the outlet works of New Hogan Dam or withdrawn directly from New Hogan Reservoir.

EFFECTIVE DATE

2. This contract shall be effective on the date first hereinabove written and at that time shall supersede Interim Contract No. 14-06-200-4659A, dated December 31, 1969, between the United States and the Stockton District relating to the use of New Hogan.

DISTRICTS TO APPOINT WATERMASTER--NONLIABILITY OF THE UNITED STATES

3. (a) The Districts by written agreement shall appoint a watermaster, and shall make his identity known to the Contracting Officer and the District Engineer. He shall be responsible for the following:

(1) Administration of the diversion into storage, storage regulation, and release of water pursuant to the terms of this contract; and

(2) Submittal of water use schedules to the Contracting Officer and the District Engineer pursuant to Article 5 and the coordination of schedules between the Districts.

(b) The United States shall not be liable or responsible for the carriage, distribution, or diversion of water after its release and/or diversion from New Hogan pursuant to this contract.

RESERVOIR OPERATION--USE OF WATER BY DISTRICTS

4. (a) Acting through the District Engineer, at the request of the watermaster, the United States shall store, regulate and/or release all flows of the Calaveras River at New Hogan for the purpose of making available agricultural and municipal, industrial, and domestic water for use by the Districts. Such storage, regulation, and release of water shall be subordinate only to storage and release of water for flood control, as conclusively determined by the District Engineer; to maintenance of a storage basin of fifteen thousand (15,000) acre-foot capacity for silting and storage of water for recreational and incidental uses, including recreational use on United States lands adjacent to the Reservoir; and to release of the portion of the unregulated runoff in the Calaveras River which is passed through New Hogan as it occurs in recognition of prior downstream water rights entitlements.

(b) Acting through the District Engineer, the United States may temporarily reduce or discontinue storage, regulation, and/or release of water for purposes of investigation, inspection, maintenance, repair, or replacement of any of the facilities of New Hogan. So far as feasible, however, the District Engineer will give the watermaster notice in advance of such temporary interruption except in case of emergency when notice need not be given.

(c) After meeting prior downstream water rights entitlements, the release and entitlement to water from New Hogan shall be in accordance with the schedule submitted pursuant to Article 5.

(d) For purposes of subdivision (b) of Article 6 the Stockton District shall be deemed to have diverted municipal, industrial, and domestic water during this contract as follows:

(1) 1st through 10th year - as determined by actual deliveries to municipal, industrial, and domestic customers;

(2) 11th through 20th year - ten thousand (10,000) acre-feet or actual municipal, industrial, and domestic water deliveries, whichever is greater;

(3) 21st through 30th year - twenty thousand (20,000) acre-feet or actual municipal, industrial, and domestic water deliveries, whichever is greater; and

(4) 31st through 40th year - thirty thousand (30,000) acre-feet or actual municipal, industrial, and domestic water deliveries, whichever is greater.

WATER USE SCHEDULE

5. (a) Prior to April 1 the watermaster shall submit a written schedule to the District Engineer and the Contracting Officer indicating the desired times and quantities of water to be released from New Hogan during the year. The watermaster shall inform the District Engineer of any revision in said schedule within a reasonable time before the desired change of time of delivery.

(b) Prior to May 1 of each year the watermaster shall submit to the Contracting Officer a water use report indicating for the preceding year the total quantity of water actually used for municipal, industrial, and domestic purposes.

(c) Each day the watermaster shall submit to the District Engineer a water use report indicating for the previous day the total quantity of water actually withdrawn directly from New Hogan Reservoir.

RATE AND METHOD OF PAYMENT

6. (a) The Districts shall pay to the United States their share of the construction, operation, maintenance, replacement, and contract administration costs of New Hogan in the following manner:

(1) Construction Costs - The total reimbursable construction allocation of New Hogan, which is thirty-six and two-tenths percent (36.2%) of the construction cost of New Hogan, excluding any specific costs associated with recreational use, as determined by the Secretary of the Army, in forty (40) equal annual installments commencing on September 1 following the execution of this contract. Payments shall be made to the Bureau of Reclamation and mailed to 2800 Cottage Way, Sacramento, California 95825. Revenues received from prior interim contracts between the Stockton District and the United States for water service from New Hogan, less operation and maintenance and contract administration expenses chargeable to such contracts, shall be credited to payments due until such credits are depleted. The Contracting Officer shall notify the Districts in writing by August 1 following execution of this contract the amount of accumulated credits and the application thereof. If the actual construction cost shall not have been determined on the date of this contract the Contracting Officer shall announce the

estimated construction cost. Such estimated construction cost shall govern the amount of the construction obligation until the actual construction obligation can be determined and a statement thereof furnished to the Districts. Installments coming due after the determination of the actual construction cost shall be adjusted to reflect any difference between the estimated and the actual construction cost;

(2) Operation, Maintenance, and Replacement Costs - The Districts shall pay to the United States thirty-eight percent (38%) of the total operation, maintenance, and replacement costs of New Hogan, excluding any specific costs associated with recreational use of New Hogan, to be paid in equal annual amounts for 5-year periods which shall begin on April 1 of the first year of each period and end March 31 of the fifth year. During the first 5-year period beginning April 1 of the year following the year in which this contract is executed, the Districts shall pay to the United States annually the sum of Seventy-two Thousand Two Hundred ($72,200). This amount is estimated to cover the annual operation, maintenance, and replacement costs chargeable to the Districts during the first 5-year period plus the operation, maintenance, and replacement costs allocated to the Districts from the date of execution of this contract to April 1 of the following year. At the end of each 5-year period an estimate shall be made by the District Engineer of the

annual operation, maintenance, and replacement costs for the next 5-year period payable by the District and the Districts will be notified of the annual amount within thirty (30) days after the end of the preceding 5-year period. After the first 5-year period the annual installments due for succeeding 5-year periods shall be adjusted to reflect the difference between the actual operation, maintenance, and replacement costs allocated to the Districts for the previous 5-year period and the sum advanced by the Districts. Annual payments for operation, maintenance, and replacement costs shall be due June 1 of each year and shall be made payable to the Treasurer of the United States and deposited with the Disbursing Officer, United States Army, Corps of Engineers, 650 Capitol Mall, Sacramento, California 95814; and

(3) Contract Administration Costs - Upon execution of this contract, the Districts shall pay Five Thousand Dollars ($5,000) to the Contracting Officer for contract administration costs. Not later than August 1 of each year thereafter the Contracting Officer shall furnish to the Districts a statement of the actual costs of the Bureau of Reclamation incurred in administering this contract and the recordable contracts in the preceding fiscal year made in accordance

with Article 19 and such amount shall be paid by the Districts to the Contracting Officer by September 1 of each year in order to restore the account to Five Thousand Dollars ($5,000): Provided, That this amount may be exceeded to the extent of the costs of appraisals provided for in Article 20: Provided further, That at any time it appears that this amount will be insufficient to cover the costs of appraisals for the remainder of the year the Districts shall advance within thirty (30) days after receipt of notice the additional amount which the Contracting Officer estimates will be necessary to cover such costs.

(b) Each year prior to September 1 the Districts shall pay interest at two and six-tenths percent (2.6%) annually on that portion of the unpaid construction obligation which is allocated to municipal, industrial, and domestic water use computed in the ratio that such use or contract obligation bears to sixty-nine thousand (69,000) acre-feet minus one-tenth (0.1) of the amount of municipal and industrial water contract obligation or water used. The interest for the period from the date of execution to the following March 31 shall be computed on that portion of the unpaid construction obligation allocated to municipal and industrial water use in the ratio that such use bears to twenty-nine thousand (29,000) acre-feet.

(c) After the construction cost allocated to conservation has been paid with interest when applicable as provided in subdivision (b) of this article, the only cost to be paid by the Districts will be for operation, maintenance, and replacement and contract administration as provided in subsections (2) and (3) of subdivision (a) of this article.

(d) All payments to be made by the Districts under this article shall be by certified check, money order, bank draft, or District warrant.

QUALITY OF WATER

7. The operation and maintenance of the New Hogan facilities for the provision of water under this contract shall be performed in such manner as is practicable to maintain the quality of raw water released from New Hogan. The United States is under no obligation to construct or furnish water treatment facilities to maintain or to better the quality of water. Further, the United States does not warrant the quality of water to be released from New Hogan pursuant to this contract.

POINTS OF DIVERSION--MEASUREMENT OF WATER

8. (a) Water will be made available to the Districts at the outlet works of New Hogan or at such points adjacent to New Hogan as may be jointly agreed upon in writing by the Contracting Officer, the District Engineer, and the watermaster.

(b) Water withdrawn directly from New Hogan Reservoir shall be measured by the Districts at a point located in accordance with subdivision (a) of this article. Water furnished by the Districts for municipal, industrial, and domestic use shall be measured by the Districts at the point or points of delivery to such users. Measurements shall be made with equipment installed, operated, and maintained by the Districts: Provided, That upon the request of the Contracting Officer the Districts shall investigate the accuracy of all measuring equipment installed by the Districts to determine the quantity of municipal, industrial, and domestic water diverted and shall adjust any errors disclosed by such investigation. The United States shall be afforded reasonable opportunity to be present during the inspection and testing procedure by the Districts and the United States shall have full and free access at all reasonable times to inspect said measuring equipment for the purpose of determining the accuracy and condition thereof. If said facilities are found to be defective or inaccurate they shall be readjusted or repaired, or both, or replaced by the Districts. In the event the Districts neglect or fail to make such repairs or replacements within a reasonable time as may be necessary to satisfy the operating requirements of the Contracting Officer, the United States may cause the repairs or replacements to be made and charge the costs thereof to the Districts, which charge the Districts shall pay to the United States on or before June 1 of the year following that in which the cost was incurred and a statement thereof furnished by the Contracting Officer.

SUBCONTRACTS

9. The Districts shall be responsible for the furnishing of agricultural water from New Hogan only to lands within the confines of each District's area of jurisdiction. Nothing herein shall prohibit the Districts or water users within the Districts from commingling municipal, industrial, and domestic water from New Hogan with water from other sources and exporting an amount of municipal, industrial, and domestic water not in excess of the water from those other sources beyond the boundaries of the Districts. Each District, without the consent of the other District or of the Contracting Officer, may enter into subcontracts for the furnishing of agricultural or municipal, industrial, and domestic water, and each such subcontract shall contain a provision whereby the subcontractor specifically agrees to be bound by the provisions of this contract. Nothing contained in any such subcontract shall be deemed in any way to release the Districts from their primary liability to the United States with respect to each and all of the obligations undertaken by each District pursuant to this contract. Copies of subcontracts for the furnishing of New Hogan water shall be furnished to the Contracting Officer.

UNITED STATES NOT LIABLE FOR WATER SHORTAGE--RESPONSIBILITY OF DISTRICTS--RETURN FLOWS--RIGHT OF ACCESS TO WORKS

10. (a) In no event shall any liability accrue against the United States or any of its officers, agents, or employees for any damage, direct or indirect, arising from a shortage of water on account of errors in operation, drought, or other unavoidable causes whatsoever.

(b) The Districts agree to take water released from New Hogan pursuant to this contract at the delivery points established pursuant to Article 8 hereof and to perform any and all acts necessary thereafter to maintain control over such water. The Districts assume full responsibility for the control and distribution of such water: Provided, That the United States reserves the right to all waste, seepage, and return-flow water derived from water furnished to the Districts which escapes or is discharged beyond the Districts' boundaries, and nothing herein shall be construed as an abandonment or a relinquishment by the United States of any such water, but this shall not be construed as claiming for the United States any right, as waste, seepage, or return flow, to water being used pursuant to this contract for surface irrigation or underground storage within the Districts' boundaries by the Districts.

(c) All works, including pipelines, pumps, and meters necessary to enable the Districts to take and distribute water from New Hogan pursuant to this contract shall be constructed, operated, and maintained, or caused to be constructed, operated, and maintained by the Districts without cost or expense to the United States. An easement is necessary and will be granted pursuant to 10 U.S.C. 2669 for the installation, operation, and maintenance of these works on property of the United States. In addition, it is understood that installation, operation, and maintenance of such works on property of the United States shall also be subject to such restrictions and regulations as to location, method of installation, operation, and maintenance as may be prescribed by the Contracting Officer and the District Engineer and subject further to the provisions of subdivision (d) of this article. It is specifically recognized and agreed that this contract does not grant to the Districts any right of access to the stored waters at New Hogan or to the adjacent lands of the United States for any purpose except as provided herein for installation, operation, and maintenance of facilities.

(d) Works installed pursuant to subdivision (c) of this article shall be installed in accordance with plans and specifications approved by the Contracting Officer and the District Engineer. The Contracting Officer and the District Engineer shall have the right of ingress and egress at all reasonable times over and across the land of the Districts for the purpose of inspecting and reading the meters which may be installed and the Districts hereby grant a right-of-way to said parties for such purpose.

(e) The Districts do not assume any obligation, liability, or responsibility for conditions arising out of the operation of New Hogan for flood control or the release of any water for flood control, or for any defect in or failure of New Hogan works.

WATER POLLUTION CONTROL

11. The Districts agree that they will comply fully with all applicable Federal laws, orders, and regulations, and the laws of the State of California, all as administered by appropriate authorities, concerning the pollution of streams, reservoirs, groundwater, or water courses with respect to thermal pollution or the discharge of refuse, garbage, sewage effluent, industrial waste, oil, mine tailings, mineral salts or other pollutants. The Districts agree further that any contract they may enter into with a third party for the furnishing of New Hogan water will contain a similar water pollution control article.

TITLE AND PHYSICAL OPERATIONS TO BE WITH THE UNITED STATES

12. (a) Title to all of New Hogan works shall be and remain in the name of the United States.

(b) Any and all physical operations of New Hogan pursuant to this contract shall be performed by the Corps of Engineers on behalf of the United States.

Article 10(e)
Article 11
Article 12

CHARGES A GENERAL OBLIGATION--LEVIES THEREFOR

13. (a) The Districts, notwithstanding the default in the payment by individual water users of assessments, tolls, or other charges levied by the Districts, are obligated to pay to the United States the charges becoming due as provided in this contract in the manner and proportions prescribed in the operating agreement entered into by the Districts pursuant to Article 34.

(b) The Districts shall cause to be levied and collected all necessary assessments, tolls, and other charges, and shall use all of the authority and resources of the Districts to meet their obligations hereunder.

ALL BENEFITS CONDITIONED UPON PAYMENT

14. (a) It is agreed that the payment of charges upon the terms and conditions provided for herein is a prerequisite to the right to the use of water released to the Districts pursuant to this contract.

(b) Should the Districts fail to levy the assessments, tolls, or charges against any lands or water user required to meet the Districts' obligation to the United States under this contract or, having levied, should the Districts be prevented from collecting such assessments, tolls, or charges by judicial proceedings, or otherwise fail to collect them, such lands or water users shall not be entitled to receive water from New Hogan and the Districts, except as otherwise ordered by a court of competent jurisdiction, shall not deliver water to such lands or water users from New Hogan unless and until arrangements for its delivery satisfactory to the Contracting Officer have been made.

COVENANT AGAINST CONTINGENT FEES

15. The Districts warrant that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Districts for the

purpose of securing business. For breach or violation of this warranty the United States shall have the right to annul this contract without liability, or in its discretion to add to the contract repayment obligation or consideration the full amount of such commission, percentage, brokerage, or contingent fee.

PENALTY FOR DELINQUENT PAYMENTS

16. The Districts shall pay a penalty on installments or charges which become delinquent computed at the rate of one-half of one percent per month of the amount of such delinquent installments or charges for each day from the date of such delinquency until paid: Provided, That no penalty shall be charged to the Districts unless such delinquency continues for more than thirty days.

BOOKS, RECORDS, AND REPORTS

17. The Districts shall establish and maintain accounts and other books and records pertaining to their financial transactions, land use and crop production, water use, and to such other matters as the Contracting Officer may require. Reports thereon shall be furnished to the United States in such form and on such date or dates as may be required by the Contracting Officer. Each party shall have the right, during office hours, to examine and make copies of the other parties' books and official records relating to matters covered by this contract.

CHANGES IN DISTRICT ORGANIZATION

18. While this contract is in effect, no change shall be made in the Districts, by inclusion or exclusion of lands, by dissolution, consolidation, or merger or otherwise, except upon the Contracting Officer's written consent thereto.

LAND NOT TO RECEIVE WATER FURNISHED TO DISTRICTS BY UNITED STATES UNTIL OWNERS THEREOF EXECUTE CERTAIN CONTRACTS

19. (a) No New Hogan water released to a District pursuant to this contract shall be furnished by the District or a subcontractor thereof to any excess lands as defined in Article 21 unless the owners thereof shall have executed valid recordable contracts in form prescribed by the United States, agreeing to the provisions of this article and Articles 20 and 21 hereof, agreeing to the appraisal provided for in Article 20 hereof and that such appraisal shall be made on the basis of the actual bona fide value of such lands at the date of the appraisal without reference to the construction of New Hogan, all as hereinafter provided, and agreeing to the sale of such excess lands under terms and conditions satisfactory to the Secretary and at prices not to exceed those fixed, as hereinafter provided. No sale of any excess lands shall carry the right to receive water made available pursuant to this contract, unless and until the purchase price involved in such sale is approved by the Contracting Officer and upon proof of fraudulent representation as to the true

consideration involved in such sales the United States may instruct the District by written notice to refuse to furnish any water subject to this contract to the land involved in such fraudulent sales and the District thereafter shall not furnish said water to such lands.

(b) If New Hogan water furnished to a District pursuant to this contract reaches the underground strata of excess land owned by a large landowner, as defined in Article 21, who has not executed a recordable contract and the large landowner pumps such New Hogan water from the underground, the District will not be deemed to have furnished such water to said lands within the meaning of this contract if such water reached the underground strata of the aforesaid excess land as an unavoidable result of the furnishing of New Hogan water by the District to nonexcess lands or to excess lands with respect to which a recordable contract has been executed.

VALUATION AND SALE OF EXCESS LANDS

20. (a) The value of the excess irrigable lands within a District as defined in Article 21, held in private ownership of large landowners as defined in said article, for the purposes of this contract, shall be appraised in a manner to be prescribed by the Secretary. At the option of the large landowner, however, the value of such land may be appraised, subject to the approval thereof by the Secretary, by three appraisers. One of said appraisers shall

be designated by the Secretary and one shall be designated by the respective District in which the land is located, and the two appraisers so appointed shall name the third. If the appraisers so designated by the Secretary and the District are unable to agree upon the appointment of the third, the Presiding Justice of the Third District Court of Appeal of the State of California shall be requested to name the third appraiser.

(b) The following principles shall govern the appraisal:

(1) No value shall be given such lands on account of the existing or prospective possibility of securing water from New Hogan; and

(2) The value of improvements on the land at the time of said appraisal shall be included therein, but shall also be set forth separately in such appraisal.

(c) The excess land of any large landowner shall be reappraised in the manner provided in subdivision (a) hereof at the instance of the United States or at the request of said landowner. The cost of the first two appraisals of each tract of excess land shall be paid by the United States. The cost of each appraisal thereafter shall be paid by the party requesting such appraisal.

(d) Any improvements made or placed on the appraised land after the appraisal hereinabove provided for prior to sale of the land by a large landowner may be appraised in like manner.

(e) Excess irrigable lands sold by large landowners within a District shall not carry the right to receive water made available pursuant to this contract for such land and the Districts agree to refuse to furnish such water to lands so sold until, in addition to compliance with the other provisions hereof, a verified statement showing the sale price upon any such sale shall have been filed with the District and the sale price is not in excess of the appraised value as provided herein.

(f) Each District agrees to take all reasonable steps requested by the Contracting Officer to ascertain the occurrence and conditions of all sales of irrigable lands of large landowners in such District made subsequent to the execution of this contract and to inform the United States concerning the same.

(g) A true copy of this contract, of each recordable contract executed pursuant to this article and Articles 19 and 21 hereof, and of each appraisal made pursuant thereto shall be furnished to the respective District by the United States and shall be maintained on file in the office of said District and like copies in such offices of the Bureau of Reclamation as may be designated by the Contracting Officer and shall be made available for examination during the usual office hours by all persons who may be interested therein.

EXCESS LANDS

21. (a) As used herein, the term "excess land" means that part of the irrigable land in excess of one hundred and sixty (160) acres held within the area served by a District and its subcontractors in the beneficial ownership of any single person, whether a natural person, a corporation, or the beneficiary of a trust approved by the Contracting Officer. With respect to land held in co-ownership, such as a tenancy in common, joint tenancy, or community property, the beneficial ownership of each co-owner shall be that fraction of the total acreage held in co-ownership which equals the co-owner's fractional interest therein. The term "large landowner" means an owner of excess lands, and the term "nonexcess land" means all irrigable land within each District which is not excess land as defined herein.

(b) Each large landowner as a condition precedent to the right to receive water made available pursuant to this contract for any of his excess lands shall:

(1) Before any New Hogan water is furnished by the District to his excess land, execute a valid recordable contract in form prescribed by the United States, agreeing to the provisions contained in this article and Articles 19 and 20 hereof and agreeing to dispose of his excess lands in accordance therewith to persons who can take title thereto as nonexcess land as

Article 21(a)(b)(1)--

herein provided and at a price not to exceed the approved, appraised value of such excess land and within a period of ten (10) years after the date of the execution of said recordable contract and agreeing further that if said land is not so disposed of within said period of ten (10) years, the Secretary shall have the power to dispose of said land at the appraised value thereof fixed as provided herein or such lower price as may be approved by the owner of such land, subject to the same conditions on behalf of such large landowner; and each District agrees that it will refuse to furnish said water to any large landowner other than for his nonexcess lands until such owner meets the conditions precedent herein stated; and

(2) Within thirty (30) days after the date of notice from the United States requesting such large landowner to designate his irrigable lands within a District which he desires to designate as nonexcess lands, file in the office of such District, in duplicate, one copy thereof to be furnished by said District to the Bureau of Reclamation, his written designation and description of lands so selected to be nonexcess lands and upon failure to do so the District shall make such designation and mail a notice thereof to such large landowner, and in the event the District fails to act within such period of time as

the Contracting Officer considers reasonable, such designation will be made by the Contracting Officer, who will mail a notice thereof to the District and the large landowner. The large landowner shall become bound by any such action on the part of the District or the Contracting Officer and the District will furnish said water only to the land so designated to be nonexcess land. A large landowner may with the consent of the Contracting Officer designate land other than that previously designated as nonexcess land: Provided, That an equal acreage of the land previously designated as nonexcess, shall, upon such new designation, become excess land thereafter subject to the provisions of this article and Articles 19 and 20 hereof and shall be described in an amendment of such recordable contract as may have been executed by the large landowner, in the same manner as if such land had been excess land at the time of the original designation.

REPEAL OR AMENDMENT OF FEDERAL RECLAMATION LAWS

22. In the event that the Congress of the United States repeals the so-called excess land provisions of the Federal reclamation laws, Articles 19, 20, and 21 of this contract will no longer be of any force or effect, and, in the event that the Congress amends the excess-land provision or other provisions of the Federal reclamation laws, the

United States agrees, at the option of the Districts, to negotiate amendments of appropriate articles of this contract, all consistently with the provisions of such amendment.

WATER ACQUIRED BY DISTRICTS OTHER THAN FROM THE UNITED STATES

23. (a) The provisions of this contract shall not be applicable to or affect water or water rights now owned or hereafter acquired by the Districts or landowners within the Districts other than from the United States. Water furnished pursuant to the terms of this contract may be transported by means of the same facilities as water now available or which may become available to the Districts or landowners within the Districts other than pursuant to the terms of this contract if the Contracting Officer determines that such mingling is necessary to avoid a duplication of facilities; and notwithstanding such mingling of water, the provisions of this contract shall be applicable to the quantity of water furnished to the Districts pursuant to the terms hereof, and such mingling of water shall not in any manner subject to the provisions of this contract the quantity of water acquired by or available to the Districts or landowners within the Districts other than from the United States.

(b) With respect to the facilities or portions thereof in which mingling is permitted as provided in subdivision (a) hereof, the Districts shall take or cause to be taken such action as may in

the opinion of the Contracting Officer be necessary to assure that the quantity of water furnished by the United States during each 24-hour period will be delivered by the Districts only to lands eligible to receive the same under Articles 19, 20, and 21 herein. The Districts shall be deemed to be in breach of this article and Articles 19, 20, and 21 of this contract if at any time there is furnished to excess lands not covered by recordable contracts and served by the facilities or portions thereof in which mingling is permitted, a quantity of water which is greater than that which the District or landowners within the Districts have introduced into said facilities from the supply available other than pursuant to this contract.

CONTINGENT ON APPROPRIATION OR ALLOTMENT OF FUNDS

24. The expenditure of any money or the performance of any work by the United States hereunder which may require appropriation of money by the Congress or the allotment of funds shall be contingent upon such appropriation or allotment being made. The failure of the Congress so to appropriate funds or the absence of any allotment of funds shall not relieve the Districts from any obligations then accrued under this contract and no liability shall accrue to the United States in case such funds are not appropriated or allotted.

OFFICIALS NOT TO BENEFIT

25. (a) No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom. This restriction shall not be construed to extend to this contract if made with a corporation or company for its general benefit.

(b) No official of the Districts shall receive any benefit that may arise by reason of this contract other than as a landowner within the Districts and in the same manner as other landowners within the Districts.

NOTICES

26. (a) Any notice authorized or required to be given to the United States shall be deemed to have been given when mailed, postage prepaid, or delivered to the Regional Director, Region 2, Bureau of Reclamation, 2800 Cottage Way, Sacramento, California 95825. Any notice authorized or required to be given to the Districts shall be deemed to have been given when mailed in a postage-prepaid or franked envelope or delivered to:

(1) Stockton and East San Joaquin Water Conservation District, Post Office Box 5157, Stockton, California 95205; and

(2) Calaveras County Water District, Post Office Box 846, San Andreas, California 95249.

(b) The designation of the addressee or the address given above may be changed by notice given in the same manner as provided in this article for other notices.

(c) This article shall not preclude the effective service of any such notice or announcement by other means.

ASSIGNMENT LIMITED--SUCCESSORS AND ASSIGNS OBLIGATED

27. The provisions of this contract shall apply to and bind the successors and assigns of the parties hereto, but no assignment or transfer of this contract or any part or interest therein shall be valid until approved by the Secretary.

REMEDIES UNDER CONTRACT NOT EXCLUSIVE--WAIVERS

28. Nothing contained in this contract shall be construed as in any manner abridging, limiting, or depriving the United States of any means of enforcing any remedy, either at law or in equity, for the breach of any of the provisions hereof which it would otherwise have. Any waiver at any time by either party to this contract of its rights with respect to a default, or any matter arising in connection with this contract, shall not be deemed to be a waiver with respect to any subsequent default or matter.

Article 26(b) - (c)
Article 27
Article 28

DETERMINATIONS

29. (a) Where the terms of this contract provide for action to be based upon the opinion or determination of either party to this contract, whether or not stated to be conclusive, said terms shall not be construed as permitting such action to be predicated upon arbitrary, capricious, or unreasonable opinions or determinations.

(b) In the event the Districts question any factual determination made by a representative of the Secretary as required in the administration of this contract, any findings, as to the facts in dispute thereafter made by the Secretary shall be made only after consultation with the Board of Directors of each District.

(c) Except as otherwise provided herein, the Secretary's decision on all questions of fact arising under this contract shall be conclusive and binding upon the parties hereto.

ASSURANCE RELATING TO VALIDITY OF CONTRACT

30. Promptly after the execution and delivery of this contract each District shall file and prosecute to a final decree, including any appeal therefrom to the highest court of the State of California, in a court of competent jurisdiction a special proceeding for the judicial examination, approval, and confirmation of the proceedings had for the organization of the District and the proceedings of the District's Board of Directors and of the District leading up to and

including the making of this contract and the validity of the provisions hereof; and this contract shall not be binding on the United States until each District's organization and proceedings and this contract shall have been so confirmed by a court of competent jurisdiction or pending appellate action in any court if ground for appeal be laid. The Districts shall furnish to the Contracting Officer certified copies of such decree and of all pertinent supporting documents.

TITLE VI, CIVIL RIGHTS ACT OF 1964

31. (a) The Districts hereby agree that they will comply with Title VI of the Civil Rights Act of 1964 (P.L. 88-352) and all requirements imposed by or pursuant to the Department of the Interior Regulation (43 CFR 17) issued pursuant to that title, to the end that, in accordance with Title VI of that Act and the Regulation, no person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Districts receive financial assistance from the Bureau of Reclamation and hereby give assurance that they will immediately take any measures to effectuate this agreement.

(b) If any real property or structure thereon is provided or improved with the aid of Federal financial assistance extended to

the Districts by the Bureau of Reclamation, this assurance obligates the Districts, or in the case of any transfer of such property, any transferee for the period during which the real property or structure is used for a purpose involving the provision of similar services or benefits. If any personal property is so provided, this assurance obligates the Districts for the period during which they retain ownership or possession of the property. In all other cases, this assurance obligates the Districts for the period during which the Federal financial assistance is extended to them by the Bureau of Reclamation.

(c) This assurance is given in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts, property, discounts, or other Federal financial assistance extended after the date hereof to the Districts by the Bureau of Reclamation, including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date. The Districts recognize and agree that such Federal financial assistance will be extended in reliance on the representations and agreements made in this assurance, and that the United States shall reserve the right to seek judicial enforcement of this assurance. This assurance is binding on the Districts, their successors, transferees, and assignees.

EQUAL OPPORTUNITY

32. During the performance of this contract, the Districts agree as follows:

(a) The Districts will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Districts will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Districts agree to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this Equal Opportunity clause.

(b) The Districts will, in all solicitations or advertisements for employees placed by or on behalf of the Districts, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(c) The Districts will send to each labor union or representative of workers with which they have a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency Contracting Officer, advising the labor union or workers' representative of the Districts' commitments under this Equal Opportunity clause, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(d) The Districts will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(e) The Districts will furnish all information and reports required by said Executive Order and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to their books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(f) In the event of the Districts' noncompliance with the Equal Opportunity clauses of this contract or with any

EQUAL OPPORTUNITY

32. During the performance of this contract, the Districts agree as follows:

(a) The Districts will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Districts will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Districts agree to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this Equal Opportunity clause.

(b) The Districts will, in all solicitations or advertisements for employees placed by or on behalf of the Districts, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(c) The Districts will send to each labor union or representative of workers with which they have a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency Contracting Officer, advising the labor union or workers' representative of the Districts' commitments under this Equal Opportunity clause, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(d) The Districts will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(e) The Districts will furnish all information and reports required by said Executive Order and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to their books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(f) In the event of the Districts' noncompliance with the Equal Opportunity clauses of this contract or with any

of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended, in whole or in part, and the Districts declared ineligible for further Government contracts in accordance with procedures authorized in said Executive Order, and such other sanctions may be imposed and remedies invoked as provided in said Executive Order, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(g) The Districts will include the provisions of subdivisions (a) through (g) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of said Executive Order so that such provisions will be binding upon each subcontractor or vendor. The Districts will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, That in the event the Districts become involved in, or are threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the Districts may request the United States to enter into such litigation to protect the interests of the United States.

RULES AND REGULATIONS

33. The Secretary reserves the right to make, after consultation with the Districts, such rules and regulations consistent with the provisions of this contract, the laws of the United States and the State of California, and to add to or to modify them as may be deemed proper and necessary to carry out this contract, and to supply necessary details of its administration which are not covered by express provisions of this contract. The Districts agree to observe such rules and regulations.

DISTRICTS TO MAKE OPERATING AGREEMENT

34. Prior to the execution of this contract the Districts shall enter into an operating agreement providing, among other things, for the division between the Districts of the New Hogan water and the payment of the costs becoming due pursuant to this contract. Such agreement shall be in accordance with the terms and conditions of this contract and shall be subject to approval by the Contracting Officer prior to execution.

IN WITNESS WHEREOF, the parties have executed this contract the day and year first herein written.

Rita Lurgen
Appd. Sol. Off.

THE UNITED STATES OF AMERICA

By _____
Regional Director, Region 2
Bureau of Reclamation

STOCKTON AND EAST SAN JOAQUIN
WATER CONSERVATION DISTRICT

(SEAL)

ATTEST:

By _____
President

_____
Secretary

CALAVERAS COUNTY WATER DISTRICT

(SEAL)

ATTEST:

By _____
President

_____
Secretary

APPROVED:

DEPARTMENT OF THE ARMY

By _____

Date: September 15, 1970

RESOLUTION NO. 1255

RESOLUTION OF THE BOARD OF DIRECTORS OF THE CALAVERAS COUNTY WATER DISTRICT AUTHORIZING EXECUTION OF CONTRACT BETWEEN THE UNITED STATES OF AMERICA AND THE STOCKTON & EAST SAN JOAQUIN WATER CONSERVATION DISTRICT AND THE CALAVERAS COUNTY WATER DISTRICT PROVIDING FOR REPAYMENT AND CONSERVATION USE OF NEW HOGAN PROJECT

WHEREAS, there has been presented to this Board a proposed "Contract Between the United States of America and Stockton & East San Joaquin Water Conservation District and Calaveras County Water District Providing for Repayment and Conservation Use of New Hogan Project Numbered R.O. Draft 7/6-1970, Rev. W.O. 7/20-1970, Rev. R.O. 8/13-1970"; and

WHEREAS, said contract has been approved by the United States Department of the Interior and the Corps of Army Engineers; and

WHEREAS, the Secretary - Manager of this District recommends that said Contract be approved by this Board and that the President and Secretary of this District be authorized to execute said Contract on behalf of this District;

NOW, THEREFORE, BE IT RESOLVED:

That said Contract is approved and the President and Secretary of this District are authorized and directed to execute said "Contract Between the United States of America and the Stockton & East San Joaquin Water Conservation District and Calaveras County Water District Providing for Repayment and Conservation Use of the New Hogan Project" on behalf of this District.

PASSED AND ADOPTED this 19th day of August 1970, by the following vote:

AYES: Directors Irvin Tanner, Elliott McCombs, Oliver Turner, Kenneth Mitchell and William Hart

NOES: None

ABSENT: None

CALAVERAS COUNTY WATER DISTRICT

RESOLUTION NO. 1255

William D. Hart
President of the Board of Directors
of Calaveras County Water District

ATTEST:

E. Stanley Edwards
Secretary of the Board of Directors
of Calaveras County Water District

CERTIFIED A TRUE COPY
E. Stanley Edwards
SECRETARY
Calaveras County Water District

R.O. Draft 10/16-1987

Contract No.
14-06-200-5057A
Amendatory

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
New Hogan Project, California

AMENDATORY CONTRACT AMONG THE UNITED STATES OF AMERICA, STOCKTON EAST WATER DISTRICT AND CALAVERAS COUNTY WATER DISTRICT PROVIDING FOR REPAYMENT AND CONSERVATION USE OF NEW HOGAN PROJECT

THIS AMENDATORY CONTRACT, made this 25th day of March, 1988 between the UNITED STATES OF AMERICA, hereinafter referred to as the United States, represented by the Contracting Officer executing this amendment, and STOCKTON EAST WATER DISTRICT AND CALAVERAS COUNTY WATER DISTRICT hereinafter referred to as the Contractors,

WITNESSETH, That:

EXPLANATORY RECITALS

WHEREAS, the parties have entered into a repayment contract, dated August 25, 1970 and identified as contract No. 14-06-200-5057A, as amended, which provides repayment and conservation use of New Hogan Dam and Reservoir and is hereinafter referred to as the repayment contract; and

WHEREAS, pursuant to Section 212 of Public Law 97-293 the Reclamation Reform Act of October 12, 1982, the Contractors' water supply from the abovestated reservoir is exempt from the provisions of Federal reclamation law; and

WHEREAS, the Contractors desire to amend the repayment contract to reflect the intent so stated in Section 212 of Public Law 97-293;

NOW, THEREFORE, in consideration of the mutual and dependent stipulations and covenants herein contained, it is mutually agreed by the parties hereto as follows:

1. The following changes to the repayment contract between the United States and the Contractors, shall be effective commencing October 12, 1982.

2. Articles 19, 20, 21 and 22 of the repayment contract and all references to such articles in other articles of the repayment contract are hereby deleted in their entirety.

3. Nothing in this amendatory contract shall terminate, cancel or affect any sales of land heretofore made under recordable contract.

4. Except as herein amended, all provisions of the repayment contract shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have signed their names as of the day and year first above written.

UNITED STATES OF AMERICA

ACTING By _____
Regional Director, Mid-Pacific Region
Bureau of Reclamation

(SEAL)

STOCKTON-EAST WATER DISTRICT

Attest:

_____
Secretary

By _____
President

(SEAL)

CALAVERAS COUNTY WATER DISTRICT

Attest:

_____
Secretary
CORP20

By _____
President

RESOLUTION NO. 87-160

WHEREAS, the Bureau of Reclamation has proposed amendments to the contract for New Hogan Water to delete those sections relating to ownership or pricing limitations of Federal Reclamation Law.

BE IT RESOLVED that the Board of Directors of CALAVERAS COUNTY WATER DISTRICT does hereby authorize the execution of the "Amendatory Contract Among the UNITED STATES OF AMERICA, STOCKTON EAST WATER DISTRICT and CALAVERAS COUNTY WATER DISTRICT Providing For Payment and Conservation Use of the New Hogan Project."

BE IT FURTHER RESOLVED that the President is hereby authorized to execute said Amendatory Contract.

PASSED AND ADOPTED this 10th day of December, 1987 by the following vote:

AYES: Directors Clark, Johnson, Neilsen, Gleason and Queirolo

NOES: None

ABSENT: None

CALAVERAS COUNTY WATER DISTRICT

President

ATTEST:

Steve Felts
Secretary

CERTIFIED A TRUE COPY
Linda O'Keefe
Assistant Secretary
Calaveras County Water District

BUREAU OF RECLAMATION
OFFICIAL FILE COPY
MAR 17 1988

RESOLUTION OF THE BOARD OF DIRECTORS
OF STOCKTON EAST WATER DISTRICT

RESOLUTION 87-88-26

RESOLUTION AUTHORIZING SIGNATURES ON AMENDMENT TO CONTRACT
FOR USE OF NEW HOGAN WATER

WHEREAS, on February 16, 1988 the Board of Directors of Stockton East Water District adopted the Amendatory Contract Among the United States of America, Stockton East Water District and Calaveras County Water District Providing For Repayment And Conservation Use of New Hogan Project; and

WHEREAS, the United States of America has requested that signatures on the Amendatory Contract be authorized by Resolution of the Board of Directors of Stockton East Water District;

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of Stockton East Water District approves and authorizes the Board President and Secretary of the Board to execute and sign the Amendatory Contract approved at the February 16, 1988 Board meeting.

PASSED AND ADOPTED by the Board of Directors of Stockton East Water District at a regular meeting held on March 15, 1988, by the following vote:

AYES: Solari, Dondero, Laven, Bozzano, MacNear, Huckins
NOES: Tone
ABSENT: None

Roger M. Huckins
ROGER M. HUCKINS, President
Stockton East Water District

ATTEST:

EDWARD M. STEFFANI, Secretary
Stockton East Water District

RESOLUTION NO. 87-88-26

SECRETARY'S CERTIFICATE

I, EDWARD M. STEFFANI, Secretary of the Board of Directors of the STOCKTON-EAST WATER DISTRICT, Stockton, California, do hereby certify as follows:

The foregoing is a full, true and correct copy of a resolution duly adopted at a Regular Meeting of the Board of Directors of said District duly and regularly and legally held at the regular meeting place thereof on March 15, 1988, of which meeting all of the members of said Board of Directors had due notice and at which a majority thereof were present.

I have carefully compared the same with the original minutes of said meeting on file and of record in my office, and the foregoing is a full, true, and correct copy of the original resolution adopted at said meeting and entered in said minutes.

Said resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

Dated: 3/15/88

EDWARD M. STEFFANI
Secretary of the Board
STOCKTON-EAST WATER DIST

(SEAL)

MEMORANDUM OF UNDERSTANDING

BETWEEN

CALAVERAS COUNTY WATER DISTRICT

AND

STOCKTON EAST WATER DISTRICT

WHEREAS, on August 25, 1970 Calaveras County Water District (Calaveras) and Stockton East Water District (Stockton) entered into a contract with the United States of America providing for repayment and conservation use of New Hogan Project; and

WHEREAS, on August 25, 1970 Calaveras and Stockton entered into a contract providing for the use, repayment and administration of water from the New Hogan Project; and

WHEREAS, the New Hogan Project is operated by the US Corps of Engineers as a multi-purpose reservoir for recreation, flood control and conservation use; and

WHEREAS, contract between Calaveras, Stockton and United States reserves a storage basin of 15,000 acre feet for silting and storage of water for recreational and incidental uses; and

WHEREAS, the US Corps of Engineers through the District Engineer has developed an operational plan for the storage, regulation and release of flood control waters; and

WHEREAS, Calaveras filed an Application with the Federal Energy Regulatory Commission (FERC) for License to construct an electrical generating facility at New Hogan Dam; and

WHEREAS, it is the desire of Calaveras and Stockton to maximize the combined conservation and power generation potential of New Hogan and the Calaveras watershed.

NOW, THEREFORE, BE IT RESOLVED that Calaveras and Stockton are entering into this Memorandum of Understanding (MOU) to cooperatively pursue the greater use of water from New Hogan, to clarify the application of various contract terms, to resolve the conflict of the parties with respect to the proposed New Hogan Power Plant Project and to jointly investigate the availability and development of additional water supplies.

The Contract between Calaveras and Stockton provides for a distribution of the conservation yield based on a yield study prepared by Murray, Burns and Kienlen dated May 4, 1970. As a result of a study dated November 4, 1980 by Murray, Burns and Kienlen, Calaveras and Stockton wish to consider modification of the parameters used to develop the original yield study and thus increase the amount of water yield and assume risks which differ from those on which the 1970 study was based. In so doing, each party recognizes the need to protect and provide for certain needs and therefore wish to define the minimum delivery amounts which shall dictate the maximum reservoir drawdown. Calaveras shall have reserved for its use up to 7,700 acre feet plus 5,000 acre feet for water rights and Stockton shall have reserved for its use up to 15,000 acre feet plus 2,500 acre feet for water rights.

The parties recognize that certain contract provisions may be conflicting due to this MOU but agree that at such time as conflicts arise the parties shall confer to resolve any conflict in keeping with the concepts developed in

this MOU. With respect to the provisions of Paragraph 5(A)(1) of the District's contract, the definition of "P", project water, shall be "Project Water, but in no event less than 71,100 acre feet".

Stockton shall prepare and submit to Calaveras a revised Operations Plan which Calaveras shall in good faith review and comment on, and then the parties shall jointly agree on a Final Operations Plan no later than December 31, 1982. This Plan may thereafter be modified by agreement of the parties.

Calaveras shall review its ultimate use and buildup schedule set forth in said August 25, 1970 contract and shall submit a revised use and buildup schedule to Stockton for good faith review and comment by July 1, 1983.

Calaveras filed an Application for License on October 13, 1981 with the Federal Energy Regulatory Commission (FERC) for Project No. 2903-001, a proposed 2.5 megawatt unit at New Hogan Dam. Stockton, on February 19, 1982, filed a petition to intervene and a Notice of Intent to file a competing application. In recognition of the desires and interests expressed in this MOU, and immediately upon mutual agreement between Calaveras and Stockton of this MOU or any modification thereof, then Stockton agrees to withdraw its petition, not file a competing application and to cooperate with Calaveras' efforts to develop and operate the hydroelectric project.

Stockton and Calaveras have a mutual need for additional water supplies as noted above, and Calaveras has submitted to Stockton a number of options for developing additional water supplies within Calaveras County. The parties agree that they shall investigate joint development of these options and in so doing Calaveras shall provide to Stockton its records, maps and other data regarding those options. The parties shall then jointly consider the feasibility of

pursuing in additional detail development of one or more of those alternative projects. It is further understood that if one party desires not to proceed, the other may do so independently, and will not be hindered or opposed by the non-participating party.

PASSED AND ADOPTED by the Board of Directors of STOCKTON-EAST WATER DISTRICT on the 15th day of June, 1982 by Resolution No. 82-83-07.

STOCKTON-EAST WATER DISTRICT

By _____
President

ATTEST:

_____
Secretary

PASSED AND ADOPTED by the Board of Directors of CALAVERAS COUNTY WATER DISTRICT on the 10th day of June, 1982 by Resolution No. 3441.

CALAVERAS COUNTY WATER DISTRICT

By _____
President

ATTEST:

_____
Secretary

Resolution No. 82-83-07(

RESOLUTION OF THE BOARD OF DIRECTORS OF THE STOCKTON-EAST WATER DISTRICT RELATIVE TO ADOPTION OF THE MEMORANDUM OF UNDERSTANDING BETWEEN CALAVERAS COUNTY WATER DISTRICT (CCWD) AND STOCKTON-EAST WATER DISTRICT (SEWD) REGARDING THE PROPOSED NEW HOGAN POWER PLANT PROJECT AND RELATIVE TO JOINTLY INVESTIGATING THE AVAILABILITY AND DEVELOPMENT OF ADDITIONAL WATER SUPPLIES

WHEREAS, on August 25, 1970 Stockton-East Water District (SEWD) and Calaveras County Water District (CCWD) entered into a contract with the United States of America providing for repayment and conservation use of New Hogan Project; and

WHEREAS, on August 25, 1970 SEWD and CCWD entered into a joint contract providing for the use, repayment and administration of water from the New Hogan Project; and

WHEREAS, it is the desire of SEWD and CCWD to maximize the conservation use and power generation potential of New Hogan and the Calaveras watershed; and

WHEREAS, it is the desire of SEWD and CCWD to enter into a Memorandum of Understanding to cooperatively pursue the greater use of water from New Hogan, to clarify the application of various contract terms, to resolve the conflict of the parties with respect to the proposed New Hogan Power Plant Project and to jointly investigate the availability and development of additional water supplies.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of SEWD approves and adopts said Memorandum of Understanding, dated May 25, 1982.

PASSED AND ADOPTED BY THE BOARD OF DIRECTORS OF THE STOCKTON-EAST WATER DISTRICT ON THE 15TH DAY OF JUNE, 1982.

PERRY H. TAFT, President
Board of Directors
Stockton-East Water District

ATTEST

JAMES D. BEARD, II, Secretary
Board of Directors
Stockton-East Water District

(SEAL)

SECRETARY'S CERTIFICATE

I, JAMES D. BEARD, II, Secretary of the Board of Directors of the STOCKTON-EAST WATER DISTRICT, Stockton, California, do hereby certify as follows:

The foregoing is a full, true and correct copy of a resolution duly adopted at a Regular Meeting of the Board of Directors of said District duly and regularly and legally held at the regular meeting place thereof on _____, of which meeting all of the members of said Board of Directors had due notice and at which a majority thereof were present.

I have carefully compared the same with the original minutes of said meeting on file and of record in my office, and the foregoing is a full, true, and correct copy of the original resolution adopted at said meeting and entered in said minutes.

Said resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

Dated: 4/15/82

James D. Beard II

JAMES D. BEARD, II
Secretary of the Board
STOCKTON-EAST WATER DISTRICT

(SEAL)

RESOLUTION NO. 3441

WHEREAS, CALAVERAS COUNTY WATER DISTRICT (CCWD) and STOCKTON EAST WATER DISTRICT (SEWD) entered into an agreement with the U.S. Corps of Engineers on August 25, 1970 for use of water out of New Hogan Reservoir, and also entered into an agreement jointly concerning use, repayment and administration of water from said New Hogan Reservoir; and

WHEREAS, it is the desire of CCWD and SEWD to maximize the combined conservation and power generation potential of New Hogan and the Calaveras watershed; and

WHEREAS, CCWD and SEWD have hereby decided to enter into a Memorandum of Understanding to cooperatively pursue the greater use of water from New Hogan, to clarify the application of various contract terms, to resolve the conflict of the parties with respect to the proposed New Hogan Power Plant Project and to jointly investigate the availability and development of additional water supplies.

NOW, THEREFORE, BE IT RESOLVED that the President of the Board of Directors of CALAVERAS COUNTY WATER DISTRICT be authorized to execute said Memorandum of Understanding.

PASSED AND ADOPTED this 10th day of June, 1982, by the following vote:

AYES: Directors Queirolo, Neilsen, Sisco and Silveira
NOES: None
ABSENT: Director Johnson

CALAVERAS COUNTY WATER DISTRICT

President

ATTEST:

Secretary

Execution Copy

August 25, 1970

CONTRACT BETWEEN THE STOCKTON & EAST SAN JOAQUIN WATER CONSERVATION DISTRICT AND THE CALAVERAS COUNTY WATER DISTRICT PROVIDING FOR THE USE, REPAYMENT, AND ADMINISTRATION OF WATER FROM THE NEW HOGAN PROJECT OF THE UNITED STATES.

THIS CONTRACT is made this 25th day of August, 1970, between the STOCKTON & EAST SAN JOAQUIN WATER CONSERVATION DISTRICT, a political subdivision of the State of California, and the CALAVERAS COUNTY WATER DISTRICT, a political subdivision of the State of California.

EXPLANATORY RECITALS

I.

The United States of America has agreed that the two contracting parties herein may contract for the water of the New Hogan Project, upon terms to be mutually agreed, provided that prior to the execution of any contract with the United States the two contracting parties herein enter into an operating agreement providing among other things for the division between the parties of the water from the New Hogan Project, the payment of the costs becoming due the United States under the proposed contract, and the appointment of a watermaster.

II.

The contracting parties herein, that is the DISTRICTS, have jointly requested and reviewed a yield study for the New Hogan Project prepared by the United States Bureau of Reclamation dated August 1968, have sponsored for their respective service areas a study of water use and water rights on the Calaveras River prepared by Murray, Burns & Kienlen Civil Engineers dated February 7, 1969, and have caused to be made an Operation Study, and on the

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basis of the information contained in those studies have apportioned the New Hogan Project water as set forth by this CONTRACT.

III.

The parties recognize that STOCKTON DISTRICT may enter into a separate long-term contract with the United States for delivery of water from Folsom South Canal to supplement the supplies available to STOCKTON DISTRICT under this CONTRACT, the Bureau Contract, and otherwise.

IV.

The Bureau is authorized and is now constructing Folsom South Canal pursuant to Congressional authorization and said canal will have a hydraulic capacity substantially in excess of the requirements of the service area in Sacramento and San Joaquin Counties. Said excess capacity is anticipated to be used to convey water for the proposed East Side Division of the Central Valley Project, the feasibility of which has been reported on by the Bureau of Reclamation and is now under review by the State of California. The parties recognize that when and if said East Side Division is authorized and constructed the CALAVERAS DISTRICT may be able to obtain additional supplemental water supplies from said Division.

THEREFORE, IN CONSIDERATION OF THE TERMS AND CONDITIONS HEREIN CONTAINED, IT IS AGREED AS FOLLOWS:

1. Definitions. As used herein, the following terms shall have the stated meanings:

1. (A) "accounting year" shall mean the twelve consecutive calendar months beginning April 1 of each year and ending March 31 of the succeeding year.

1. (B) "agricultural water" shall mean Project Water used primarily in the commercial production of agricultural crops or livestock, including domestic use incidental thereto, on tracts of land operated in units of more than two (2) acres.

1. (C) "Articles" are preceded by an Arabic number; "Sub-articles" are preceded by a capital-case letter in parenthesis; "Paragraphs" are preceded by an Arabic number in parenthesis; "sub-paragraphs" are preceded by a lower-case letter in parenthesis.

1. (D) "assumed water rights" shall mean the rights to the natural flow of the Calaveras River, including the percolation losses necessary to deliver the water required to satisfy said rights as agreed upon by the parties in this CONTRACT.

1. (E) "Bureau" shall mean the Bureau of Reclamation of the United States Department of the Interior.

1. (F) "Bureau Contract" shall mean a repayment contract signed by the DISTRICTS and the United States.

1. (G) "CALAVERAS DISTRICT" shall mean the CALAVERAS COUNTY WATER DISTRICT.

1. (H) "DISTRICTS" shall mean the CALAVERAS DISTRICT and the STOCKTON DISTRICT collectively.

1. (I) "Folsom South Canal" shall mean the Folsom South Canal of the American River Division of the Central Valley Project, California.

1. (J) "Initial Delivery Date" shall mean January 1st of the year in which the Secretary of the Interior of the United States announces that water from the Folsom South Canal is first available for delivery to STOCKTON DISTRICT under a long-term contract.

1. (K) "irrigation season" shall mean the first seven consecutive calendar months of each accounting year, i.e., the period

extending from April 1 to October 31 of each such year.

1. (L) "M & I Water" shall mean Project Water other than agricultural water.

1. (M) "New Hogan Project" shall mean the New Hogan Project of the United States located on the Calaveras River, in Calaveras County, California.

1. (N) "Operations Study" shall mean that study prepared by Murray, Burns & Kienlen under date of May 4, 1970, a copy of which is on file in each of the DISTRICT offices.

1. (O) "Project Water" shall mean the total amount of water available to the DISTRICTS from New Hogan Reservoir each year under the Bureau Contract less the amounts of water necessary to satisfy assumed water rights. Project Water may be determined by the following formula: $P = D + C_r - W_c - W_s$.

1. (P) "Repayment Obligation" is the amount set out in the Bureau Contract as the "total reimbursable construction allocation".

1. (Q) "STOCKTON DISTRICT" shall mean the STOCKTON AND EAST SAN JOAQUIN WATER CONSERVATION DISTRICT.

1. (R) "water entitlement" shall mean the percent of the Project Water that each DISTRICT at a given time is entitled to in accordance with the provisions of this CONTRACT. Any computation using this term shall be made using the water entitlement as it exists at the time of the computation.

1. (S) "Watermaster" shall be as defined in Article 11 herein.

1. (T) (Letters):

1. (T) (1) "AF" shall mean acre feet.

1. (T) (2) "C_c" shall mean annual diversions to CALAVERAS DISTRICT, including W_c, from the channel of the Calaveras River downstream from New Hogan Dam measured in AF.

1. (T) (3) "C_{cm}" shall mean the portion of C_c used as M & I water.

1. (T) (4) "C_r" shall mean annual diversions from the New Hogan Reservoir pool to CALAVERAS DISTRICT measured in AF.

1. (T) (5) "C_{rm}" shall mean the portion of C_r used as M & I water.

1. (T) (6) "D" shall mean the annual releases from the New Hogan Reservoir Pool in AF measured at the gage located on the Calaveras River approximately 1/2 mile downstream from New Hogan Dam which releases are made pursuant to direction of the Watermaster (thus excluding spills and flood control releases).

1. (T) (7) "P" shall mean Project Water as defined in Subarticle (O) of this Article.

1. (T) (8) "S" shall mean the quantity of water in AF available annually to STOCKTON DISTRICT determined by the following formula: $S = D - C_c$.

1. (T) (9) "S_m" shall mean the portion of S used as M & I water.

1. (T) (10) "W_c" shall mean the quantity of water in AF necessary annually to satisfy the assumed water rights within CALAVERAS DISTRICT. The parties agree that, subject to revision as provided in Subarticle 3(A), said quantity of water necessary for CALAVERAS DISTRICT is 350 AF.

1. (T) (11) "W_s" shall mean the quantity of water in AF necessary annually to satisfy the assumed water rights within STOCKTON DISTRICT. The parties agree that, subject to revision as provided in Subarticle 3(A), said quantity of water necessary for STOCKTON DISTRICT is 12,650 AF.

2. Payment of Obligations Under the Bureau Contract. STOCKTON DISTRICT, subject to the execution of the Bureau Contract, shall pay the charges imposed by the Bureau Contract.

3. Determination of Project Water.

3. (A) It is agreed by the parties that initially the sum of W_c and W_s shall equal 13,000 AF and that release of this quantity

annually from New Hogan Reservoir to the Calaveras River will satisfy the assumed water rights within the DISTRICTS. The amounts of water necessary to satisfy W_c and W_s shall be considered to remain constant for ten year periods, the first of which shall begin with the date of this CONTRACT. At any time after the expiration of a ten year period either DISTRICT can request that a redetermination be made whether either or both W_c or W_s should be changed to reflect changes in use of lands by owners having rights to use of the natural flow of the Calaveras River under the laws of the State of California. If the DISTRICTS cannot agree on the changes, if any, to be made, the issue shall be submitted to a civil engineer experienced in water matters and his decision shall be final. If the DISTRICTS cannot agree on an engineer, the matter shall be submitted to arbitration as set out in Article 12. After any agreement between the DISTRICTS to change W_c or W_s, or both, or after any decision rendered by a civil engineer or by arbitration as provided herein, no new request for such a redetermination may be made by either DISTRICT until the expiration of the new ten year period commencing with the date of the preceding request for a redetermination.

3. (B) Water shall be scheduled by the DISTRICTS as follows:

3. (B) (1) (a) On or before March 15 of each accounting year, CALAVERAS DISTRICT shall furnish to Watermaster an initial schedule setting forth its desired monthly quantities of water in AF for the next succeeding accounting year. The total of the monthly amounts of water in said initial schedule shall not exceed, by more than the amount of W_c, the maximum water entitlement of CALAVERAS DISTRICT under this CONTRACT during the succeeding accounting year. The initial schedule shall be accompanied by the advance payment specified in Subarticle 5(D) below.

3. (B) (1) (b) Watermaster shall combine the initial schedule furnished by CALAVERAS DISTRICT with a similar initial

schedule for STOCKTON DISTRICT to determine the total amount of water and the scheduled availability thereof as desired by both DISTRICTS during the succeeding accounting year.

3. (B) (1) (c) The total amount of water scheduled initially pursuant to subparagraph 3(B)(1)(b) above shall not exceed 84,100 AF.

3. (B) (2) On April 1 of each accounting year the Watermaster, using the total amounts of water initially scheduled pursuant to Paragraph 3(B)(1) above, shall estimate whether a reduction should be made in the total amount of water from that initially scheduled by both DISTRICTS for the accounting year. The estimate shall be based on a forecast of the content in AF of New Hogan Reservoir on the last day of the current irrigation season, which forecast shall be made by the Watermaster as follows:

3. (B) (2) (a) Utilizing the techniques employed in the Operation Study and beginning with the amount of water in, and the surface area of, the reservoir on March 31, the monthly quantities of total water initially scheduled by both DISTRICTS during the irrigation season shall be assumed withdrawn as scheduled. Inflows to the reservoir and rates of evaporation each month shall be assumed to occur as set forth in the following table:

Month	Inflow (AF)	Evaporation Rate (feet per month)
April	3,500	0.3
May	2,800	0.4
June	1,900	0.6
July	1,600	0.9
August	1,400	0.7
September	900	0.5
October	600	0.3

Amounts of evaporation in AF each month shall be the product of the evaporation rate for that month and the area of reservoir water

surface corresponding to the amount of water in storage at the end of the prior month.

3. (B) (2) (b) In the event the estimate made pursuant to subparagraph 3(B)(2)(a) above indicate that withdrawal of the total water initially scheduled by the DISTRICTS will result in less than 71,400 AF of water remaining in the reservoir on the last day of the irrigation season, the total amount of water available for both DISTRICTS during the accounting year shall be reduced by 17,800 AF so that such total amount of available water will not exceed 66,300 AF.

3. (B) (2) (c) In the event said reduction of 17,800 AF in total scheduled water is required pursuant to subparagraph 3(B)(2)(b) above, and subject to the provisions of Subarticle 4(C) below, Watermaster shall adjust downward the total amount of water available to CALAVERAS DISTRICT from that scheduled initially under subparagraph 3(B)(1)(a) above. Said downward adjustment shall be made by reducing the total water scheduled by CALAVERAS DISTRICT during the irrigation season by the product of 17,800 AF and the percent of Project Water initially scheduled by CALAVERAS DISTRICT in the schedule submitted pursuant to subparagraph 3(B)(1)(a) above.

3. (B) (2) (d) Watermaster, after adjusting downward CALAVERAS DISTRICT'S initial schedule as provided in subparagraph 3(B)(2)(c) above, shall adjust downward STOCKTON DISTRICT'S initial schedule, subject to the provisions of Subarticle 4(C), so the total water scheduled by both DISTRICTS for the accounting year shall not exceed 66,300 AF.

As an example illustrating the adjustments to the initial schedules of both DISTRICTS under subparagraphs 3(B)(2)(c) and (d) above in the event the total of the water desired by both DISTRICTS during the accounting year must be limited to 66,300 AF pursuant to subparagraph 3(B)(2)(b) above, let it be

3(B)(2)(a) to 3(B)(2)(d)

assumed that, with applicable W_c at 350 AF, CALAVERAS DISTRICT initially schedules 4,350 AF of water for diversion during the accounting year, an amount which does not exceed its maximum water entitlement at the time. STOCKTON DISTRICT initially schedules the remaining 79,750 AF of the total scheduled supply of 84,100 AF.

Thus, Project Water initially scheduled by CALAVERAS DISTRICT is 4,350 minus 350, or 4,000 AF, or 5.63% of the total Project Water (71,100 AF) initially scheduled. Pursuant to subparagraph 3(B)(2)(c), the 4,000 AF of Project Water initially scheduled for diversion during the irrigation season by CALAVERAS DISTRICT will be reduced by 17,800 x 0.0563, or 1,002 AF, to 2,998 AF, and the total diversion by CALAVERAS DISTRICT during the accounting year will be limited to 2,998 plus 350, or 3,348 AF. STOCKTON DISTRICT will adjust its initial schedule for the accounting year to accord with the remainder of the available Project Water which is 66,300 minus 13,000 minus 2,998, or 50,302 AF, and accordingly will have available during the accounting year 50,302 plus 12,650, or 62,952 AF.

3. (B) (2) (e) For use in the forecasting provided in this Paragraph 3(B)(2) the Watermaster shall treat any releases scheduled from New Hogan Reservoir during November through March following the irrigation season as though such releases were made during the irrigation season and during the month of October.

3. (B) (2) (f) For the purposes of computing the reductions in total scheduled water pursuant to subparagraphs 3(B)(1)(c) and (d) above, the Watermaster shall treat any irrigation releases scheduled from New Hogan Reservoir during January, February, and March immediately preceding the irrigation season as though such releases had been made during the irrigation season and during April and shall treat any irrigation releases scheduled from the

3(B)(2)(d) to 3(B)(2)(f)

reservoir in November and December as though such releases were made in October.

3. (B) (3) In the event the March 31 reservoir content and anticipated inflow to and evaporation from the reservoir indicate that reservoir content on the last day of the irrigation season will exceed 162,000 AF, Watermaster may, and at the request of CALAVERAS DISTRICT shall, make an estimate in a manner similar to that provided for in Paragraph 3(B)(2) above to determine whether water will be available in excess of the total amount scheduled fer use during the irrigation season in the initial schedules prepared pursuant to Paragraph 3(B)(1). Said estimate may be made any time during the month of April but shall be considered tentative until confirmed or revised to reflect the content of the reservoir on April 30. The difference between 162,000 AF and the reservoir content estimated pursuant to this Paragraph 3(B)(3) to exist on the last day of the irrigation season shall be available to either or both DISTRICTS for use during the irrigation season as follows:

3. (B) (3) (a) Watermaster shall inform CALAVERAS DISTRICT promptly of the results of any forecast made pursuant to this Paragraph 3(B)(3) and CALAVERAS DISTRICT shall have the option of increasing the amounts of water initially scheduled by it under Paragraph 3(B)(1) for diversion during the irrigation season. The amount of said increase shall be not more than the product of the percent of Project Water initially scheduled by CALAVERAS DISTRICT and the forecasted excess over 162,000 AF of the reservoir content on the last day of the irrigation season. CALAVERAS DISTRICT shall inform Watermaster whether it chooses to exercise the option herein provided within five days after being notified that excess water is available and shall furnish to Watermaster a schedule revised to conform with this subparagraph 3(B)(3)(a) at the time CALAVERAS DISTRICT so informs Watermaster. No additional advance payment shall accompany any schedule revised in accordance with this subparagraph 3(B)(3)(a).

3. (B) (3) (b) STOCKTON DISTRICT shall have the option of using all water available under Paragraph 3(B)(3) above, and not desired by CALAVERAS DISTRICT under its option exercised pursuant to subparagraph 3(B)(3)(a). Watermaster shall revise STOCKTON DISTRICT'S initial schedule of water use during the irrigation season to conform with the water available to it under this subparagraph 3(B)(3)(b), and shall inform CALAVERAS DISTRICT promptly of the revised schedule.

3. (B) (3) (c) In the event Watermaster estimates prior to April 30 of an accounting year that excess water will be available to DISTRICTS under Paragraph 3(B)(3) and the confirming forecast reflecting the actual reservoir content on April 30 indicates that withdrawal of the excess water scheduled pursuant to subparagraphs 3(B)(3)(a) and (b) will result in a reservoir content of less than 162,000 AF on the last day of the irrigation season, the amounts of the excess water tentatively made available to each DISTRICT shall immediately be reduced proportionately in such total amounts as will result in an estimated reservoir content of not less than 162,000 AF on the last day of the irrigation season.

3. (B) (4) On or before April 2 of each year the Watermaster shall deliver to the office of CALAVERAS DISTRICT a written report showing his estimates of the total amounts of water to be available to each DISTRICT during the accounting year beginning April 1, as determined pursuant to Paragraphs 3(B)(2), and the monthly schedule of deliveries of such totals. If the total water available to both DISTRICTS during the irrigation season is reduced in accordance with subparagraphs 3(B)(2)(c) and (d) the revised schedule prepared by Watermaster for CALAVERAS DISTRICT shall adjust the monthly amounts initially scheduled each month proportionately and the revised schedule for STOCKTON DISTRICT shall conform to said revised schedule of CALAVERAS DISTRICT within the total amount of water available to both DISTRICTS during the accounting

year. If CALAVERAS DISTRICT is for any reason in disagreement with the foregoing determination and report by Watermaster, CALAVERAS DISTRICT shall give written notice of said disagreement to Watermaster on or before April 5. If such a notice of disagreement is received by the Watermaster on or before April 5, Watermaster shall arrange a joint meeting of the Boards of Directors of the DISTRICTS to be held not later than April 10. Said determination of the Watermaster may be revised at said joint meeting by action approved by a majority of each Board of Directors. If said Boards do not agree on a revision and CALAVERAS DISTRICT continues to object to the determination made by the Watermaster, then the matter shall be submitted to a civil engineer experienced in water matters and his decision shall be final. If the DISTRICTS cannot agree on a civil engineer, the matter shall be submitted to arbitration pursuant to Article 12 of this CONTRACT. During the period following April 2 and until the determination of the Watermaster has been modified by agreement of the Boards of Directors or by a decision of a civil engineer or through arbitration, the scheduled amounts of water set forth in the report of the Watermaster shall be complied with by both DISTRICTS.

3. (B) (5) In the event the forecast made pursuant to Paragraph 3(B)(3) indicates that water in excess of the initial schedules prepared pursuant to Paragraph 3(B)(1) will be available during the irrigation season and CALAVERAS DISTRICT informs the Watermaster that it chooses to exercise its option in accordance with subparagraph 3(B)(3)(a), such action of CALAVERAS DISTRICT shall be deemed to indicate its approval of the determination of the Watermaster. In the event CALAVERAS DISTRICT does not choose to exercise said option and also, within the five days provided it for such choice, informs Watermaster of its disagreement with the Watermaster's estimate that excess water will be available during the irrigation season, Watermaster will arrange for a joint meeting

3(B)(4) to 3(B)(5)

of the Boards of Directors of the DISTRICTS to be held on one of the days May 1-5, inclusive, when results of the confirming forecast made pursuant to Paragraph 3(B)(3) may be revised at said joint meeting by action of a majority of each Board of Directors. If said Boards do not agree on a revision and CALAVERAS DISTRICT continues to object to the determination made by the Watermaster, then the matter shall be submitted to a civil engineer experienced in water matters and his decision shall be final. If the DISTRICTS cannot agree on a civil engineer, the matter shall be submitted to arbitration as set out in Particle 12. During the period following CALAVERAS DISTRICT'S notification of disagreement with the determination of the Watermaster made pursuant to Paragraph 3(B)(3) and until that determination has been confirmed or modified by agreement of the Boards of Directors or by decision of a civil engineer or through arbitration, only the amounts of water initially scheduled pursuant to Paragraph 3(B)(1) shall be available to each DISTRICT.

3. (B) (6) In entering into this CONTRACT the DISTRICTS are agreed that scheduling of, and diversion and releasing of water from, New Hogan Reservoir and the channel of Calaveras River by each DISTRICT and the individual water users therein, shall be so administered as to enable the water entitlements of each DISTRICT to be fully supplied, subject to all of the applicable provisions of this Article 3 and of Article 4, during a recurrence of the water-supply conditions of the period of years covered by the Operation Study. If as shown in the calculations made pursuant to Paragraph 5(D)(3) CALAVERAS DISTRICT has taken in excess of the total amount of water scheduled pursuant to Paragraph 3(B)(1) or as that schedule may have been revised pursuant to Paragraphs 3(B)(2), 3(B)(3), or 5(D)(2), or if Watermaster has caused to be released from New Hogan Reservoir water in excess of the total amount scheduled for STOCKTON DISTRICT pursuant to Paragraphs 3(B)(1) or as that schedule may have been revised pursuant to Paragraphs 3(B)(2) or 3(B)(3), the DISTRICTS recognize that in subsequent years the ability of either or both DISTRICTS to fully secure its or their water entitlements

under said water-supply conditions may be jeopardized. Accordingly, if CALAVERAS DISTRICT has so taken excess water, or if Watermaster has so caused excess water to be released to STOCKTON DISTRICT, the following actions shall be taken.

3. (B) (6) (a) If CALAVERAS DISTRICT has taken water during an accounting year in excess of the amounts so scheduled, Watermaster in the succeeding accounting year, shall reduce the total amount of water scheduled by STOCKTON DISTRICT pursuant to subparagraphs 3(B)(1)(b) and (c), or 3(B)(2)(b) and (d), by the amount of such excess taking by CALAVERAS DISTRICT, and CALAVERAS DISTRICT shall make the payment to STOCKTON DISTRICT provided for in Paragraph 5(D)(4) below.

3. (B) (6) (b) If Watermaster has caused to be released from New Hogan Reservoir water in excess of the total amount scheduled for STOCKTON DISTRICT, then Watermaster, in the succeeding accounting year, shall reduce the total amount of water scheduled by STOCKTON DISTRICT pursuant to subparagraphs 3(B)(1)(b) and (c), or 3(B)(2)(b) and (d), by the amount of such excess releases.

3. (B) (6) (c) The actions provided for in this Paragraph 3(B)(6) shall not be required if either flood control releases are made during the November through March portion of the accounting year in which the excess taking or releasing of water occurred, or, if the Watermaster in a forecast made pursuant to Paragraph 3(B)(3) anticipates an October 31 reservoir content of more than 162,000 AF in the accounting year following the one in which the excess diversions or releases occurred.

3. (B) (7) Subject to the provisions of Subarticle 5(D) below, CALAVERAS DISTRICT may change its rates of diversion or its monthly schedule of diversion during the accounting year as follows:

3. (B) (7) (a) Rates of diversion at points located on the reservoir above New Hogan Dam may be changed at any time.

3. (B) (7) (b) Notification of a desire to change the rates of diversion from the channel of Calaveras River below New Hogan Dam shall be furnished the Watermaster a reasonable time in advance of the desired time of change to enable Watermaster to communicate with the District Engineer as provided in the Bureau Contract. The change in rate of diversion shall be made at the time established by the District Engineer and the Watermaster shall inform CALAVERAS DISTRICT of said time.

3. (C) (1) The Operation Study was adopted by the DISTRICTS to express certain principles of operating New Hogan Reservoir and to define certain limiting conditions governing operation of said reservoir. The Operation Study is based on the anticipated characteristics of the requirements of the DISTRICTS for water at the time of negotiating and executing this CONTRACT, which requirements are anticipated to be for irrigation service only, except for the use by CALAVERAS DISTRICT of a nominal quantity of M & I water. In the event either DISTRICT begins to deliver significant water from New Hogan Project for municipal and industrial purposes, and from time to time as such deliveries for municipal and industrial purposes are increased or decreased, it may be necessary to revise said Operation Study to conform with such changed use and to accordingly redefine the limiting conditions governing operation of said Reservoir. Upon the request of the Board of Directors of either of the DISTRICTS the Watermaster shall prepare, or cause to be prepared, such a revised study. Any such revisions shall employ the basic data in the Operation Study or agreed upon modifications of such data and shall comply with the following principles: First, the revised requirements on the Reservoir shall be so established as to make it unnecessary to reduce the content of New Hogan Reservoir below 15,000 AF at any time. Second, requirements by either DISTRICT for municipal and industrial water to the extent provided in

Subarticle 4(C) shall at all times be served without deficiency. Third, new operating limitations similar to those provided in subparagraphs 3(B)(1)(c), 3(B)(2)(b), and Paragraph 3(B)(3) shall be determined. Fourth, each revised Operation Study shall cover the same period of years, or an extension thereof, as were employed in the Operation Study.

3. (C) (2) Upon approval of any revised Operation Study by both DISTRICTS, said revised study shall become the Operation Study defined in Subarticle 1(N), and the limitations provided in subparagraphs 3(B)(1)(c), 3(B)(2)(b), and Paragraph 3(B)(3) shall be automatically amended accordingly.

3. (C) (3) If the DISTRICTS are unable to agree upon such a revised Operation Study or upon the need to make a revision in the Operation Study all of said issues shall be submitted to a civil engineer experienced in water matters and his decision shall be final, and if the DISTRICTS cannot agree on an engineer the matter shall be submitted to arbitration as set out in Article 12.

4. District Water Entitlements. The water entitlements of the DISTRICTS shall be as follows:

4. (A) The maximum water entitlement of CALAVERAS DISTRICT shall be 43.50% of the Project Water, provided that:

4. (A) (1) Until April 1, 1985, or until April 1 of the accounting year which begins after the initial delivery date, whichever is earlier, the CALAVERAS DISTRICT shall not take more than 10,000 AF of Project Water per year.

4. (A) (2) In the event CALAVERAS DISTRICT does not pay 43.50% of 1/40th of the repayment obligation in the 15th accounting year after the initial delivery date, the maximum water entitlement of CALAVERAS DISTRICT shall be reduced to such lesser percentage of 1/40th of the repayment obligation which the CALAVERAS DISTRICT does in fact pay in the 15th accounting year after the

initial delivery date. For example, if in the 15th accounting year referred to, CALAVERAS DISTRICT'S payment is 43.50% of 1/40th of the repayment obligation, then no adjustment shall be made in CALAVERAS DISTRICT'S maximum water entitlement. If, however, CALAVERAS DISTRICT'S payment in said 15th accounting year amounts to 25.00% of 1/40th of the repayment obligation, then CALAVERAS DISTRICT'S maximum water entitlement shall thereafter be no more than 25.00%.

4. (A) (3) It is anticipated, based on information presently available to the DISTRICTS, that the Folsom South Canal water service contract which hereafter may be made between the United States and STOCKTON DISTRICT will contain an option, which option may be exercised by STOCKTON DISTRICT at any time or times prior to the end of the 15th year after the initial delivery date, and which option will permit STOCKTON DISTRICT to take at least 30,928 AF more water than it is otherwise obligated to take under such Folsom South Canal water service contract. Insofar as concerns securing said option to take at least 30,928 AF within 15 years STOCKTON DISTRICT, in the course of negotiations with the Bureau, shall consult with CALAVERAS DISTRICT and shall permit CALAVERAS DISTRICT to participate in said negotiations. If STOCKTON DISTRICT enters into a contract for water service from the Folsom South Canal and such water service contract does not contain the full option set forth above but contains either, or both, an option period shorter or longer than 15 years, or an option which will not permit it to take at least 30,928 AF more than it is otherwise obligated to take, then Paragraph 4(A)(2) shall be automatically amended as follows:

4. (A) (3) (a) If said 15 year option period is reduced to a lesser period, or increased to a longer period, then the time in which CALAVERAS DISTRICT may build up to its maximum water entitlement shall be reduced or increased to the length of option

4(A)(2) to 4(A)(3)(a)

time granted to the STOCKTON DISTRICT in said Folsom South Canal water service contract.

4. (A) (3) (b) Upon execution of this CONTRACT by the parties, CALAVERAS DISTRICT will have an option to a water entitlement of 43.50% of the Project Water (0.4350 x 71,100) or 30,928.50 AF taken for purposes of calculations herein as 30,928 AF. If the amount of water subject to an option on the part of the STOCKTON DISTRICT in the Folsom South Canal water service contract is less than 30,928 AF then, not later than April 1 of the accounting year which begins after the initial delivery date, said maximum water entitlement of 43.50% shall be reduced by multiplying said 43.50% by the ratio of the amount of water in AF which the STOCKTON DISTRICT has under option to 30,928 AF, provided, however, that CALAVERAS DISTRICT, at its option, may avoid any part or all of such reduction by commencing and continuing annual payments toward the repayment obligation, which payments are proportional to the maximum water entitlement which CALAVERAS DISTRICT chooses to retain. For example, if the option accorded STOCKTON DISTRICT in its Folsom South Canal contract is for 20,000 AF, CALAVERAS DISTRICT's maximum water entitlement will be reduced to $\frac{20,000 \times 100}{30,928} \times 0.4350$, or 28.13%; however, if CALAVERAS DISTRICT chooses under its option to avoid this reduction in maximum water entitlement, and instead wishes to retain a maximum water entitlement of 43.50%, it shall commence and continue paying annually not less than 43.50 minus 28.13, or 15.37% of 1/40th of the repayment obligation. In the same example, with STOCKTON DISTRICT securing an option to only 20,000 AF in its Folsom South Canal contract, if CALAVERAS DISTRICT chooses to retain a maximum water entitlement of 40.00%, then it shall commence and continue paying annually 40.00 minus 28.13, or 11.87% of 1/40th, of the repayment obligation. Payments made under this subparagraph 4(A)(3)(b) shall in all respects be treated as though they were payments made for water actually used.

4. (A) (4) At any time that this CONTRACT is in effect CALAVERAS DISTRICT may obtain a supply of water from the proposed East Side Division of the Central Valley Project or from any other source and may exchange water so obtained for water to which STOCKTON DISTRICT has become entitled pursuant to this CONTRACT provided that STOCKTON DISTRICT shall in any event be entitled to take without exchange 56.50% of the Project Water, and provided further, that water shall not be so exchanged unless:

4. (A) (4) (a) It is delivered to STOCKTON DISTRICT without additional charge to STOCKTON DISTRICT.

4. (A) (4) (b) It is delivered to STOCKTON DISTRICT without the STOCKTON DISTRICT being required to make any expenditure for purposes of receiving such exchange water which it would not otherwise be required to make were it not for the delivery of such exchange water.

4. (A) (4) (c) Such exchange water is of a quality equal to or better than the quality of water flowing in the Folsom South Canal at its intersection with the Calaveras River.

4. (A) (4) (d) Such exchange water is delivered to the STOCKTON DISTRICT at a point within the DISTRICT at or east of the Folsom South Canal and at an elevation not lower than the water surface in the Folsom South Canal at its intersection with the Calaveras River.

The right to so exchange water as set forth above in this Paragraph 4(A)(4) shall immediately terminate at any time that the CALAVERAS DISTRICT fails to comply with each and every condition set forth above in this Paragraph 4(A)(4).

4. (B) Subject to the payment obligations imposed on STOCKTON DISTRICT by this CONTRACT, STOCKTON DISTRICT shall be entitled, at its option, to take and use all Project Water CALAVERAS DISTRICT is not entitled to under this CONTRACT, or does not in fact use.

4. (C) In the event the Watermaster determines pursuant to Paragraph 3(B)(2) above that the total amount of available water

in any accounting year shall be 66,300 AF or less, the DISTRICTS shall apply the reduction in water available to each proportionately to so much of the water otherwise scheduled by each as is in excess of an amount of 7,700 AF plus W_c for use in CALAVERAS DISTRICT and 10,000 AF plus W_s for use in STOCKTON DISTRICT, which amounts shall be available to each DISTRICT respectively without deficiencies to the extent of assumed water rights and estimated municipal, industrial, and domestic use. Estimated municipal, industrial, and domestic use shall be determined from actual use during the preceding accounting year plus anticipated new uses for the current accounting year.

5. Payments By The Calaveras District.

5. (A) CALAVERAS DISTRICT shall pay to STOCKTON DISTRICT a sum equal to the product of CALAVERAS DISTRICT'S ultimate water entitlement determined pursuant to Paragraph 4(A)(2), expressed as a percentage, and the total Repayment Obligation as payment in full thereof by CALAVERAS DISTRICT of its share thereof. Said payment shall be made in the following manner until the entire amount with interest, where applicable, is paid:

5. (A) (1) During each accounting year no less than that percentage of the equal annual installment of the total Repayment Obligation, whether or not such an installment is due and payable in that particular accounting year, equal to the percentage of Project Water used by CALAVERAS DISTRICT during that accounting year; said percentage of the equal annual installment being determined by the formula $100\ (\frac{C_r + C_o - W_c}{P})$. If a balance is still outstanding at the time STOCKTON DISTRICT completes full repayment of the Repayment Obligation, the total amount then payable by CALAVERAS DISTRICT must be paid within 15 accounting years after STOCKTON DISTRICT completes full repayment of the total Repayment Obligation. During each accounting year of said 15 year period

4(C) to 5(A)(1)

CALAVERAS DISTRICT must pay no less than 1/15th of its total obligation due on the date said period begins.

5. (A) (2) During each accounting year, that percentage of the interest payable by STOCKTON DISTRICT to the Bureau for the use of M & I water that equals the percentage of M & I water used by CALAVERAS DISTRICT of the entire amount of M & I water allocated to that year under the Bureau Contract; said percentage of interest payable being determined by the formula $\frac{(C_{rm} + C_{cm})\ 100}{C_{rm} + C_{cm} + S_m}$. Payments under this Paragraph 5(A)(2) shall not be credited to CALAVERAS DISTRICT'S obligation under Subarticle 5(A) above.

5. (A) (3) When any payment provided for in Paragraph 5(A)(1) herein is due and payable in an accounting year subsequent to STOCKTON DISTRICT'S full repayment of the Repayment Obligation due under the Bureau Contract, CALAVERAS DISTRICT shall pay interest annually at the rate of four and one-half percent (4½%) on the full unpaid decreasing balance due under Subarticle 5(A).

5. (B) CALAVERAS DISTRICT shall pay to STOCKTON DISTRICT for each accounting year a sum equal to that percentage of the administration costs and operation, maintenance, and replacement costs that STOCKTON DISTRICT must pay to the Bureau each accounting year under the Bureau Contract that equals the percentage of Project Water used by CALAVERAS DISTRICT during that year; said percentage of contract administration costs and operation, maintenance, and replacement costs being determined by the formula $\frac{(C_r + C_o - W_o)}{P}\ 100$.

5. (C) Subject to the provisions herein on maximum use, CALAVERAS DISTRICT shall pay for, per accounting year, as a minimum, the amount of water shown on its buildup schedule attached hereto as Exhibit "A".

5. (D) An advance payment shall be made and adjusted as follows:

5. (D) (1) Upon submitting the initial schedule provided for in Paragraph 3(B)(1), CALAVERAS DISTRICT shall pay to STOCKTON DISTRICT an advance payment for the number of AF of Project Water ordered in such schedule. Such advance payment shall be computed as follows:

$$\frac{\text{Total AF scheduled minus } W_c}{40 \times 71{,}100} \times \text{Repayment Obligation}$$

plus

$$\frac{\text{Total AF scheduled minus } W_c}{71{,}100} \times \text{The operation, maintenance, replacement, and administrative costs to be paid by STOCKTON DISTRICT for the current year pursuant to the Bureau Contract.}$$

5. (D) (2) At any time CALAVERAS DISTRICT may request a revision in its then current schedule of monthly AF for the remainder of the accounting year. Such request for revision shall be submitted in writing to STOCKTON DISTRICT. If the request is for an increase in the total quantity of water scheduled for the accounting year, an additional advance payment shall be submitted to the Watermaster along with the request to STOCKTON DISTRICT; said additional advance payment shall be computed in the same manner as set forth in Paragraph 5(D)(1) above. Upon receipt of said request STOCKTON DISTRICT shall consider the same and shall within its sole discretion determine whether or not it will grant the request of CALAVERAS DISTRICT. STOCKTON DISTRICT shall reply to the request of the CALAVERAS DISTRICT within ten days. If an increase has been requested and STOCKTON DISTRICT does not approve said request for increase or approves a lesser amount than is covered by the additional payment accompanying the request for an increase, the Watermaster shall immediately make an appropriate refund of the advance payment or a proportional part thereof. If the request was for a reduction in the scheduled amount and STOCKTON DISTRICT has approved said reduction, the Watermaster shall immediately make a refund to

CALAVERAS DISTRICT, said refund to be calculated in the same manner as set forth in Paragraph 5(D)(1).

5. (D) (3) The Watermaster shall calculate the final amounts owed by CALAVERAS DISTRICT as of March 31 of each accounting year and shall present his calculations in a statement to CALAVERAS DISTRICT by June 1 of the succeeding accounting year. Failure of the Watermaster to present his calculations as provided herein shall not affect CALAVERAS DISTRICT'S obligations under this Article, but CALAVERAS DISTRICT shall not be in default for failure to pay said amounts during any period of such failure by the Watermaster. The Watermaster shall show in said statement any additional sums due STOCKTON DISTRICT because of water use in excess of the amount covered by the advance payment provided for in Paragraph 3(B)(1) and the amount of interest due for the preceding accounting year under Paragraphs 5(A)(2) and (3). Within 30 days after receiving the statement of the Watermaster CALAVERAS DISTRICT shall pay to STOCKTON DISTRICT any additional sums due STOCKTON DISTRICT.

5. (D) (4) In the event that as shown in the calculations made pursuant to Paragraph 5(D)(3) the use of CALAVERAS DISTRICT during the preceding accounting year has not been in accordance with its schedule as submitted pursuant to Paragraph 3(B)(1) or as said schedule may have been revised pursuant to Paragraphs 3(B)(2) or 5(D)(2), then in such event if the use has been less than scheduled STOCKTON DISTRICT shall retain any advance funds having been paid to it for that accounting year and the same shall be accounted for as though CALAVERAS DISTRICT had used the scheduled water in that accounting year. If CALAVERAS DISTRICT has taken in excess of the amount so scheduled and STOCKTON DISTRICT in the ensuing accounting year reduces its total scheduled water in accordance with the provisions of subparagraph 3(B)(6)(a), then CALAVERAS DISTRICT shall pay STOCKTON DISTRICT $15.00 for each acre foot of such

reduction by STOCKTON DISTRICT. Any amount due under this Paragraph 5(D)(4) shall be included in the statement rendered by the Watermaster to CALAVERAS DISTRICT on or before June 1 of each accounting year. In the event that STOCKTON DISTRICT is required to reduce its total scheduled water in accordance with the provisions of subparagraph 3(B)(6)(a) for one or more successive years, then for each of such successive years after the first year said sum of $15.00 for each AF shall be increased for each successive year by $5.00; that is, in the second successive year the rate per AF would be increased to $20.00 and in the fourth successive year the rate would be increased to $30.00. Said sums of $15.00 and $5.00 may from time to time be increased or decreased as the cost of water in the general area increases or decreases. Either DISTRICT may at any time request such an increase or decrease and if the DISTRICTS cannot agree upon the question of an increase or decrease the matter shall be submitted to a civil engineer experienced in water matters and his decision shall be final. If the DISTRICTS cannot agree on a civil engineer, the matter shall be submitted to arbitration pursuant to Article 12 of this CONTRACT. The provisions of this Subarticle 5(D) shall not relieve CALAVERAS DISTRICT from the obligation to use not more than the amount of water scheduled nor shall it in any way relieve the Watermaster from taking necessary action to enforce use of water by <u>both</u> DISTRICTS in accordance with applicable schedules.

5. (E) Irrespective of any of the foregoing, the total sum to be paid to STOCKTON DISTRICT by CALAVERAS DISTRICT for each accounting year pursuant to Paragraph 5(A)(1) until the Repayment Obligation under the Bureau Contract has been fully discharged, shall be not less than the amount paid the preceding accounting year.

6. <u>Remedies of Stockton District</u>. The right of CALAVERAS DISTRICT and the water users within that DISTRICT to receive Project Water is dependent upon performance by CALAVERAS DISTRICT of its obligations under this CONTRACT. If CALAVERAS DISTRICT fails for any reason to pay any sum due STOCKTON DISTRICT under this CONTRACT:

6. (A) Interest shall be payable by CALAVERAS DISTRICT on the delinquent sum at the rate of nine percent (9%) per annum on the delinquent amount.

6. (B) If any sum due under this CONTRACT remains delinquent for 12 months or longer, STOCKTON DISTRICT prior to any such sum being fully repaid, may upon written notice cause CALAVERAS DISTRICT'S water entitlement to Project Water to be reduced by the percentage that said delinquent sums bear to the total obligation at that time of the CALAVERAS DISTRICT under Subarticle 5(A). Any amounts so used to reduce CALAVERAS DISTRICT'S water entitlement and the interest on any such amounts shall no longer be an obligation of CALAVERAS DISTRICT and shall be deemed fully compensated by the increased water entitlement of STOCKTON DISTRICT. For example, during the period to the 15th accounting year referred to in Paragraph 4(A)(2) CALAVERAS DISTRICT'S maximum water entitlement is 43.50% and its Repayment Obligation under Subarticle 5(A) is 0.435 x $5,597,000 (said sum of $5,597,000 shall be automatically adjusted if the total reimburseable construction allocation announced by the Secretary of the Army pursuant to the Bureau Contract is a different sum), or $2,434,695. If CALAVERAS DISTRICT orders 7,110 AF of Project Water in such an accounting year, its advance payment which should accompany that order is 10% ($\frac{100 \times 7,110}{71,100}$) of the annual payment of $210,000 due from the STOCKTON DISTRICT to the Bureau (assuming $140,000 due on Repayment Obligation = $65,000 O, M, & R + $5,000 administration). If the advance payment does not accompany the order and a 12-month period goes by, then the $2,434,695 will be reduced in the amount of $21,000 (10% of $210,000) to $2,413,695, and thereafter the CALAVERAS DISTRICT'S maximum water entitlement is $\frac{100 \times 2,413,695}{5,597,000}$, or 43.12%.

6. (C) If any sum due under this CONTRACT remains delinquent for 36 months or longer, STOCKTON DISTRICT, acting as Watermaster or otherwise, upon 30 days written notice to CALAVERAS DISTRICT, may terminate the total water entitlement of CALAVERAS DISTRICT, and STOCKTON DISTRICT in such event is authorized to sell

and dispose of the water to which CALAVERAS DISTRICT would otherwise but for such nonpayment be entitled, to any person, firm, or corporation within or without the DISTRICTS upon such terms and conditions as the STOCKTON DISTRICT shall determine, provided, that CALAVERAS DISTRICT may reacquire its said water entitlement at such time, if any, as said water entitlement is not disposed of or committed to others or in use in place of other water supplies which the STOCKTON DISTRICT has relinquished. If only a portion of such water entitlement is so available, then the CALAVERAS DISTRICT may reacquire such portion that is available. The ability of the CALAVERAS DISTRICT to reacquire water entitlement pursuant to this Subarticle 6(C) shall be subject to reduction by the operation of Subarticle 6(B), Paragraph 4(A)(2), and Paragraph 4(A)(3). Such right to reacquire water shall be subject to the condition that CALAVERAS DISTRICT shall pay to STOCKTON DISTRICT a sum calculated as follows: All delinquent sums including sums becoming delinquent after the exercise of the STOCKTON DISTRICT'S rights under this Subarticle 6(C), plus interest as set forth in Subarticle 6(A), less any income that STOCKTON DISTRICT has had during the period of termination from the sale or other disposition of the subject water, plus actual expenses of STOCKTON DISTRICT in temporarily disposing of water subject to such termination.

6. (D) During any period that CALAVERAS DISTRICT is in default under this CONTRACT, STOCKTON DISTRICT may require that CALAVERAS DISTRICT and all users of Project Water within CALAVERAS DISTRICT cease diversion from any pumps or other diversion works owned, operated, maintained, or authorized by CALAVERAS DISTRICT, whether such pumps or other diversion works are located at the New Hogan Reservoir pool or below, and if said diversion or any part

6(C) to 6(D)

x

of it does not cease, CALAVERAS DISTRICT authorizes the Watermaster to shut off, and in any reasonable fashion, temporarily disable any such pump or other diversion works. CALAVERAS DISTRICT expressly gives authority to the United States and the Watermaster during the perbd of such default to shut off, and by any reasonable means, temporarily disable any of said pumps or other diversion works, provided, however, that within the limits of CALAVERAS DISTRICT'S water entitlement the Watermaster shall furnish water to CALAVERAS DISTRICT water users upon payment in advance by those users of a charge per AF not in excess of what STOCKTON DISTRICT charges its water users for water of a similar type for a similar use. All amounts collected pursuant to this Subarticle 6(D) shall be credited, less actual expenses, to the delinquent sums owed by CALAVERAS DISTRICT.

6. (E) The remedies under this Article are cumulative and non restrictive. STOCKTON DISTRICT may use any, or any combination of, the remedies specified in this Article 6 and any other remedy or remedies allowed to it in law or equity, whether based upon breach of contract or otherwise.

6. (F) Any water use or diversion agreements made by CALAVERAS DISTRICT with its water users shall be expressly made subject to this CONTRACT and the remedies herein.

7. Remedies of Calaveras District. The right of STOCKTON DISTRICT and the water users within that DISTRICT to receive Project Water is dependent upon performance by the STOCKTON DISTRICT of its obligations under this CONTRACT.

7. (A) If STOCKTON DISTRICT fails to pay any sum due under the Bureau Contract, or fails to perform any other obligation due thereunder, the CALAVERAS DISTRICT may in its stead perform said obligation. To the extent that CALAVERAS DISTRICT pays any sum due under the Bureau Contract, such sum shall be credited to CALAVERAS DISTRICT'S obligation under Subarticle 5(A) herein. To the

extent that CALAVERAS DISTRICT'S payments exceed the amount that CALAVERAS DISTRICT would have had to pay under Subarticle 5(A) herein, such excess amount shall be deemed immediately delinquent and STOCKTON DISTRICT shall pay interest on said delinquent amounts at the rate of nine percent (9%) per annum until paid.

7. (B) If STOCKTON DISTRICT fails to pay any sum due under the Bureau Contract, or fails to perform any obligation due thereunder, including but not limited to the performance of the duties of the Watermaster, on 30 days written notice in advance to STOCKTON DISTRICT, CALAVERAS DISTRICT may exclude the STOCKTON DISTRICT as Watermaster hereunder and without any other authorization than herein contained, CALAVERAS DISTRICT is authorized to take over and perform all of the duties and responsibilities of STOCKTON DISTRICT as Watermaster, and to substitute CALAVERAS DISTRICT in all respects as Watermaster. Said right to so function as Watermaster shall continue until such time as STOCKTON DISTRICT has corrected the delinquency in payment or other failure.

7. (C) If any sum due under this CONTRACT remains delinquent for 36 months or longer, CALAVERAS DISTRICT, acting as Watermaster or otherwise, upon 30 days written notice to STOCKTON DISTRICT, may terminate the total water entitlement of STOCKTON DISTRICT, and CALAVERAS DISTRICT in such event is authorized to sell and dispose of the water to which STOCKTON DISTRICT would otherwise but for such nonpayment be entitled, to any person, firm, or corporation within or without the DISTRICTS (to the extent permitted by the Bureau Contract or any amendment thereto) upon such terms and conditions as the CALAVERAS DISTRICT shall determine, <u>provided</u>, that the STOCKTON DISTRICT may reacquire its said water entitlement at such time, if any, as said water entitlement is not disposed of or committed to others or in use in place of other water supply which CALAVERAS DISTRICT has relinquished. If only a portion of such water entitlement

is so available, then STOCKTON DISTRICT may reacquire such portion that is available. Such right to reacquire water shall be subject to the condition that STOCKTON DISTRICT shall pay to CALAVERAS DISTRICT a sum calculated as follows: All delinquent sums including sums becoming delinquent after the exercise of CALAVERAS DISTRICT'S rights under this Subarticle 7(C), plus interest as set forth in Subarticle 7(A) above, less any income that CALAVERAS DISTRICT has had during the period of termination from the sale or other disposition of the subject water, plus actual expenses of CALAVERAS DISTRICT in temporarily disposing of water subject to such termination.

7. (D) The remedies under this Article are cumulative and nonrestrictive. CALAVERAS DISTRICT may use any, or any combination of, the remedies specified in this Article 7 and any other remedy or remedies allowed to it in law or equity, whether based upon breach of contract or otherwise.

7. (E) Any water use or diversion agreements made by STOCKTON DISTRICT with its water users shall be expressly made subject to this CONTRACT and the remedies herein.

8. Delay in Payment. If, due to adverse economic conditions, or for any other reason, either or both DISTRICTS are unable to make payments required under this CONTRACT, or by the Bureau Contract, and the United States because of such inability grants a delay of a definite or indefinite period for payment under the Bureau Contract, then such delay shall be applied for the benefit of the DISTRICT experiencing such inability to make payments, and if both DISTRICTS are subject to such inability then the benefit of such delay shall be applied pro rata on the basis of the affected then current payment obligations of the respective DISTRICTS. This Article 8 shall be liberally construed to the end that any loss of water, the right to use water, or water entitlement by either DISTRICT, as a result of adverse economic conditions, or other causes beyond the control of a DISTRICT, shall be reduced or eliminated.

9. Vesting of Water Entitlements; Continuation of Agreement. At the conclusion and complete performance of both the Repayment Obligation of the Bureau Contract and the repayment provided under Subarticle 5(A) of this CONTRACT, both DISTRICTS shall become vested with the water entitlements for which they have respectively paid, subject only to what rights remain in the United States at the conclusion of the Repayment Obligation of the Bureau Contract. This CONTRACT shall then continue in effect in perpetuity, subject to all of its terms.

10. Area of Water Use. The CALAVERAS DISTRICT expressly agrees that no water from the New Hogan Project shall be used by it or through it by a third party beyond the boundaries shown on the attached map marked Exhibit "B". All water sales, use, or distribution contracts made by CALAVERAS DISTRICT shall be expressly subject to the provisions of this Article 10.

11. Watermaster.

11. (A) The STOCKTON DISTRICT is hereby appointed Watermaster under this CONTRACT and the Bureau Contract. The function of the Watermaster shall be exercised by the Secretary-Manager of STOCKTON DISTRICT or by any other person or position designated by resolution of the Board of Directors of STOCKTON DISTRICT. It shall be the duty of the Watermaster to:

11. (A) (1) Exercise general supervision over the administration of this CONTRACT and general administration on behalf of the DISTRICTS over the operation of the Bureau Contract.

11. (A) (2) Exercise general supervision over the diversion and use of water from the New Hogan Project by the DISTRICTS.

11. (A) (3) Administer the diversion into storage, the storage regulation and the release of water.

11. (A) (4) Compile and submit water use schedules to the Contracting Officer and the District Engineer as set forth in the Bureau Contract.

11. (A) (5) Calculate and determine the sums, including interest, owed by CALAVERAS DISTRICT to STOCKTON DISTRICT under this CONTRACT.

11. (A) (6) Exercise such other duties given to the Watermaster elsewhere in this CONTRACT.

11. (B) CALAVERAS DISTRICT shall pay the expenses of the Watermaster directly attributed to that DISTRICT'S activities on the following basis: Two (2) times the hourly wage or salary of any non-CALAVERAS DISTRICT personnel used, for the actual hours of time spent by such personnel, and other costs, actually incurred, including automobile and truck costs, insurance costs, and audit costs, all as may be agreed upon by the DISTRICTS from time to time in writing. If the DISTRICTS are unable at any time to agree upon the amount of the Watermaster's expenses properly chargeable to CALAVERAS DISTRICT, then the matter shall be submitted to arbitration as set forth in Article 12.

11. (C) All diversions from the Calaveras River from the New Hogan Reservoir pool or from below New Hogan Dam within CALAVERAS DISTRICT shall be metered by meters of a type approved by the Watermaster. These meters shall be installed, services, maintained, and replaced as necessary by CALAVERAS DISTRICT and the Watermaster shall be free to inspect any such meter at any reasonable time. CALAVERAS DISTRICT shall read and inspect all of the aforementioned meters monthly and shall supply the information required by the Watermaster and certify the correctness of the meters to the Watermaster by the 10th day of each following month. If a diversion is unmetered, or if the meter is not approved, or

if the data from an approved meter is not supplied as required, the Watermaster may estimate the amount of water used for each such diversion, using, when possible, the criteria then in use by STOCKTON DISTRICT within its own DISTRICT for estimating the consumption of water for various types and classes of water use. The Watermaster shall determine the amount of M & I water used by the CALAVERAS DISTRICT. In determining the total quantity of Project Water diverted by CALAVERAS DISTRICT each year for use in preparing the statement provided for in Paragraph 5(D)(3) above, the Watermaster shall do so either by adding the amounts metered or estimated monthly, or alternatively, at the option of STOCKTON DISTRICT, by subtracting from D, as defined in Paragraph 1(T)(6) the amount of water entering STOCKTON DISTRICT in the Calaveras River and adding C_r as defined in Paragraph 1(T)(4). In case the alternative method is employed, the amount of water entering STOCKTON DISTRICT shall be measured by a device whose type, location, and installation is approved by CALAVERAS DISTRICT and which is installed and maintained by STOCKTON DISTRICT entirely at STOCKTON DISTRICT'S expense, and representatives of CALAVERAS DISTRICT may inspect any such measuring device at any reasonable time. The determination of the Watermaster is bound by the data supplied by an approved meter unless the Watermaster can show that the information recorded by meter is substantially in error.

11. (D) The Watermaster shall cause to be measured by meter diversions for M & I use within STOCKTON DISTRICT (S_m). Representatives of CALAVERAS DISTRICT may inspect such meters at any reasonable time.

11. (E) STOCKTON DISTRICT by undertaking and performing the functions of Watermaster does not warrant to either CALAVERAS DISTRICT or to the water users of CALAVERAS DISTRICT, as to conditions beyond the control of said Watermaster, a supply of water of any given quantity at any given time, or of any particular quality.

11. (F) By July 1 of each year the Watermaster shall submit a report to each DISTRICT giving a full accounting of the use of New Hogan water for the preceding accounting year, all money paid to the Bureau under the Bureau Contract, and all money paid to STOCKTON DISTRICT under this CONTRACT. Said report shall contain any suggestions for improving operations under this CONTRACT. The Watermaster shall cause an annual audit to be made of the financial transactions under this CONTRACT by a certified public accountant and shall send a copy of each said annual audit to each DISTRICT.

12. Arbitration. In any instance in which the DISTRICTS fail to reach agreement as required herein, or in any instance in which a DISTRICT disagrees with a determination of the Watermaster, a DISTRICT may submit the disagreement to arbitration in the manner provided in this Article 12. Matters for which arbitration is specifically provided elsewhere in this CONTRACT shall also be subject to the procedures set forth in this Article 12. The procedure for arbitration shall be as follows:

12. (A) Either party may give notice requesting arbitration to the other.

12. (B) Within ten (10) days of the giving of a notice pursuant to Subarticle 12(A) of this Article, the DISTRICTS shall each select one arbitrator and the two arbitrators so selected shall together select a third arbitrator. If the third arbitrator has not been appointed by the expiration of the ten (10) day period specified above in this Subarticle 12(B) then either party may request the American Arbitration Association to make the selection of any arbitrator or arbitrators who have not been so selected. During the fifteen (15) days next following the selection of the third member of said board of arbitration, the board of arbitration shall meet together from time to time and hear evidence and arguments orally and in writing from the DISTRICTS relative to the matters before it and shall then render its decision with respect

to any matter submitted to it. The decision of said board of arbitration with respect to any matter submitted to it pursuant to this Article 12 shall be final and binding on both parties. The Watermaster shall cause notice of any decision of a board of arbitration hereunder to be given to both DISTRICTS.

12. (C) The costs of arbitration pursuant to this Article 12, including the fees and expenses of the members of the board of arbitration, if any, shall be borne equally by the DISTRICTS.

12. (D) As to any matter not specifically provided for herein as to the procedure for arbitration, the rules of the American Arbitration Association shall apply unless the DISTRICTS agree to the contrary.

13. Attorneys' Fees and Costs. In any case where court action is instituted by one DISTRICT against the other to interpret this CONTRACT, the rights of the parties thereunder, or to enforce a right or obligation created by this CONTRACT, the prevailing party shall receive its costs and reasonable attorneys' fees to be set by the court.

14. Captions and Calculations. The captions to the Articles herein are not part of this CONTRACT, and are not to be used in its interpretation. Any computations made pursuant to this CONTRACT concerning numbers of AF shall be carried out to the nearest acre foot. Any computations made pursuant to this CONTRACT involving percentages shall be carried out to the closest 1/100th of one percent.

15. Binds and Inures. This CONTRACT shall bind and inure to the legal successors of the DISTRICTS and is not made for the benefit of any third party.

16. Subordinate to Bureau Contract. This CONTRACT at all times is subject and subordinate to the provisions of the Bureau Contract.

17. Notices. Notices required to be given under this CONTRACT shall be made by prepaid registered or certified mail deposited

in a United States Post Office mail box addressed as follows:

CALAVERAS DISTRICT:	STOCKTON DISTRICT:
Secretary-Manager Calaveras County Water District P. O. Box 846 San Andreas, California 95249	Secretary-Manager Stockton and East San Joaquin Water Conservation District P. O. Box 5157 Stockton, California 95205

Notices so posted shall be deemed delivered on the second day following said posting. Changes in these addresses shall be given in writing by the method specified herein.

18. Effective Date and Delay in Payment.

18. (A) This CONTRACT shall not be effective until the Bureau Contract has been signed and approved by the United States.

18. (B) It is understood that certain of the water users identified in the Murray, Burns & Kienlen Civil Engineers study dated February 7, 1969 and located within CALAVERAS DISTRICT have for some time been making diversions for agricultural purposes from the Calaveras River below New Hogan Dam and that said diversions have included, in part, stored water which has been released from the New Hogan Project pursuant to interim contracts now and heretofore in effect between the STOCKTON DISTRICT and the Bureau by which contracts the STOCKTON DISTRICT has paid the Bureau at the rate of $4.00 per AF for said release of stored water and will so pay the Bureau during 1970. It is anticipated by the parties that in 1971 and subsequently these water users will divert water, part of which will be Project Water and part of which will be W_c as defined in this CONTRACT. It is further understood that CALAVERAS DISTRICT may need to complete certain internal arrangements before it can pay STOCKTON DISTRICT for the Project Water diverted by these users. CALAVERAS DISTRICT shall include within the initial schedules submitted on March 15, 1971 pursuant to Paragraph 3(B)(1) the monthly quantity of water estimated to be required by the aforementioned diverters during the 1971 year and shall similarly include the amount so required in the initial schedules submitted on March 15 of each year thereafter. Notwithstanding the provisions of Paragraph 3(B)(1) and Subarticle 5(D) related to advance payments, the advance payment made by CALAVERAS DISTRICT on March 15, 1971 need not include the amount representing planned diversions by these water users but

may be deferred by the CALAVERAS DISTRICT to and including April 1, 1972, provided that any sum so deferred pursuant to this Subarticle 18(B) shall bear interest at the rate of nine percent (9%) per annum until paid in full. On March 15, 1972 and in all years thereafter, the water and advance payment therefor for these users shall be included in the initial schedules and advance payments submitted by CALAVERAS DISTRICT pursuant to Paragraph 3(B)(1).

IN WITNESS WHEREOF, the parties have executed this CONTRACT the day and year first herein written.

CALAVERAS COUNTY WATER DISTRICT

By William D. Hart
President

ATTEST:
Stanley Edwards
Secretary

STOCKTON & EAST SAN JOAQUIN WATER CONSERVATION DISTRICT

By William C. Ghio
President

ATTEST:
Robert C. Hagebeen
Secretary

EXECUTION OF THE FOREGOING CONTRACT APPROVED BY THE DEPARTMENT OF THE INTERIOR OF THE UNITED STATES.

By R. J. Pafford Jr.
Contracting Officer

Year	Delivery AF/Annum AG	M & I	Total AF/Annum
1972	6340	60	6400
1973	6632	75	6707
1974	6923	93	7016
1975	7215	110	7325
1976	7507	133	7640
1977	7798	156	7954
1978	8090	182	8272
1979	8382	210	8592
1980	8673	240	8913
1981	8965	275	9240
1982	9257	310	9567
1983	9548	355	9903
1984	9840	400	10240
1985	11560	450	12010
1986	13280	500	13780
1987	15000	570	15570
1988	16720	630	17350
1989	18440	700	19140
1990	20160	790	20950
1991	21880	880	22760
1992	23600	940	24540
1993	25290	1010	26300
1994	27040	1080	28120
1995	27040	1160	28200
1996	27040	1250	28290
1997	27040	1340	28380
1998	27040	1440	28480
1999	27040	1550	28590
2000	27040	1680	28720
2001	27040	1780	28820
2002	27040	1880	28920
2003	27040	1990	29030
2004	27040	2150	29190
2005	27040	2220	29260
2006	27040	2340	29380
2007	27040	2480	29520
2008	27040	2630	29670
2009	27040	2790	29830
2010	27040	2960	30000

AG - Agriculture

M & I - Municipal & Industrial

AF/Annum - Acre Feet Per Annum

EXHIBIT "A"

Water Delivery

For

New Hogan Project

Calaveras County Water District

1972	6340	60	6400
1973	6632	75	6707
1974	6923	93	7016
1975 -	7215	110	7325
1976	7507	133	7640
1977	7798	156	7954
1978	8090	182	8272
1979	8382	210	8592
1980 -	8673	240	8913
1981	8965	275	9240
1982	9257	310	9567
1983	9548	355	9903
1984	9840	400	10240
1985 -	11560	450	12010
1986	13280	500	13780
1987	15000	570	15570
1988	16720	630	17350
1989	18440	700	19140
1990 -	20160	790	20950
1991	21880	880	22760
1992	23600	940	24540
1993	25290	1010	26300
1994	27040	1080	28120
1995 -	27040	1160	28200
1996	27040	1250	28290
1997	27040	1340	28380
1998	27040	1440	28480
1999	27040	1550	28590
2000 -	27040	1680	28720
2001	27040	1780	28820
2002	27040	1880	28920
2003	27040	1990	29030
2004	27040	2150	29190
2005 -	27040	2220	29260
2006	27040	2340	29380
2007	27040	2480	29520
2008	27040	2630	29670
2009	27040	2790	29830
2010 -	27040	2960	30000

AG - Agriculture

M & I - Municipal & Industrial

AF/Annum - Acre Feet Per Annum

EXHIBIT "A"

Water Delivery

R.O. Draft 10/16-1987

Contract No.
14-06-200-5057A
Amendatory

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
New Hogan Project, California

AMENDATORY CONTRACT AMONG THE UNITED STATES OF AMERICA, STOCKTON EAST WATER DISTRICT AND CALAVERAS COUNTY WATER DISTRICT PROVIDING FOR REPAYMENT AND CONSERVATION USE OF NEW HOGAN PROJECT

THIS AMENDATORY CONTRACT, made this 25th day of March, 1988 between the UNITED STATES OF AMERICA, hereinafter referred to as the United States, represented by the Contracting Officer executing this amendment, and STOCKTON EAST WATER DISTRICT AND CALAVERAS COUNTY WATER DISTRICT hereinafter referred to as the Contractors,

WITNESSETH, That:

EXPLANATORY RECITALS

WHEREAS, the parties have entered into a repayment contract, dated August 25, 1970 and identified as contract No. 14-06-200-5057A, as amended, which provides repayment and conservation use of New Hogan Dam and Reservoir and is hereinafter referred to as the repayment contract; and

WHEREAS, pursuant to Section 212 of Public Law 97-293 the Reclamation Reform Act of October 12, 1982, the Contractors' water supply from the abovestated reservoir is exempt from the provisions of Federal reclamation law; and

WHEREAS, the Contractors desire to amend the repayment contract to reflect the intent so stated in Section 212 of Public Law 97-293;

NOW, THEREFORE, in consideration of the mutual and dependent stipulations and covenants herein contained, it is mutually agreed by the parties hereto as follows:

1. The following changes to the repayment contract between the United States and the Contractors, shall be effective commencing October 12, 1982.

2. Articles 19, 20, 21 and 22 of the repayment contract and all references to such articles in other articles of the repayment contract are hereby deleted in their entirety.

3. Nothing in this amendatory contract shall terminate, cancel or affect any sales of land heretofore made under recordable contract.

4. Except as herein amended, all provisions of the repayment contract shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have signed their names as of the day and year first above written.

UNITED STATES OF AMERICA

By _____
ACTING
Regional Director, Mid-Pacific Region
Bureau of Reclamation

(SEAL)

STOCKTON-EAST WATER DISTRICT

Attest:

_____
Secretary

By _____
President

(SEAL)

CALAVERAS COUNTY WATER DISTRICT

Attest:

_____
Secretary
CORP20

By _____
President

RESOLUTION NO. 87-160

WHEREAS, the Bureau of Reclamation has proposed amendments to the contract for New Hogan Water to delete those sections relating to ownership or pricing limitations of Federal Reclamation Law.

BE IT RESOLVED that the Board of Directors of CALAVERAS COUNTY WATER DISTRICT does hereby authorize the execution of the "Amendatory Contract Among the UNITED STATES OF AMERICA, STOCKTON EAST WATER DISTRICT and CALAVERAS COUNTY WATER DISTRICT Providing For Payment and Conservation Use of the New Hogan Project."

BE IT FURTHER RESOLVED that the President is hereby authorized to execute said Amendatory Contract.

PASSED AND ADOPTED this 10th day of December, 1987 by the following vote:

AYES: Directors Clark, Johnson, Neilsen, Gleason and Queirolo

NOES: None

ABSENT: None

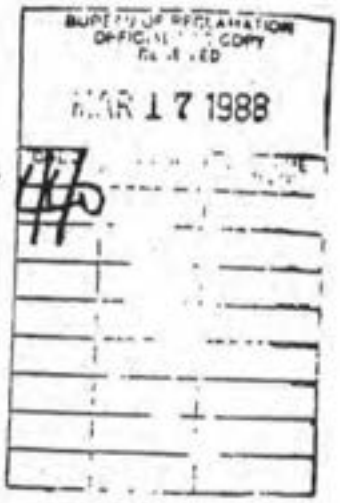
CALAVERAS COUNTY WATER DISTRICT

President

ATTEST:

Steve Felts
Secretary

CERTIFIED A TRUE COPY
Linda O'Keefe
Assistant Secretary
Calaveras County Water District



RESOLUTION OF THE BOARD OF DIRECTORS
OF STOCKTON EAST WATER DISTRICT

RESOLUTION 87-88-26

RESOLUTION AUTHORIZING SIGNATURES ON AMENDMENT TO CONTRACT
FOR USE OF NEW HOGAN WATER

WHEREAS, on February 16, 1988 the Board of Directors of Stockton East Water District adopted the Amendatory Contract Among the United States of America, Stockton East Water District and Calaveras County Water District Providing For Repayment And Conservation Use of New Hogan Project; and

WHEREAS, the United States of America has requested that signatures on the Amendatory Contract be authorized by Resolution of the Board of Directors of Stockton East Water District;

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of Stockton East Water District approves and authorizes the Board President and Secretary of the Board to execute and sign the Amendatory Contract approved at the February 16, 1988 Board meeting.

PASSED AND ADOPTED by the Board of Directors of Stockton East Water District at a regular meeting held on March 15, 1988, by the following vote:

AYES: Solari, Dondero, Laven, Bozzano, MacNear, Huckins
NOES: Tone
ABSENT: None

Roger M. Huckins
ROGER M. HUCKINS, President
Stockton East Water District

ATTEST:

EDWARD M. STEFFANI, Secretary
Stockton East Water District

RESOLUTION NO. 87-88-28

SECRETARY'S CERTIFICATE

I, EDWARD M. STEFFANI, Secretary of the Board of Directors of the STOCKTON-EAST WATER DISTRICT, Stockton, California, do hereby certify as follows:

The foregoing is a full, true and correct copy of a resolution duly adopted at a Regular Meeting of the Board of Directors of said District duly and regularly and legally held at the regular meeting place thereof on March 15, 1988, of which meeting all of the members of said Board of Directors had due notice and at which a majority thereof were present.

I have carefully compared the same with the original minutes of said meeting on file and of record in my office, and the foregoing is a full, true, and correct copy of the original resolution adopted at said meeting and entered in said minutes.

Said resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

Dated: 3/15/88

EDWARD M. STEFFANI
Secretary of the Board
STOCKTON-EAST WATER DIST

(SEAL)

Attachment M SEWD/ USBR and SEWD/CSJWCD Contract for Central Valley Project Water Supply(New Melones)

R.O. Draft 4/30-1982
Rev. R.O. 7/21-1982
Rev. R.O. 8/10-1982
Rev. R.O. 9/15-1982
Rev. R.O. 9/20-1982
W.O. Draft 10/28-1982
Rev. R.O. 2/17-1983
Rev. R.O. 2/28-1983
Rev. R.O. 3/2-1983
Rev. R.O. 9/7-1983

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
Central Valley Project, California

Contract No.
4-07-20-W0329

CONTRACT BETWEEN THE UNITED STATES AND STOCKTON-EAST WATER DISTRICT PROVIDING FOR PROJECT WATER SERVICE

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Contract No.
4-07-20-W0329

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
Central Valley Project, California

CONTRACT BETWEEN THE UNITED STATES
AND
STOCKTON-EAST WATER DISTRICT
PROVIDING FOR PROJECT WATER SERVICE

THIS CONTRACT, made this 19th day of December 1983, in pursuance generally of the Act of June 17, 1902 (32 Stat. 388), and acts amendatory or supplementary thereto including but not limited to the Act of August 26, 1937 (50 Stat. 844), as amended and supplemented, and the Act of August 4, 1939 (53 Stat. 1187), as amended and supplemented, all collectively hereinafter referred to as the Federal reclamation laws between THE UNITED STATES OF AMERICA, hereinafter referred to as the United States, and STOCKTON-EAST WATER DISTRICT, hereinafter referred to as the Contractor, a public agency of the State of California, duly organized, existing, and acting pursuant to the laws thereof, with its principal place of business in Stockton, California.

WITNESSETH, That:

EXPLANATORY RECITALS

WHEREAS, the United States is constructing and operating the Central Valley Project, California for the purpose, among others, of furnishing water for irrigation, municipal, industrial, domestic, and other beneficial uses; and

WHEREAS, pursuant to the Flood Control Acts of December 22, 1944 (58 Stat. 887) and October 23, 1962 (76 Stat. 1173), the Corps of Engineers, United States Army was authorized to construct the New Melones Dam on the

Stanislaus River, California, for the multipurpose uses of flood control, irrigation, municipal and industrial, power generation, and recreation, among other beneficial purposes; and

WHEREAS, pursuant to said acts, New Melones Dam and Reservoir were constructed by the Corps of Engineers and transferred to the Secretary of the Interior to become an integral part of the Central Valley Project to be operated and maintained pursuant to the authorizing acts and Federal reclamation laws; and

WHEREAS, investigations by the United States indicate that the Contractor has a present and potential need for an irrigation and municipal and industrial water supply; and

WHEREAS, Stockton-East Water District has sought a long-term water supply from the Folsom South Canal of the Central Valley Project which is not currently available; and

WHEREAS, the Flood Control Act of 1962 provides "That before initiating any diversions of water from the Stanislaus River Basin in connection with the operation of the Central Valley project, the Secretary of the Interior shall determine the quantity of water required to satisfy all existing and anticipated future needs within that basin and the diversions shall at all times be subordinate to the quantities so determined . . ."; and

WHEREAS, in the Record of Decision dated June 29, 1981, the Secretary determined the Stanislaus River Basin and the needs therein; and

WHEREAS, although Stockton-East Water District is not within the Basin, said Secretarial determination and investigations by the United States indicate that there will be an interim water supply available from the

Central Valley Project for furnishing to the Contractor for surface diversion and direct application for irrigation and municipal and industrial and other purposes; and

WHEREAS, the Contractor desires to contract pursuant to Federal reclamation laws and the laws of the State of California, for water service from the Central Valley Project pursuant to the conditions hereinafter set forth;

NOW, THEREFORE, in consideration of the covenants herein contained, it is agreed as follows:

DEFINITIONS

1. When used herein, unless otherwise distinctly expressed or manifestly incompatible with the intent hereof, the term:

(a) "Secretary" or "Contracting Officer" shall mean the Secretary of the Interior or his duly authorized representative;

(b) "Project" shall mean the Central Valley Project, California, of the Bureau of Reclamation;

(c) "year" shall mean calendar year;

(d) "Basin" shall mean the Stanislaus River Basin area for which a reservation of water is required by the Flood Control Act of 1962 and which is defined in the special report entitled "New Melones Unit, Central Valley Project, California, Stanislaus River Basin Alternative and Water Allocation, September 1980," approved by the Under Secretary in his June 29, 1981, Record of Decision;

(e) "agricultural water" shall mean water used primarily in the commercial production of agricultural crops or livestock including domestic

use incidental thereto, on tracts of land operated in units of more than five acres;

(f) "municipal, industrial, and domestic water" (hereinafter referred to as M&I) shall mean water used for other than agricultural purposes;

(g) "interim water supply" shall mean that portion of the water supply available from the New Melones Unit during the buildup to full Basin requirements which will be withdrawn as the needs within the Basin develop.

TERM OF CONTRACT--RIGHT TO USE OF WATER

2. (a) This contract shall be effective on the date first hereinabove written and shall remain in effect through December 31, 2022.

(b) The Contracting Officer shall provide a written notification to the Contractor announcing the initial delivery date which shall be January 1 of the year following the date that water from the Project is first available to the Contractor: Provided, That water availability shall not be declared until all applicable requirements of State and Federal law with respect to utilization and delivery of Stanislaus River water for the purpose of this contract have been complied with: Provided further, That the land classification requirements of Federal reclamation law must be satisfied prior to the announcement of water availability.

(c) If within a period of 5 years, commencing with the year in which the initial delivery date occurs, the Contractor does not own or have available to it for the remainder of the term hereof, facilities which in the opinion of the Contracting Officer are adequate for the conveyance and distribution of water to be made available pursuant to the terms of this contract, this contract shall terminate. If in the opinion of the Contracting Officer, at the end of said 5-year period, the Contractor is diligently proceeding toward completion of the conveyance and distribution facilities, the Contracting Officer shall extend said period from year to year to permit completion of said facilities.

WATER TO BE FURNISHED TO THE CONTRACTOR

3. (a) The Contractor understands and agrees that the water supply provided pursuant to this contrsct is an interim water supply. As the Basin use develops or if the interim water supply available to Central San Joaquin Water Conservation District pursuant to its contract with the United States is increased, the Contractor's interim water supply may be reduced for subsequent years as determined by the Contracting Officer upon a minimum of one year written notification to the Contractor. The Contractor's interim water supply also may be reduced, as determined by the Contracting Officer, to provide South Delta Water Agency an interim water supply in dry and critically dry water years, as determined by the Contracting Officer, but only in the event that the United States and said Agency execute a contract for that interim water supply during those dry and critically dry water years.

(b) Subject to the terms and conditions herein stated, the United States shall make available annually to the Contractor a maximum of 75,000

acre-feet of interim water: Provided, That this quantity may be increased pursuant to subdivisions (f) and (g) of this article; Provided further, That if the total water quantity is reduced pursuant to subdivision (a) of this article, the maximum and minimum quantities specified in subdivisions (c) and (d) shall be adjusted proportionately to such reduction or otherwise adjusted in a manner mutually agreed to by the Contracting Officer and the Contractor: And provided further, That in the event litigation by a third party prevents delivery of Project water for a period of time during the term of this contract, upon approval of the Contracting Officer the minimum payments as described in subdivisions (c) and (d) of this article during that same period shall be suspended.

(c) The United States shall make available to the Contractor the annual quantities of agricultural water up to a maximum quantity of 65,000 acre-feet as specified in the schedule submitted by the Contractor in accordance with Article 4 and the Contractor shall pay for said water in accordance with Article 5: Provided, That the United States shall make available and the Contractor shall pay for, as a minimum, such quantities of agricultural water as specified below:

(1) Each year, for the first five years commencing with the year in which the initial delivery date occurs pursuant to Article 2, the quantity of water specified in a schedule, or any revision thereof, submitted in accordance with Article 4.

(2) Each year for years 6 through 8 a minimum quantity of 22,750 acre-feet and for years 9 and 10 the minimum quantity of 45,500 acre-feet: Provided, That if in any year the Contractor schedules a quantity larger than the stated minimum, such increased quantity shall

constitute a new minimum for each subsequent year until such time as the above-stated minimums exceed that quantity.

(3) Each year beginning in the 11th year and continuing for the remaining contract term, the quantity of water scheduled in the 11th year (which quantity shall be at least equal to or greater than the quantity made available and paid for in the 10th year except as reduced pursuant to subdivision (a) of this article). In no event shall the annual quantity furnished for agricultural purposes exceed 65,000 acre-feet, except as provided pursuant to subdivisions (f) and (g) of this article: Provided, That the United States shall not be obligated to furnish any quantity greater than the quantity scheduled in the 11th year and such quantity shall constitute the new contract maximum for the remaining contract term.

(d) The United States shall make available to the Contractor the annual quantities of M&I water up to a maximum quantity of 10,000 acre-feet as specified in the schedule submitted by the Contractor in accordance with Article 4 and the Contractor shall pay for said water in accordance with Article 5: Provided, That the United States shall make available and the Contractor shall pay for, as a minimum, such quantities of M&I water as specified in the following table except as reduced pursuant to subdivision (a) of this article: Provided, however, That at any time or times after the

TABLE OF MINIMUM M&L WATER QUANTITIES

(In acre-feet)

Years Beginning With Initial Delivery Date	Minimum Annual M&I Water Delivery	Years Beginning With Initial Delivery Date	Minimum Annual M&I Water Delive
1	100	21	8,700
2	200	22	9,400
3	300	23	10,000
4	400	24	10,000
5	500	25	10,000
6	600	26	10,000
7	700	27	10,000
8	800	28	10,000
9	900	29	10,000
10	1,000	30	10,000
11	1,700	31	10,000
12	2,400	32	10,000
13	3,100	33	10,000
14	3,800	34	10,000
15	4,500	35	10,000
16	5,200	36	10,000
17	5,900	37	10,000
18	6,600	38	10,000
19	7,300	39	10,000
20	8,000	40	10,000

Contractor's requirement for M&I water exceeds 10,000 acre-feet per year, any or all of the Project water to be furnished for agricultural use, as specified in subdivision (c) of this article, may be converted to M&I use and shall be added to said 10,000 acre-feet and shall become the minimum quantity the Contractor shall pay for as M&I water each year thereafter during the term of this contract. Any time or times water for agricultural use is converted to M&I use, the minimum quantities of agricultural water for which payment is required pursuant to subdivision (c) of this article shall be adjusted accordingly.

(e) In any year the Contractor schedules a quantity larger than the minimum stated in the Table of Minimum M&I Water Quantities for that year, such scheduled quantity shall constitute a new minimum for each subsequent year until such time as the minimum stated on the Table exceeds that quantity.

(f) The Contracting Officer will review the supplemental needs of the Contractor following restudy of the available groundwater and with the mutual agreement of the Contractor the maximum water quantity of 75,000 acre-feet may be adjusted: Provided, That said maximum quantity may be increased only if the Contracting Officer has determined that additional Project water is available: Provided, however, That the increase shall not cause the adjusted maximum quantity to exceed 90,000 acre-feet; And Provided further, That if the total water quantity is increased pursuant to this subdivision, the maximum and minimum annual quantities specified in subdivisions (c) and (d) of this article shall be adjusted proportionately to such increase or otherwise adjusted in a manner mutually agreed to by the Contracting Officer and the Contractor.

(g) If the Contractor in any year requires a quantity of water in addition to the maximum quantities stated in subdivisions (b), (c), and/or (d) herein which the United States is obligated to furnish, additional Project

water, if available as determined by the Contracting Officer, may be furnished upon receipt of a schedule from the Contractor indicating the quantity of water and the desired time of delivery and appropriate payment. The furnishing by the United States and acceptance by the Contractor of such additional water shall neither entitle nor obligate the Contractor to receive or pay for such quantities in subsequent years.

(h) The United States and the Contractor by mutual agreement may reduce the annual quantity of water which the United States is obligated to make available and the Contractor obligated to pay for during the remainder of the term of this contract.

(i) The Contractor will use all proper methods to secure the economical and beneficial use of water furnished pursuant to this contract.

(j) If in any year after the Contracting Officer has approved a schedule or any revision thereof submitted by the Contractor, the United States is unable to furnish any of the water in the quantities and at the times requested in the schedule or revision thereof and the Contractor does not elect to receive and does not receive such water at other times during such year, the Contractor shall be entitled to an adjustment as provided in Article 6.

DELIVERY SCHEDULES

4. (a) For each year the Contractor will submit a schedule, subject to the provisions of Article 3, indicating the amounts of agricultural and M&I water required monthly. The first schedule shall be submitted 2 months prior to the initial delivery of water. Thereafter, annual schedules indicating monthly water requirements for the subsequent years shall be submitted not later than November 1 of each year or at such other times as determined by the Contracting Officer

to assure coordination of Project operations. The United States shall attempt to deliver water in accordance with said schedules, or any revisions thereof satisfactory to the Contracting Officer which are submitted to the Contracting Officer within a reasonable time before the desired time of delivery. The inability, failure, or refusal of the Contractor to submit a schedule shall not relieve it of its payment obligations.

(b) If the Contractor during any month is furnished a quantity of water in addition to that which it has requested for such month in its schedule and accepts such additional water, the Contractor shall be deemed to have revised its schedule and ordered and obligated itself to pay for such additional water and the United States shall be deemed to have accepted such revision as satisfactory. As soon thereafter as possible the Contractor shall submit a revised schedule to the United States for the remaining quantity to be delivered during that year.

RATES AND METHOD OF PAYMENT FOR WATER

5. (a) The rates of payment to be made by the Contractor for water made available pursuant to this contract shall be:

(1) $3.50 per acre-foot for agricultural water: Provided, That this rate shall be redetermined annually in accordance with reclamation law and the then current agricultural rate policy of the Project.

(2) $9.00 per acre-foot for M&I water: Provided, That this rate shall be redetermined annually in accordance with reclamation law and the then current M&I rate policy of the Project.

(b) At the time the Contractor submits the first schedules pursuant to Article 4 hereof to the Contracting Officer, the Contractor shall pay the amount payable for water to be delivered during the first two months. Before

the end of the first month or part thereof, of delivery of water pursuant to this contract and before the end of each month thereafter, the Contractor shall pay for the water to be delivered in accordance with the latest approved schedules during the second month immediately following. Adjustments between the payment for the scheduled amounts of water and the payment for quantities delivered each month shall be made during the following month: Provided, That any revised schedule which increases the Contractor's water deliveries shall be accompanied with an appropriate payment to assure water is not delivered in advance of payment. By December 1 of each year, the Contractor shall make any additional payment it is obligated to make for that year pursuant to Article 3.

(c) In the event the Contractor in any year is unable, fails, or refuses to accept delivery of the quantities of water scheduled and made available for delivery and for which payment is required pursuant to this contract or if the Contractor in any year fails to submit a schedule under subdivision (a) of Article 4, said inability, failure, or refusal shall not relieve the Contractor of the obligation to pay for said water and the Contractor agrees to make payment therefor in the same manner as if said water had been delivered to and accepted by the Contractor in accordance with this contract.

ADJUSTMENTS

6. The amount of any overpayment by the Contractor due to the quantity of water actually available for the Contractor during any year, as determined by the Contracting Officer, having been less than the quantity for which the Contractor was required to pay shall be applied first to any accrued indebtedness then due and payable by the Contractor pursuant to this contract. Any amount

of such overpayment then remaining shall, at the option of the Contractor, be refunded to the Contractor or credited upon amounts to become due to the United States from the Contractor under the provisions hereof in the ensuing year. Such adjustment shall constitute the sole remedy of the Contractor or anyone having or claiming to have the right to the use of any of the water supply provided for herein.

POINT OF DIVERSION--MEASUREMENT AND RESPONSIBILITY FOR DISTRIBUTION OF WATER

7. (a) The water to be furnished to the Contractor pursuant to this contract will be released from Project facilities and diverted at such location or locations as mutually agreed to by the Contracting Officer and the Contractor.

(b) The Contractor shall construct and install, without cost or expense to the United States, facilities required by the Contractor to take and convey the water from the point or points of delivery. In the event the Contractor's facilities are installed, operated, and maintained on property of the United States, the Contractor will furnish for approval of the Contracting Officer drawings showing the construction to be performed by the Contractor at least 6 months before starting said construction. The Contractor will not commence construction of any facilities on the property of the United States without the Contracting Officer's written approval of the drawings submitted by the Contractor. It is specifically recognized and agreed that this contract does not grant to the Contractor any right of access to Project water or to lands of the United States for any purpose except as provided herein for installation, operation, and maintenance of the Contractor's facilities to take Project water.

(c) All water diverted by the Contractor pursuant to this contract shall be measured with equipment furnished, installed, operated, and maintained by the Contractor at the point or points of diversion established pursuant to subdivision (a) of this article. The Contractor's maintenance program shall be approved by the Contracting Officer.

(d) M&I water furnished to the Contractor and delivered to its customers shall be measured, or caused to be measured, by the Contractor at the point or points of delivery provided from the Contractor's facilities. All measuring equipment required to determine such quantities shall be furnished, installed, operated, and maintained by the Contractor without expense to the United States.

(e) Measuring equipment required by subdivisions (c) and (d) of this article and its installation, maintenance, and use shall be approved by the Contracting Officer: Provided, That at least once each year, or upon request of the Contracting Officer, the Contractor shall investigate the accuracy of all measuring equipment used pursuant to subdivisions (c) and (d) of this article and shall correct any errors in measurement disclosed by such investigation. The United States shall be afforded reasonable opportunity to be present during the inspecting and testing procedure by the Contractor. The Contracting Officer shall have full and free access at all reasonable times to inspect said measuring equipment for the purpose of determining the accuracy and condition thereof. If said facilities are found to be defective or inaccurate,

they shall be readjusted or repaired, or both, or replaced without expense to the United States. In the event the Contractor neglects or fails to make such repairs or replacements within a reasonable time as may be necessary to satisfy the operating requirements of the Contracting Officer, the Contracting Officer may cause the repairs or replacements to be made and the costs thereof charged to the Contractor, which charge the Contractor shall pay to the United States on or before March 1 of the year following that in which the cost was incurred and a statement thereof furnished by the Contracting Officer to the Contractor.

(f) The Contractor shall maintain, in a manner satisfactory to the Contracting Officer, records of the quantities of water measured by the Contractor pursuant to subdivisions (c) and (d) of this article and will a report to the Contracting Officer before the 7th day of each month following the month in which water is so measured. The difference between the water measured by the Contractor pursuant to subdivision (d) and all water furnished by the Contracting Officer as measured pursuant to subdivision (c) shall be considered to be agricultural water.

(g) The United States shall not be responsible for the control, carriage, handling, use, disposal, or distribution of water beyond the delivery points and the Contractor shall hold the United States harmless on account of damage or claim of damage of any nature whatsoever, including property damage, personal injury or death arising out of or connected with the control, carriage, handling, use, disposal, or distribution of such water.

MAINTENANCE OF FLOWS AND LEVELS--TEMPORARY REDUCTION--
RETURN FLOWS

8. (a) The United States shall make all reasonable efforts, consistent with the most efficient overall operation of the Project, to furnish water to the Contractor at the delivery points established pursuant to Article 7.

(b) The United States may temporarily discontinue or reduce the quantity of water to be furnished to the Contractor as herein provided for the purposes of such investigation, inspection, maintenance, repair, or replacement of any of the Project facilities or any part thereof necessary for the furnishing of water to the Contractor, but so far as feasible the United States will give the Contractor due notice in advance of such temporary discontinuance or reduction, except in case of emergency, in which case no notice need be given: Provided, however, That the United States shall use its best efforts to avoid any discontinuance or reduction in service. Upon resumption of service after such reduction or discontinuance and if requested by the Contractor, the United States will attempt to deliver the quantity of water which would have been furnished hereunder in the absence of such discontinuance or reduction.

(c) The United States reserves the right to all waste, seepage, and return-flow water derived from water furnished to the Contractor which escapes or is discharged beyond boundaries of the Contractor's service area. Nothing herein shall be construed as claiming for the United States any right, as waste, seepage, or return flow, to water being used pursuant to this contract for surface irrigation or underground storage within the Contractor's service area by the Contractor, or those claiming by or through the Contractor.

WATER SHORTAGE AND APPORTIONMENT

9. (a) In its operation of the Project, the United States will use all reasonable means to guard against a condition of shortage in the quantity of water available to the Contractor pursuant to this contract. Nevertheless, if a shortage does occur during any year because of drought, or other causes which, in the opinion of the Contracting Officer, are beyond the control of the United States, no liability shall accure against the United States or any of its officers, agents, or employees for any damage, direct or indirect, arising therefrom.

(b) In any year that the Contracting Officer determines that there is a shortage in the quantity of water available to customers of the United States from the New Melones Unit of the Project, the Contracting Officer will apportion available water among the water users capable of receiving water from said Unit, consistent with the existing contracts and Project authorizations. During such water short years, the quantity of water available to the Contractor pursuant to the terms of this contract shall be reduced, as necessary, to meet the full needs of the Basin contractors and the needs of Central San Joaquin Water Conservation District for its firm and interim water supply. The Contractor's water supply may be further reduced to meet the needs of South Delta Water Agency pursuant to the terms of subdivision (a) of Article 3.

TRANSFERS OR EXCHANGES OF WATER

10. Water furnished to the Contractor pursuant to this contract shall not be sold, exchanged, or otherwise disposed of for use outside the Contractor's service area without prior written consent of the Contracting Officer.

WATER ACQUIRED BY CONTRACTOR OTHER THAN FROM THE UNITED STATES

11. (a) Water or water rights now owned or hereafter acquired by the Contractor other than from the United States and Project water furnished pursuant to the terms of this contract may be transported through distribution facilities of the Contractor if the Contracting Officer determines that such mingling is necessary to avoid a duplication of facilities: Provided, That such water is not transported through the Contractor's facilities constructed or financed by the United States. Notwithstanding such mingling, the provisions of this contract shall apply only to the quantity of water furnished to the Contractor pursuant to the terms hereof and the quantity of water acquired by or available to the Contractor other than from the United States shall not in any manner be subject to the provisions of this contract.

(b) With respect to the distribution works or portions thereof in which mingling is permitted as provided in subdivision (a) of this article, the Contractor:

(1) At the request of the Contracting Officer, the Contractor will be responsible for the installation, operation, and maintenance of watermeasuring equipment at delivery points to excess lands and, further, will be responsible for the installation, operation, and maintenance of similar equipment for measuring the water available to the Contractor or landowners within the Contractor's service area other than from the Project, and the Contracting Officer may check and inspect said equipment at any time; and

(2) Agrees that the quantity of water furnished to it by the United States during each 24-hour period will be delivered by the Contractor through the aforesaid outlets to eligible lands only. The Contractor shall be deemed to be in breach of this article and Article 12 of this contract

if at any time there is furnished to all excess lands not covered by recordable contracts and served by the distribution works or portions thereof in which mingling is permitted, a quantity of water which is greater than that which the Contractor or landowners within the Contractor's service area have introduced into said system from the supply available other than pursuant to this contract.

RULES, REGULATIONS, AND DETERMINATIONS

12. (a) The parties agree that the delivery of irrigation water or the use of Federal facilities pursuant to this contract is subject to the acreage and ownership limitations and pricing provisions of Reclamation law, as amended and supplemented, including but not limited to the Reclamation Reform Act of 1982 (Public Law 97-293, Title II).

(b) The Contractor further agrees to abide by final rules and regulations promulgated by the Secretary of the Interior covering the enforcement and administration of said limitations and provisions of Reclamation law as amended and supplemented by the Reclamation Reform Act of 1982, including the payment of full costs as provided therein.

(c) The Contracting Officer shall have the right to make, after an opportunity has been offered to the Contractor for consultation, rules and regulations consistent with the provisions of this contract, the laws of the United States and the State of California, to add or to modify them as may be deemed proper and necessary to carry out this contract, and to supply necessary details of its administration which are not covered by express provisions of this contract. The Contractor shall observe such rules and regulations.

(d) Where the terms of this contract provide for action to be based upon the opinion or determination of either party to this contract, whether or not stated to be conclusive, said terms shall not be construed as permitting such action to be predicated upon arbitrary, capricious, or unreasonable opinions or determinations. In the event that the Contractor questions any factual determination made by the Contracting Officer, the findings as to the facts shall be made by the Secretary only after consultation with the Contractor and shall be conclusive upon the parties.

GENERAL OBLIGATION—BENEFITS CONDITIONED UPON PAYMENT

13. (a) The obligation of the Contractor to pay the United States as provided in this contract is a general obligation of the Contractor notwithstanding the manner in which the obligation may be distributed among the Contractor's water users and notwithstanding the default of the individual water users in their obligations to the Contractor.

(b) The payment of charges becoming due hereunder is a condition precedent to receiving benefits under this contract. No water will be made available to the Contractor through Project facilities during any period in which the Contractor may be in arrears in the advance payment of any charges due the United States. The Contractor shall not furnish water made available pursuant to this contract for lands or parties which are in arrears in the advance payment of charges as levied or established by the Contractor.

CHARGE FOR LATE PAYMENTS

14. The Contractor shall pay a late payment charge on installments or charges which are received after the due date. The late payment charge percentage rate calculated by the Department of the Treasury and published quarterly in the Federal Register shall be used: Provided, That the late payment charge percentage rate will not be less than 0.5 percent per month. The late payment charge percentage rate applied on an overdue payment will remain in effect until payment is received. The late payment rate for a 30-day period will be determined on the day immediately following the due date and will be applied to the overdue payment for any portion of the 30-day period of delinquency. In the case of partial late payments, the amount received will first be applied to the late charge on the overdue payment and then to the overdue payment.

QUALITY OF WATER

15. The operation and maintenance of Project facilities shall be performed in such manner as is practicable to maintain the quality of raw water made available through such facilities at the highest level reasonably attainable as determined by the Contracting Officer. The United States does not warrant the quality of water and is under no obligation to construct or furnish water treatment facilities to maintain or better the quality of water.

WATER AND AIR POLLUTION CONTROL

16. The Contractor, in carrying out this contract, shall comply with all applicable water and air pollution laws and regulations of the United States and the State of California and shall obtain all required permits or licenses from the appropriate Federal, State, or local authorities.

EQUAL OPPORTUNITY

17. During the performance of this contract, the Contractor agrees as follows:

(1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this nondiscrimination clause.

(2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without discrimination because of race, color, religion, sex, or national origin.

(3) The Contractor will send to each labor union or representative of workers, with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Contracting Officer, advising the said labor union or workers' representative of the Contractor's commitments under Section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The Contractor will furnish all information and reports required by said amended Executive Order and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the Contracting Officer and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended, in whole or in part, and the Contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in said amended Executive Order, and such other sanctions may be imposed and remedies invoked as provided in said Executive Order, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The Contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by the rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of said amended Executive Order, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, That in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

TITLE VI, CIVIL RIGHTS ACT OF 1964

18. (a) The Contractor agrees that it will comply with Title VI of the Civil Rights Act of July 2, 1964 (78 Stat. 241) and all requirements imposed by or pursuant to the Department of the Interior Regulation (43 CFR 17) issued pursuant to that title, to the end that, in accordance with Title VI of that Act and the Regulation, no person in the United States shall, on the grounds of race, color, or national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Contractor receives financial assistance from the United States and hereby gives assurance that it will immediately take any measures to effectuate this agreement.

(b) If any real property or structure thereon is provided or improved with the aid of Federal financial assistance extended to the Contractor by the United States, this assurance obligates the Contractor, or, in the case of any transfer of such property, any transferee for the period during which the real property or structure is used for a purpose involving the provision of similar services or benefits. If any personal property is so provided, this assurance obligates the Contractor for the period during which it retains ownership or possession of the property. In all other cases, this assurance obligates the Contractor for the period during which the Federal financial assistance is extended to it by the United States.

(c) This assurance is given in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts, property, discounts, or other Federal financial assistance extended after the date hereof to the Contractor by the United States, including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date. The Contractor recognizes and agrees that such Federal financial assistance will be extended in reliance on the representations and agreements made in this assurance, and that the United States shall reserve the right to seek judicial enforcement of this assurance. This assurance is binding on the Contractor, its successors, transferees, and assignees.

WATER CONSERVATION PROGRAM

19. (a) While the contents and standards of a given water conservation program are primarily matters of State and local determination, there is a strong Federal interest in developing an effective water conservation program because of this contract. The Contractor shall develop and implement an effective water conservation program for all uses of water which is provided from, or conveyed through, Federally constructed or Federally financed facilities for the Contractor's use. The original water conservation program shall specify definite objectives, appropriate existing and proposed water conservation measures including, but not limited to, changes in water uses and modifications in the design or operation of existing or proposed distribution systems, and time schedules for meeting the water conservation objectives.

(b) The original water conservation program shall be submitted to and approved by the Contracting Officer prior to one or all of the following: (1) service of Federally stored/conveyed water; (2) transfer of operation and maintenance of the Project facilities to the Contractor; or (3) transfer of the Project to an operation and maintenance status. The distribution and use of Federally stored/conveyed water and/or the operation of Project facilities transferred to the Contractor shall be consistent with the approved water conservation program. Following date of execution of this contract, and at subsequent 5-year intervals, the Contractor and Contracting Officer shall review the original water conservation plan to determine if the objectives set forth therein are being met. If it is determined that the water conservation measures set forth therein require modification to further the established objectives, the Contractor and the Contracting Officer shall work together to formulate the modifications which the Contractor shall then be required to implement.

BOOKS, RECORDS, AND REPORTS

20. The Contractor shall establish and maintain accounts and other books and records pertaining to its financial transactions, land use and crop census, water use, and other matters as the Contracting Officer may require. Reports thereon shall be furnished to the Contracting Officer in such form and on such date or dates as he may require. Subject to applicable Federal laws and regulations, each party shall have the right during office hours to examine and make copies of each other's books and official records relating to matters covered by this contract.

CONTINGENT ON APPROPRIATION OR ALLOTMENT OF FUNDS

21. The expenditure or advance of any money or the performance of any work by the United States hereunder which may require appropriation of money by the Congress or the allotment of funds shall be contingent upon such appropriation or allotment being made. The failure of Congress to appropriate funds or the absence of any allotment of funds shall not relieve the Contractor from any obligation under this contract. No liability shall accrue to the United States in case such funds are not appropriated or allotted.

CHANGES IN CONTRACTOR'S SERVICE AREA

22. While this contract is in effect, no change shall be made in the Contractor's service area by inclusion or exclusion of lands, by dissolution, consolidation, merger, or otherwise, except upon the Contracting Officer's written consent.

ASSIGNMENT LIMITED--SUCCESSORS AND ASSIGNS OBLIGATED

23. The provisions of this contract shall apply to and bind the successors and assigns of the parties hereto, but no assignment or transfer of this contract or any part or interest therein shall be valid until approved by the Contracting Officer.

OFFICIALS NOT TO BENEFIT

24. (a) No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this contract or to any benefit that may arise herefrom. This restriction shall not be construed to extend to this contract if made with a corporation for its general benefit.

(b) No official of the Contractor shall receive any benefit that may arise by reason of this contract other than as a water user within the Project and in the same manner as other water users within the Project.

CONFIRMATION OF CONTRACT

25. Upon execution of this contract, the Contractor promptly shall secure a final decree of the proper court of the State of California, approving and confirming the contract and decreeing and adjudging it and the apportionment of the benefits and thereunder to be lawful, valid, and binding on the Contractor. The Contractor shall furnish to the United States a certified copy of such decree and of all pertinent supporting records.

WATER CONSERVATION PROGRAM

19. (a) While the contents and standards of a given water conservation program are primarily matters of State and local determination, there is a strong Federal interest in developing an effective water conservation program because of this contract. The Contractor shall develop and implement an effective water conservation program for all uses of water which is provided from, or conveyed through, Federally constructed or Federally financed facilities for the Contractor's use. The original water conservation program shall specify definite objectives, appropriate existing and proposed water conservation measures including, but not limited to, changes in water uses and modifications in the design or operation of existing or proposed distribution systems, and time schedules for meeting the water conservation objectives.

(b) The original water conservation program shall be submitted to and approved by the Contracting Officer prior to one or all of the following: (1) service of Federally stored/conveyed water; (2) transfer of operation and maintenance of the Project facilities to the Contractor; or (3) transfer of the Project to an operation and maintenance status. The distribution and use of Federally stored/conveyed water and/or the operation of Project facilities transferred to the Contractor shall be consistent with the approved water conservation program. Following date of execution of this contract, and at subsequent 5-year intervals, the Contractor and Contracting Officer shall review the original water conservation plan to determine if the objectives set forth therein are being met. If it is determined that the water conservation measures set forth therein require modification to further the established objectives, the Contractor and the Contracting Officer shall work together to formulate the modifications which the Contractor shall then be required to implement.

BOOKS, RECORDS, AND REPORTS

20. The Contractor shall establish and maintain accounts and other books and records pertaining to its financial transactions, land use and crop census, water use, and other matters as the Contracting Officer may require. Reports thereon shall be furnished to the Contracting Officer in such form and on such date or dates as he may require. Subject to applicable Federal laws and regulations, each party shall have the right during office hours to examine and make copies of each other's books and official records relating to matters covered by this contract.

CONTINGENT ON APPROPRIATION OR ALLOTMENT OF FUNDS

21. The expenditure or advance of any money or the performance of any work by the United States hereunder which may require appropriation of money by the Congress or the allotment of funds shall be contingent upon such appropriation or allotment being made. The failure of Congress to appropriate funds or the absence of any allotment of funds shall not relieve the Contractor from any obligation under this contract. No liability shall accrue to the United States in case such funds are not appropriated or allotted.

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(b) No official of the Contractor shall receive any benefit that may arise by reason of this contract other than as a water user within the Project and in the same manner as other water users within the Project.

CONFIRMATION OF CONTRACT

25. Upon execution of this contract, the Contractor promptly shall secure a final decree of the proper court of the State of California, approving and confirming the contract and decreeing and adjudging it and the apportionment of the benefits and thereunder to be lawful, valid, and binding on the Contractor. The Contractor shall furnish to the United States a certified copy of such decree and of all pertinent supporting records.

NOTICES

26. Any notice, demand, or request authorized or required by this contract shall be deemed to have been given, on behalf of the Contractor, when mailed, postage prepaid, or delivered to the Regional Director, Bureau of Reclamation, 2800 Cottage Way, Sacramento, California 95825, and on behalf of the United States, when mailed, postage prepaid, or delivered to the Board of Directors of the Stockton-East Water District, Post Office Box 5157, Stockton, California 95205. The designation of the addressee or the address may be changed by notice given in the same manner as provided in this article for other notices.

IN WITNESS WHEREOF, the parties hereto have executed this contract the day and year hereinabove written.

THE UNITED STATES OF AMERICA

By _____
Regional Director, Mid-Pacific Region
Bureau of Reclamation

(SEAL)

STOCKTON-EAST WATER DISTRICT

By _____
President

Attest:

_____
Secretary

RESOLUTION NO. 83-84-06

RESOLUTION BEFORE THE BOARD OF DIRECTORS OF STOCKTON EAST WATER DISTRICT AUTHORIZING EXECUTION OF NEW MELONES CONTRACT

WHEREAS, the Bureau of Reclamation has presented to the District a proposed contract between the United States and Stockton East Water District providing for project water service, Contract No. REV. R.O. 9/7-1983; and

WHEREAS, the District has reviewed this contract; and

WHEREAS, it is to the District's advantage to execute this contract providing for access to water from New Melones Reservoir; and

WHEREAS, the contract may be terminated within a period of five (5) years if the District does not own or have available to it facilities adequate for the conveyance and distribution of water;

NOW, THEREFORE BE IT RESOLVED and it is hereby resolved that Stockton East Water District shall enter into this contract with the United States Department of Interior, Bureau of Reclamation; and

BE IT FURTHER RESOLVED that the President and Secretary of the Board of Directors of the District are hereby authorized and directed to execute all necessary documents in order to carry out this resolution.

PASSED AND ADOPTED this 4th day of October, 1983 at a regular meeting of the Board of Directors of Stockton East Water District by the following vote. TO WIT:

AYES: EILERS, DONDERO, TAFT, HUCKINS, BOZZANO
NOES: NONE
ABSTENTION: NONE
ABSENT: MACNEAR

Perry H. Taft

PERRY H. TAFT, President
Board of Directors
Stockton East Water District

ATTEST:

EDWARD M. STEFFANI, Secretary
Board of Directors
Stockton East Water District

(SEAL)



SECRETARY'S CERTIFICATE

I, EDWARD M. STEFFANI, Secretary of the Board of Directors of the STOCKTON-EAST WATER DISTRICT, Stockton, California, do hereby certify as follows:

The foregoing is a full, true and correct copy of a resolution duly adopted at a Regular Meeting of the Board of Directors of said District duly and regularly and legally held at the regular meeting place thereof on OCTOBER 4, 1983, of which meeting all of the members of said Board of Directors had due notice and at which a majority thereof were present.

I have carefully compared the same with the original minutes of said meeting on file and of record in my office, and the foregoing is a full, true, and correct copy of the original resolution adopted at said meeting and entered in said minutes.

Said resolution has not been amended, modified, or rescinded since the date of its adoption, and the same is now in full force and effect.

Dated: October 4, 1983

EDWARD M. STEFFANI
Secretary of the Board
STOCKTON-EAST WATER DIST

(SEAL)

JM

CONTRACT BETWEEN
CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT
AND
STOCKTON EAST WATER DISTRICT

THIS CONTRACT, made this 29th day of August, 1991, between Central San Joaquin Water Conservation District, hereinafter referred to as "CSJWCD", a public agency of the State of California, duly organized, existing and acting pursuant to the laws thereof, with its primary place of business in Stockton, California, and Stockton East Water District, hereinafter referred to as "SEWD", a public agency of the State of California, duly organized, existing and acting pursuant to the laws thereof, with its primary place of business in Stockton, California.

RECITALS

WHEREAS, CSJWCD has executed a Water Service Contract with the United States, providing for the delivery and purchase of Project Water from the New Melones Unit of the Central Valley Project in the annual quantity of 80,000 acre feet; and

WHEREAS, SEWD has executed a Water Service Contract with the United States, providing for the delivery and purchase of Project Water from the New Melones Unit of the Central Valley Project in the annual quantity of 75,000 acre feet; and

WHEREAS, SEWD is constructing and will be constructing various components of a water conveyance system to bring Project water into its service area; and

WHEREAS, CSJWCD and SEWD have executed a Wheeling contract

wherein SEWD has agreed to transport and convey Project Water for CSJWCD to its service area; and

WHEREAS, CSJWCD is designing and will construct an internal distribution system to convey and transport its Project Water throughout its service area; and

WHEREAS, SEWD is constructing as part of its water conveyance facilities a Lower Farmington Canal from Farmington Dam into its service area; and

WHEREAS, said Lower Farmington Canal can be designed, constructed, and utilized to allow the conveyance of CSJWCD Project Water into the Duck Creek system of its service area;

WHEREAS, CSJWCD and SEWD wish to cooperate and utilize facilities to the joint and mutual benefit of each of the parties for the conveyance of Project Water;

NOW, THEREFORE, in consideration of the covenants herein contained, it is agreed as follows:

1. **Definition:** When used herein, unless otherwise distinctly expressed or manifestly incompatible with the intent hereof, the term:

(a) "Internal Distribution Facility" shall mean such channel clearing, crossing, piping, check dams, and other necessary improvements within each party's separate service area;

(b) "Lower Farmington Canal" shall mean a canal approximately 9.6 miles in length from Farmington Dam to the SEWD service area;

(c) "Project Water" shall mean water available to each party pursuant to the terms of a water service contract with the United

States for delivery of water from the New Melones unit of the Central Valley Project;

2. **Purpose of Agreement:** The purpose and intent of this contract is to specify the terms on which SEWD will convey Project Water of CSJWCD through the Lower Farmington Canal to the service area of CSJWCD.

3. **Covenant of Cooperation:** The parties to this contract do hereby covenant to cooperate in good faith to enable CSJWCD to take delivery of its Project Water in conformance with this contract.

4. **Construction of Lower Farmington Canal:** SEWD has designed, and intends to place out for bid, a water conveyance canal called the Lower Farmington Canal with a design capacity at a minimum flow of 200 CFS. Construction is intended to be completed by the latter part of 1991. SEWD agrees that CSJWCD will prepare an addendum to the Lower Farmington Canal design contract documents dated July, 1990, changing and modifying the first Fourteen Thousand (14,000) feet of the Canal to allow a minimum flow of 300 CFS and adding gates at the Funck Road pipe crossing and one (1) turnout structure. Such modification shall allow diversion of Project Water into the Duck Creek area of CSJWCD.

SEWD shall be fully responsible for the construction and construction schedule of the Lower Farmington Canal. SEWD shall bear no responsibility nor liability caused by delays in the construction schedule, for whatever reason.

5. **Use of Facility:** SEWD agrees to utilize the canal for, among other uses, conveyance of Project Water of CSJWCD to the

service area of CSJWCD at a maximum rate of 100 CFS. Nothing herein shall prevent the parties from agreeing to other sharing or utilization of other available capacity. It is understood that a separate agreement will be executed by the parties setting forth the specific terms for operation and delivery of water through the Canal by SEWD on behalf of CSJWCD.

6. **Compensation for Use of Lower Farmington Canal:** CSJWCD shall pay to SEWD an amount equal to the additional bid cost for gates at the Funck Road pipe crossing, one (1) turnout structure, an amount equal to the additional cost for increased excavation and improvement to expand the canal capacity, from 200 CFS to 300 CFS, an amount equal to the additional cost for increasing the Rock Creek Diversion structure capacity from 200 to 300 CFS, and an amount equal to the cost for increasing the Highway 4 pipe crossing capacity from 200 to 300 CFS. Said increased excavation cost shall be calculated on the unit price bid for excavation multiplied by the additional excavation quantity. CSJWCD shall make payment to SEWD for said modifications during the construction of the Lower Farmington Canal and at such time as SEWD is obligated to pay under the terms of the construction contract.

Any additional unforeseen costs which may arise as a result of oversizing the project for CSJWCD participation shall be borne by CSJWCD.

Upon receipt of bids for construction and prior to award of a construction contract thereof, should CSJWCD, in its sole discretion, deem the bided costs to be excessive or unacceptable

then CSJWCD may withdraw from this agreement and the terms and conditions herein will be void.

7. **Additional Compensation:** Notwithstanding any other provision of this Agreement, if, and only if, the amounts paid by CSJWCD pursuant to Paragraph 6 of this Agreement are less than Two Hundred Thousand Dollars ($200,000.00), then CSJWCD shall pay to SEWD an additional sum, which shall be Two Hundred Thousand Dollars ($200,000.00) less the amount paid pursuant to Paragraph 6 of this Agreement. CSJWCD shall pay the additional compensation within thirty (30) days of SEWD acceptance of completion of the Lower Farmington Canal.

8. **Operation and Maintenance:** The operation and maintenance expense for the first fourteen thousand (14,000) feet of the Canal shall be determined annually by multiplying the actual operation and maintenance cost by the quotient of total acre feet wheeled for CSJWCD divided by the total acre feet wheeled for CSJWCD plus the total acre feet conveyed for SEWD. Operation and maintenance costs shall not include costs for repair and replacement due to faulty or negligent construction of the Canal or negligent operation and maintenance. Annual review of all operation and maintenance costs shall be provided to CSJWCD. CSJWCD shall be notified of any Committee and Board Meetings when operation and maintenance procedures and costs are discussed. CSJWCD shall pay operation and maintenance costs annually on January 31, for the previous calendar year.

9. **Term of Contract:** This Contract shall be effective on

the date first above written and shall remain in effect through December 21, 2022 or until such time as both parties Water Service Contract with the United States shall terminate; provided, however, that this Contract shall automatically renew for a period of one (1) year, and at the expiration of such renewal period, or any subsequent renewal period, for one (1) year, unless either party shall give notice of non-renewal in writing prior to thirty (30) days before the commencement of any renewal period.

10. **Attorneys fees and Costs:** In any case where court action is instituted by one or more parties against one or more other parties to interpret this Agreement, the rights of the respective parties hereunder, or to enforce a right or obligation created by this Agreement, the prevailing party or parties shall receive costs and reasonable attorneys fees to be set by the court.

11. **Specific Performance:** By reason of the specialized nature of the water service to be rendered, and for the further reason that the extent of any damage caused to any party by another by reason of any breach of this Agreement may be extremely difficult to determine, it is agreed by the parties hereto that an action for damages is an inadequate remedy for any breach, and that specific performance, without precluding any other remedy available in equity or at law, will be necessary to furnish any party hereto with an adequate remedy for the breach by any other party hereto of any covenant or obligation for the benefit of the aggrieved party.

12. **Partial Invalidity:** If any term of this Agreement is held by a court of competent jurisdiction to be void or unenforceable,

the remainder of the contract terms shall remain in full force and effect and shall not be affected.

13. **Assignability:** The provisions of this contract shall apply to and bind the successors and assigns of the parties hereto, but no assignment or transfer of this contract or any part or interest therein shall be valid until approved in writing by the parties.

14. **Notices:** Any notice, demand, or request authorized or required by this contract shall be deemed to have been given, on behalf of the Contractor, when mailed, postage prepaid, or delivered to the Central San Joaquin Water Conservation District, 311 East Main Street, Suite 202, Stockton, California , 95202, and on behalf of SEWD when mailed postage prepaid, or delivered to Stockton East Water District, 6767 East Main Street, Stockton, California, 95205. The designation of the addressee or the address may be changed by notice given in the same manner as provided in this article for other notices.

IN WITNESS WHEREOF, the parties hereto have executed this contract the day and year hereinabove written.

CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT

By: Grant Thompson

GRANT THOMPSON, President

STOCKTON EAST WATER DISTRICT

By: Jack Tone

JACK TONE

CONTRACT BETWEEN
CENTRAL SAN JOAQUIN WATER CONSERVATION DISTIRCT
AND STOCKTON EAST WATER DISTRICT

This Contract, made this 4th day of January, 2000, BETWEEN CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT (CSJWCD), a public agency of the State of California, duly organized, existing and acting pursuant to the laws thereof, with its primary place of business in Stockton, California, and the STOCKTON EAST WATER DISTRICT (SEWD), a public agency of the State of California, duly organized, existing and acting pursuant to the laws thereof, with its primary place of business in Stockton, California.

1. Recitals.

   a. CSJWCS has executed a Water Service Contract with the United States Bureau of Reclamation, providing for the delivery and purchase of Project water from the New Melones Unit of the Central Valley Project in the annual quantity of 80,000 acre feet.

   b. SEWD has executed a Water Service Contract with the United States Bureau of Reclamation, providing for the delivery and purchase of water from the New Melones Unit of the Central Valley Project in the annual quantity of 75,000 acre feet.

   c. SEWD has constructed a water conveyance system to bring water from the New Melones Project into its service area.

   d. CSJWCD and SEWD have executed a Contract dated January 30, 1990, wherein SEWD has agreed to transport and convey water from the New Melones Project for CSJWCD to its service area (1990 Wheeling Agreement).

   e. SEWD has constructed a Lower Farmington Canal for the conveyance of water from Farmington Dam into its service area.

   f. CSJWCD and SEWD have executed a second Contract dated August 29, 1991, providing for the conveyance of CSJWCD water from the New Melones Project through the Lower Farmington Canal and into the Duck Creek system of its service area (1991 Wheeling Agreement).

   g. CSJWCD and SEWD wish to cooperate and utilize facilities to the joint and mutual benefit of each of the parties for the conveyance of water from the New Melones Project.

NOW, THEREFORE, in consideration of the covenants herein contained, it is agreed as follows:

2. Definitions. When used herein, unless otherwise distinctly expressed or manifestly incompatible with the intent hereof, the term:

   a. "Internal Distribution Facility" shall mean such channel clearing, crossing, piping, check dams and other improvements within the CSJWCD service area owned, operated and maintained by CSJWCD.

   b. "Lower Farmington Canal" shall mean a canal approximately 9.6 miles in length from Farmington Dam to the SEWD service area owned, operated and maintained by SEWD.

   c. "CJWCD Project Water" shall mean irrigation water available to CSJWCD pursuant to the terms of its water service contract with the United States for delivery of water from the New Melones Unit of the Central Valley Project.

   d. "SEWD Project Water" shall mean irrigation water available to SEWD pursuant to the terms of its water service contract with the United States for delivery of water from the New Melones Unit of the Central Valley Project.

   e. "Year" shall mean the calendar year.

3. Purpose of Agreement. The purpose and intent of this Contract is to specify the terms on which CSJWCD and SEWD will convey water belonging to the other party through their respective facilities to the service area of the other party. The parties intend that each party will convey a like amount of water for the other party, that actions will be taken by the parties to insure equivalency and that the parties will try to maximize the use of surface water within their respective service areas.

4. Covenant of Cooperation. The parties to this Contract do hereby covenant to cooperate in good faith each to enable the other to take delivery of water in conformance with this Contract.

5. Use of Lower Farmington Canal. SEWD agrees to utilize the Lower Farmington Canal for conveyance of quantities of CSJWCD Project Water into the service area of CSJWCD below the turnout for Duck Creek, in accordance with the terms and conditions of this Contract.

6. Use of Internal Distribution Facilities. CSJWCD agrees to utilize its Internal Distribution Facilities for conveyance of quantities of SEWD Project Water into the service area of SEWD in accordance with the terms and conditions of this Contract.

7. Quantities of Water. The quantity of wheeling capacity available in each facility for the use of the other party shall be that capacity not being utilized at the time of conveyance by the party owning the facility, up to the design capacity of the facility.

8. Prior Approval. The quantity and timing of water to be conveyed pursuant to this Contract each Year shall be approved in writing by the conveying party. The party requesting conveyance shall submit requests in writing to the other party by February 1 of each Year, and written response shall be provided by March 1 of each Year. Such written request shall include the total quantity of water to be conveyed, location and purpose of use, facilities to be utilized, plans and specifications for any proposed facilities to be constructed, proposed method of measurement, and duration of conveyance.

9. Improvements. Upon receipt of written approval of the terms of the conveyance, as set forth above, the party to convey water shall construct any and all improvements determined to be needed by the approving party in accordance with the terms of approval.

10. Record Keeping and Accounting. Each party shall keep records of the quantities of water wheeled through its facilities for the other party hereto pursuant to this Contract. At the end of each Year, the parties shall prepare an accounting of the quantities of water conveyed ("Annual Accounting"). It is the intent of the parties that the quantities of water conveyed by each party be approximately equivalent.

11. Compensation. This is intended to be a trade of equivalent value for the conveyance of like quantities of water by each party. As a result, no monetary compensation is intended to be paid from either party to the other for the rights, duties, and obligations expressed herein, provided the Annual Accounting indicates the original intention of this agreement is being achieved.

12. Term. This Contract shall be effective upon the first date written and shall remain in effect until terminated by either party as provided herein. Either party may terminate by providing notice to the other in writing by December 31 of any year.

13. Indemnity. Each party to this Contract shall indemnify, defend, and hold harmless the other party, its employees, agents, and officers, and their respective successors and assigns, from and against any and all claims, demands, losses, liability, or damages, including, but not limited to, attorneys' fees and court costs incurred in defending against the same, for personal injury, death, or property damage arising from, or in any way connected with, that party's operation of its water conveyance system as provided in this Contract.

14. Attorneys Fees and Costs. In any case where court action is instituted by a party against another party to interpret this Contract, the rights of the respective parties hereunder, or to enforce a right or obligation created by this Contract, the prevailing party or parties shall receive costs and reasonable attorneys fees to be set by the court.

15. Assignability. The provisions of this Contract shall apply to and bind the successors and assigns of the parties hereto, but no assignment or transfer of this Contract or any part or interest therein shall be valid until approved in writing by the parties.

16. Notices. Any notice, demand, or request authorized or required by this Contract shall be deemed to have been given, on behalf of the party, when mailed, postage prepaid, or delivered to a party at the following address:

Central San Joaquin Water Conservation District
311 East Main Street, Suite 202
Stockton, California 95202

Stockton East Water District
Post Office Box 5157
6767 East Main Street
Stockton, California 95205

The designation of the addressee or the address may be changed by notice given in the same manner as provided in this article for other notices.

17. Continued Validity. Nothing in this Contract shall alter the terms of the 1990 Wheeling Agreement or the 1991 Wheeling Agreement.

CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT

By _____

Attest: _____

STOCKTON EAST WATER DISTRICT

By _____

Attest: _____
Kevin M. Kauffman, Secretary

Attachment N Sample Owner's Water Use Statement

Stockton East Water District
6767 East Main Street Stockton, CA 95215
P.O. Box 5157 Stockton, CA 95205
(209) 948-0333 Phone
(209) 948-0423 Fax
Website: www.sewd.net
E-mail: sewd@sewd.net

Account No.	[redacted]
Parcel No.	[redacted]
Gross Acres	**42.7**
Net Ag Acres	**40.7**
Domestic Units	**0**
Pump ID	
Meter Size "	
Water Right	
Site:	[redacted]

OWNER'S WATER USE STATEMENT FOR CALENDAR YEAR 2024

[redacted]
17172 E MILTON RD
LINDEN CA 95236

Name Change:_____

Mailing Address Change:_____

_____

INSTRUCTIONS:

Complete this owner's water use statement and return it to the district no later than **January 15, 2025**

The information you provide will be used to determine your water bill.

A 5% penalty will be added to your water bill if this statement is not returned to the district by such date.

To complete this form, please choose one of the options below by checking the appropriate box, then follow that option's instructions:

☐ **Property has been sold.** Date of sale _____.

☐ **Option 1 - NO CHANGE - The information in Tables 1 and/or 2 reflects current agricultural irrigation and/or non-ag use.**
Check the box, sign and date at the bottom of this form, and return to the district.

☐ **Option 2 - CHANGE - I have corrected the information in Tables 1 and/or 2.**
Check the box, write the corrections on Tables 1 and/or 2, sign and date at the bottom of this form, and return to the district.

TABLE 1 - Statement of Agricultural Irrigation Use

Crop	Method of Irrigation	Acres Fallow/ Not Irrigated	Acres on Well Water	Acres on Surface Water	Statement Audit For District Use	
Walnuts	Sprinklers		40.70			

Water Meter Readings:

Ending _____

Beginning _____

Usage _____

No. of Users _____

TABLE 2 - Statement of Non-Agricultural Irrigation Use

Single Family Residences	0	
Multiple Family Residences		
Commercial Buildings		

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

Sign	Print Name	Date	Telephone Number
	[redacted]		[redacted]

Email Address

Attachment O Calaveras River Habitat Conservation Plan Project, Central California Traction Railroad Crossing Project Preliminary Design and Plan

Attachment O.1. Central California Traction Company Railroad Bridge Preliminary Design

STATE OF CALIFORNIA

CALIFORNIA NATURAL RESOURCES AGENCY

DEPARTMENT OF WATER RESOURCES

DIVISION OF INTEGRATED REGIONAL WATER MANAGEMENT

ENVIRONMENTAL RESTORATION AND ENHANCEMENT BRANCH

FISH PASSAGE IMPROVEMENT PROGRAM

CENTRAL CALIFORNIA TRACTION COMPANY RAILROAD BRIDGE PRELIMINARY DESIGN



PROJECT LOCATION



PROJECT VICINITY

SHEET INDEX

C-1	COVER SHEET
C-2	GENERAL PLAN
C-3	EXISTING CHANNEL BASE MAP AND PROFILE
C-4	PROPOSED CHANNEL PLAN AND PROFILE
C-5	FLUME AND NOTCH PLAN
C-6	FLUME AND NOTCH PROFILES
C-7	TYPICAL SECTIONS A & B
C-8	TYPICAL SECTIONS C, D, & E
C-9	FLOOD ELEVATIONS AT FLUMES AND WING WALLS

ABBREVIATIONS

D	DEEP
DIA	DIAMETER
ESM	ENGINEERED STREAMBED MATERIAL
L	LONG
MAX	MAXIMUM
MIN	MINIMUM
TWG	THALWEG
W	WIDE

NOTES

ALL ELEVATIONS ARE NGVD 29 AND WERE DERIVED FROM CITY OF STOCKTON BENCHMARK 90.

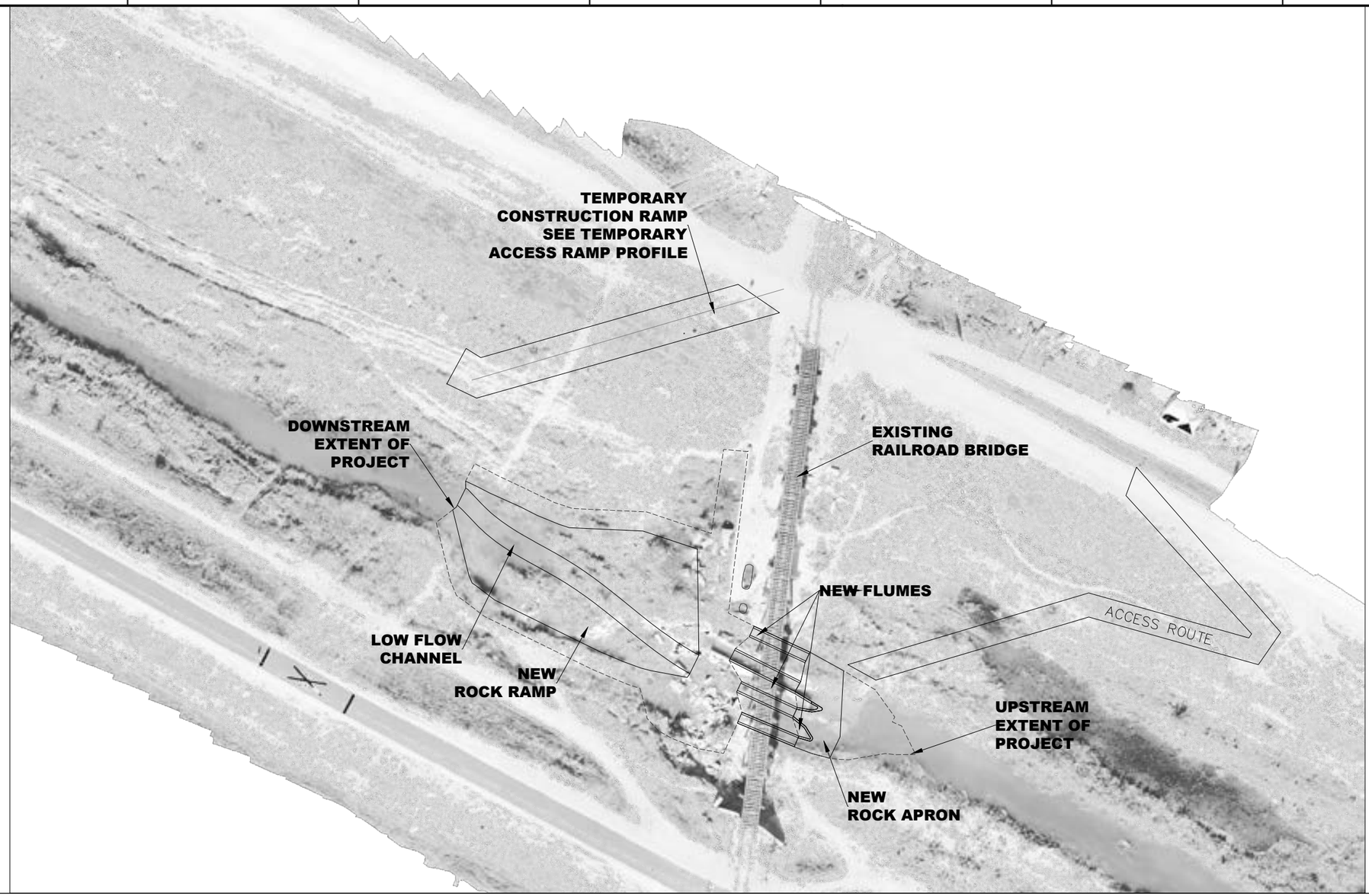
PREPARED BY:
CALIFORNIA DEPARTMENT OF WATER RESOURCES,
FISH PASSAGE IMPROVEMENT PROGRAM

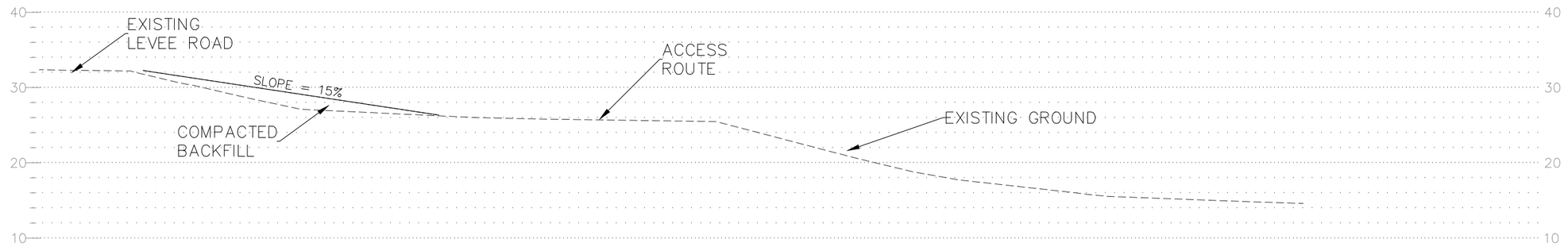
IN PARTNERSHIP WITH:
STOCKTON EAST WATER DISTRICT

LEGEND

EXISTING GROUND CONTOURS

PROPOSED GRADE CONTOURS





TEMPORARY ACCESS RAMP PROFILE

STATE OF CALIFORNIA
CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
DIVISION OF ENGINEERING
STATE WATER FACILITIES

REV.	DESCRIPTION	SUB.	APP.

REGISTERED PROFESSIONAL ENGINEER / ENGINEER-PROFESSIONALIAN No. ##### Exp. _____ CIVIL STATE OF CALIFORNIA REG. STAMP

DESIGNED: XXXXXXXXXXXX REG. C.E No. XXXXX	CHECKED: XXXXXXXXXXXX REG. C.E No. XXXXX
DRAWN: XXXXXXXXXXXX REG. C.E No. XXXXX	REVIEWED: XXXXXXXXXXXX REG. C.E No. XXXXX

SUBMITTED:
XXXXXXXXXXXX
REG. C.E No. XXXXX

APPROVAL RECOMMENDED: DATE:

CHIEF, CIVIL ENGR. SEC., REG. M.E. No. XXXXX

APPROVED: DATE:

CHIEF,XXXX.ENGR. BRANCH. REG. XX. No. XXXXX

THINK SAFETY -
ACT SAFELY

DA DEPT OF WATER RESOURCES
ENVIRO RESTORATION AND ENHANCEMENT

CALAVERAS RIVER
CENTRAL CA TRACTION RAILROAD

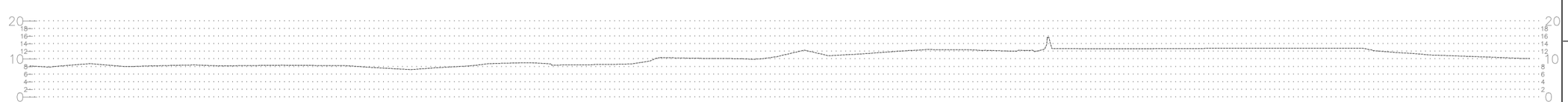
FISH PASSAGE IMPROVEMENT

GENERAL PLAN

SPEC. NO.	SHEET NO.	REVISION	DRAWING NO.
			C - 2

V#= $$$$$PRFNAME$$$$$$$$$
$$$DATE$$$$$





EXISTING_THAWEG

STATE OF CALIFORNIA
CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
DIVISION OF ENGINEERING
STATE WATER FACILITIES

REV.	DESCRIPTION	SUB.	APP.

REG. STAMP

DESIGNED: XXXXXXXXXXXX REG. C.E No. XXXXX	CHECKED: XXXXXXXXXXXX REG. C.E No. XXXXX
DRAWN: XXXXXXXXXXXX REG. C.E No. XXXXX	REVIEWED: XXXXXXXXXXXX REG. C.E No. XXXXX
SUBMITTED: XXXXXXXXXXXX REG. C.E No. XXXXX	

APPROVAL RECOMMENDED: DATE:

CHIEF, CIVIL ENGR. SEC., REG. M.E. No. XXXXX

APPROVED: DATE:

CHIEF,XXXX.ENGR. BRANCH. REG. XX. No. XXXXX

THINK SAFETY -

ACT SAFELY

DA DEPT OF WATER RESOURCES
ENVIRO RESTORATION AND ENHANCEMENT

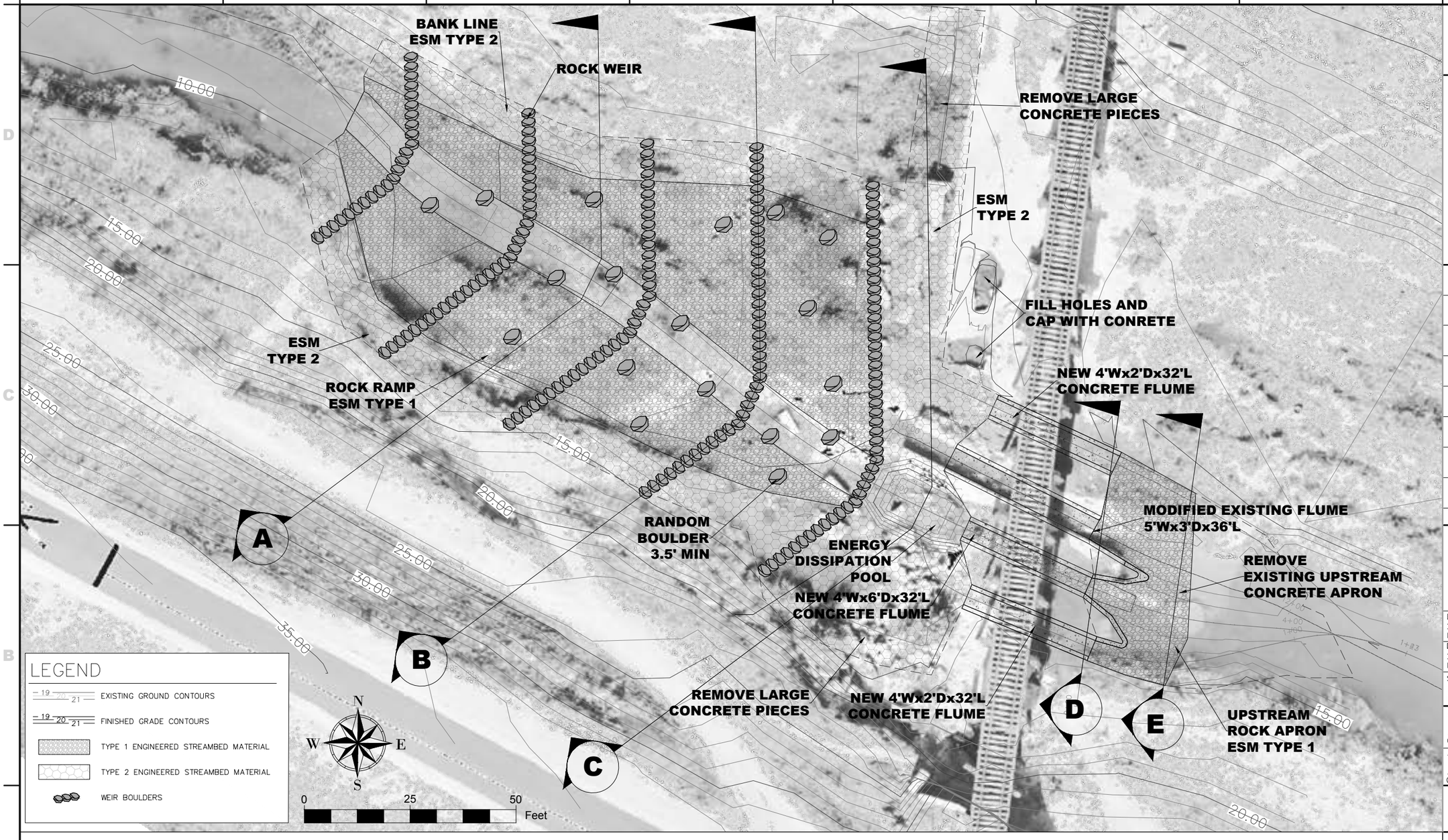
CALAVERAS RIVER
CENTRAL CA TRACTION RAILROAD

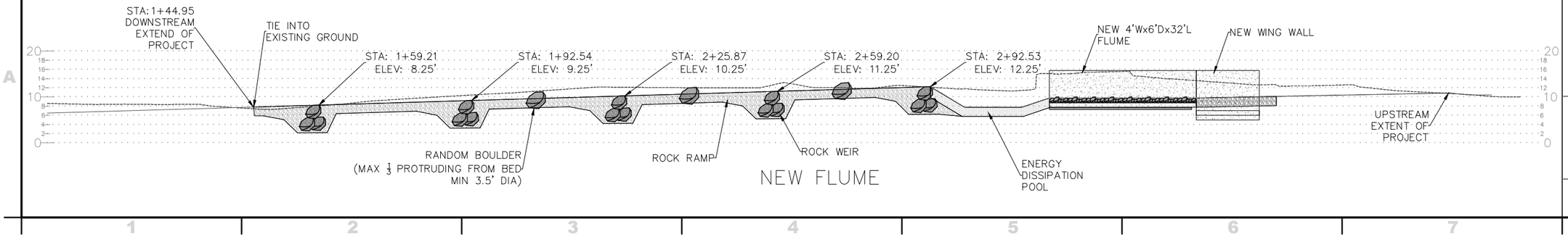
FISH PASSAGE IMPROVEMENT

EXISTING CHANNEL BASE MAP AND PROFILE

SPEC. NO.	SHEET NO.	REVISION	DRAWING NO.
			C - 3

VP: $$$$$PREVNAME$$$$$$$$$
$$$DATE$$$$$





STATE OF CALIFORNIA
CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
DIVISION OF ENGINEERING
STATE WATER FACILITIES

REV.	DESCRIPTION	SUB.	APP.

REGISTERED PROFESSIONAL ENGINEER — No. ##### — Exp. _____ — CIVIL — STATE OF CALIFORNIA — REG. STAMP

DESIGNED: XXXXXXXXXXXX REG. C.E No. XXXXX	CHECKED: XXXXXXXXXXXX REG. C.E No. XXXXX
DRAWN: XXXXXXXXXXXX REG. C.E No. XXXXX	REVIEWED: XXXXXXXXXXXX REG. C.E No. XXXXX
SUBMITTED: XXXXXXXXXXXX REG. C.E No. XXXXX	

APPROVAL RECOMMENDED: DATE:

CHIEF, CIVIL ENGR. SEC., REG. M.E. No. XXXXX

APPROVED: DATE:

CHIEF,XXXX.ENGR. BRANCH. REG. XX. No. XXXXX

THINK SAFETY -

ACT SAFELY

DA DEPT OF WATER RESOURCES
ENVIRO RESTORATION AND ENHANCEMENT

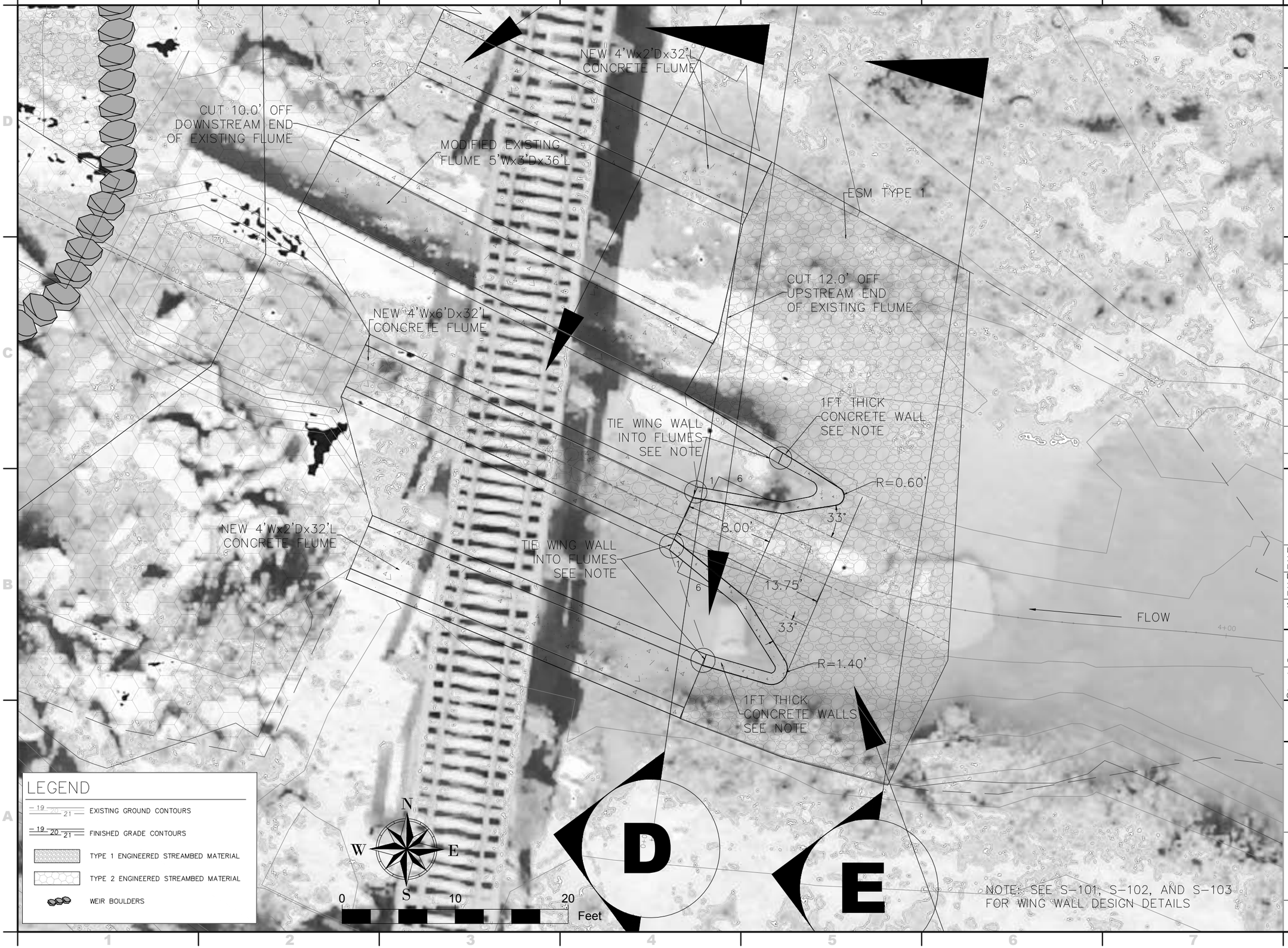
CALAVERAS RIVER
CENTRAL CA TRACTION RAILROAD

FISH PASSAGE IMPROVEMENT

PROPOSED CHANNEL PLAN
AND PROFILE

SPEC. NO.	SHEET NO.	REVISION	DRAWING NO.
			C - 4

V= $$$$$PRFNAME$$$$$$$$
$$$DATE$$$$



STATE OF CALIFORNIA
CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
DIVISION OF ENGINEERING
STATE WATER FACILITIES

REV.	DESCRIPTION	SUB.	APP.

REGISTERED PROFESSIONAL ENGINEER — No. ##### — Exp. _____ — CIVIL — STATE OF CALIFORNIA
REG. STAMP

DESIGNED:	CHECKED:
XXXXXXXXXXXX	XXXXXXXXXXXX
REG. C.E No. XXXXX	REG. C.E No. XXXXX
DRAWN:	REVIEWED:
XXXXXXXXXXXX	XXXXXXXXXXXX
REG. C.E No. XXXXX	REG. C.E No. XXXXX

SUBMITTED:
XXXXXXXXXXXX
REG. C.E No. XXXXX

APPROVAL RECOMMENDED: DATE:

CHIEF, CIVIL ENGR. SEC., REG. M.E. No. XXXXX

APPROVED: DATE:

CHIEF,XXXX.ENGR. BRANCH. REG. XX. No. XXXXX

THINK SAFETY -
ACT SAFELY

DA DEPT OF WATER RESOURCES
ENVIRO RESTORATION AND ENHANCEMENT

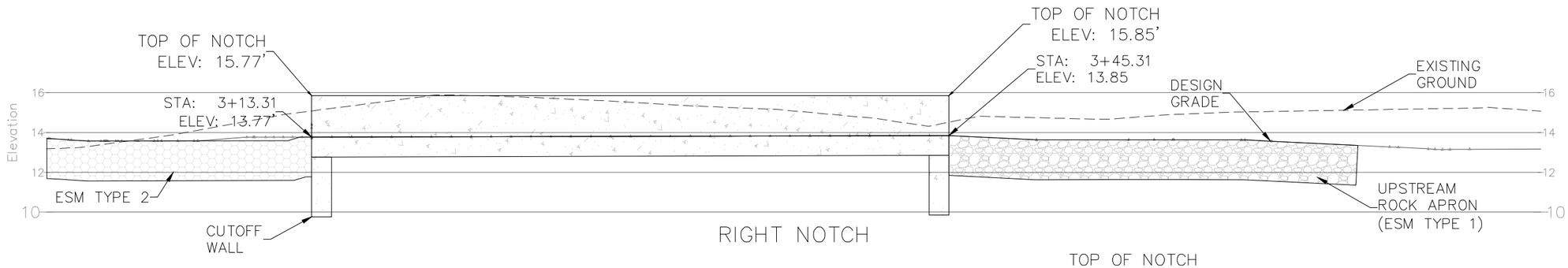
CALAVERAS RIVER
CENTRAL CA TRACTION RAILROAD

FISH PASSAGE IMPROVEMENT

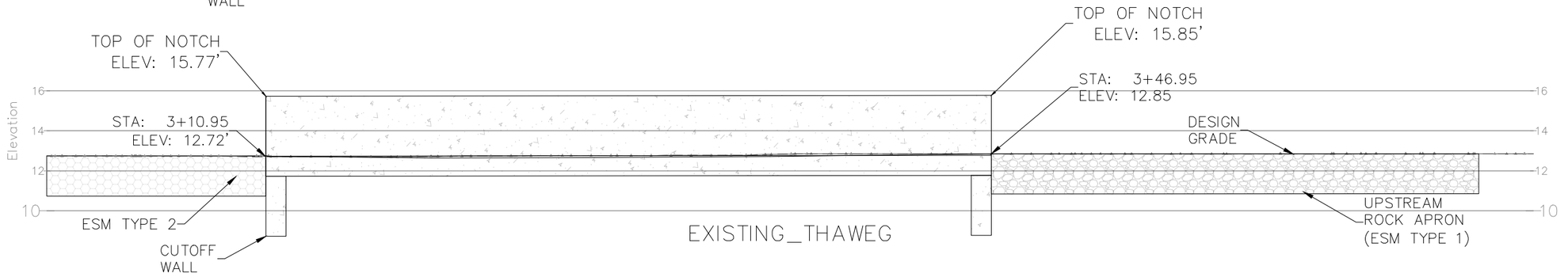
FLUME AND NOTCH PLAN

SPEC. NO.	SHEET NO.	REVISION	DRAWING NO.
			C - 5

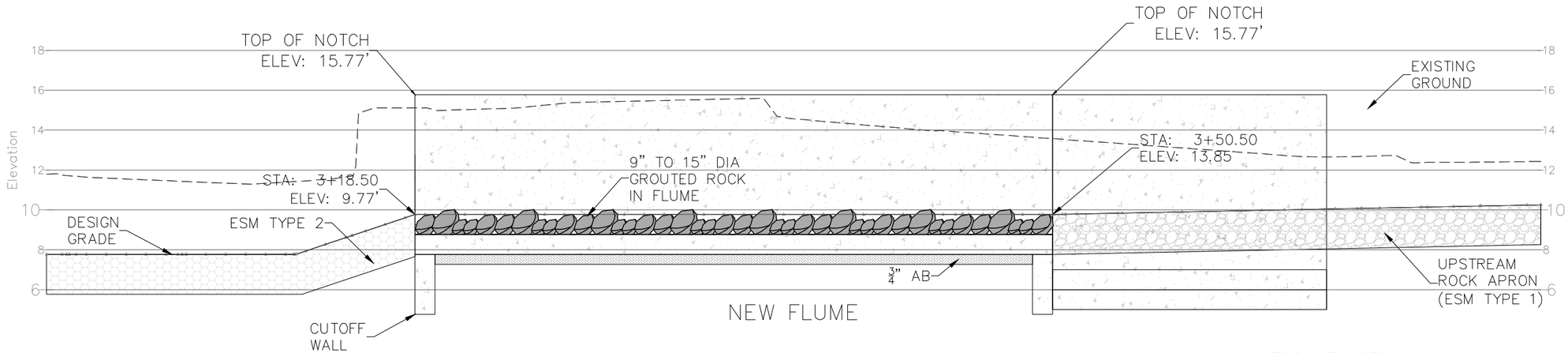
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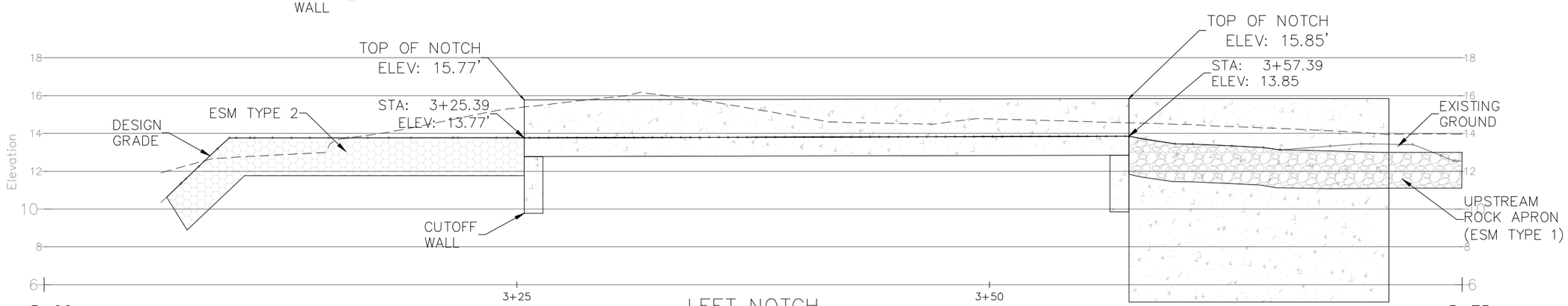
RIGHT NOTCH



EXISTING_THAWEG



NEW FLUME



LEFT NOTCH

STATE OF CALIFORNIA
CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
DIVISION OF ENGINEERING
STATE WATER FACILITIES

REV.	DESCRIPTION	SUB	APP.

REGISTERED PROFESSIONAL ENGINEER No. ##### Exp. _____ CIVIL STATE OF CAL. SIGNATURE REG. STAMP

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APPROVAL RECOMMENDED: DATE:

CHIEF, CIVIL ENGR. SEC., REG. M.E. No. XXXXX

APPROVED: DATE:

CHIEF,XXXX.ENGR. BRANCH. REG. XX. No. XXXXX

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ENVIRO RESTORATION AND ENHANCEMENT

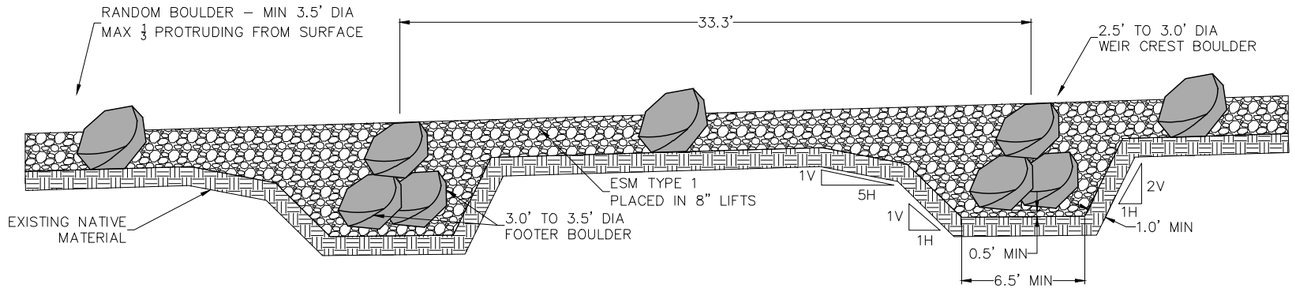
CALAVERAS RIVER
CENTRAL CA TRACTION RAILROAD

FISH PASSAGE IMPROVEMENT

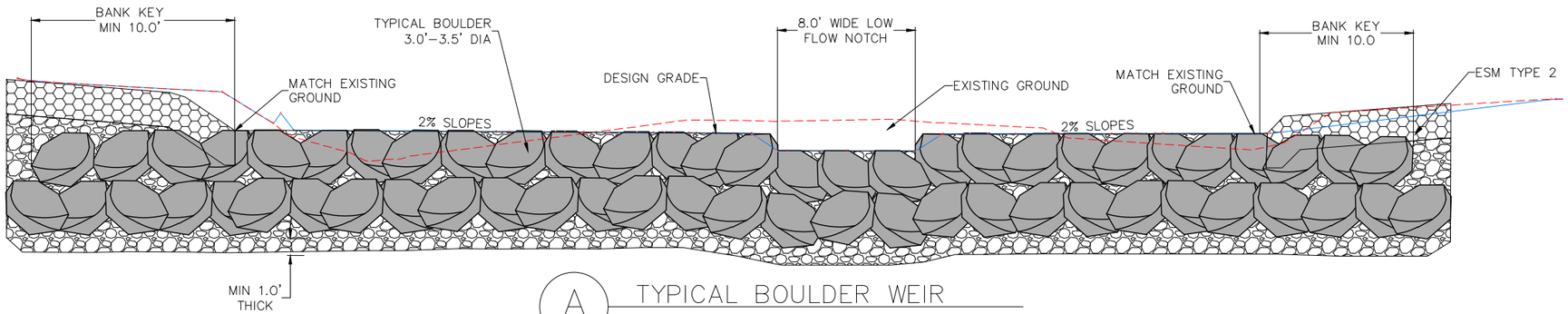
FLUME AND
AND NOTCH PROFILES

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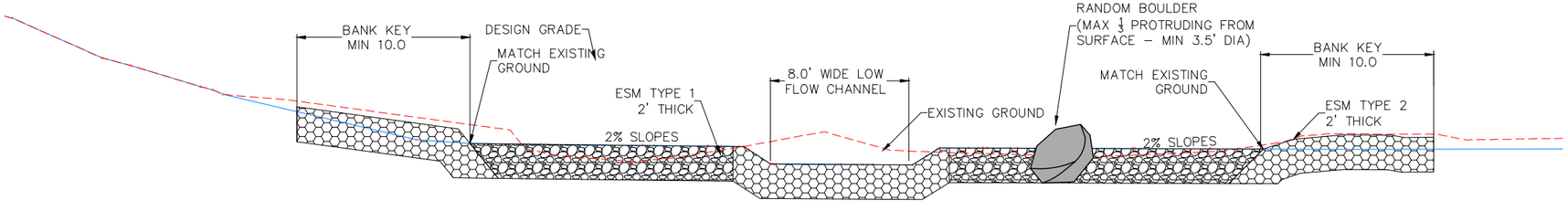
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CHANNEL PROFILE DETAIL



A TYPICAL BOULDER WEIR



B TYPICAL ROCK RAMP

TYPE 1 ESM GRADATION	
15%	LIGHT RIPRAP
25%	5" X 12" RIPRAP
20%	2" X 4" COBBLE
35%	1.5" AGGREGATE
5%	NATIVE MATERIAL (FINES)

TYPE 2 ESM GRADATION	
10%	1/4 TON RIPRAP
10%	LIGHT RIPRAP
25%	5" X 12" RIPRAP
50%	2" X 4" COBBLE
30%	1.5" AGGREGATE
5%	NATIVE MATERIAL (FINES)

STATE OF CALIFORNIA
CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
DIVISION OF ENGINEERING
STATE WATER FACILITIES

REV.	DESCRIPTION	SUB.	APP.

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SUBMITTED:
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REG. C.E No. XXXXX

APPROVAL RECOMMENDED: DATE:

CHIEF, CIVIL ENGR. SEC., REG. M.E. No. XXXXX

APPROVED: DATE:

CHIEF,XXXX.ENGR. BRANCH. REG. XX. No. XXXXX

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ENVIRO RESTORATION AND ENHANCEMENT

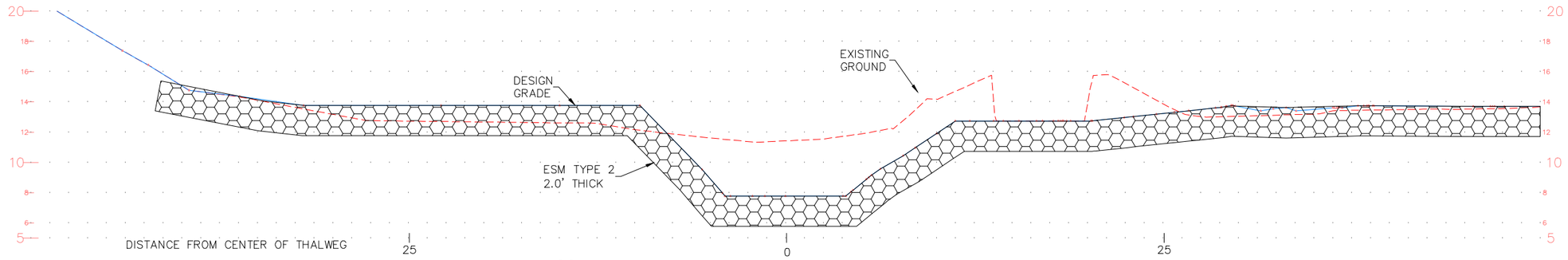
CALAVERAS RIVER
CENTRAL CA TRACTION RAILROAD

FISH PASSAGE IMPROVEMENT

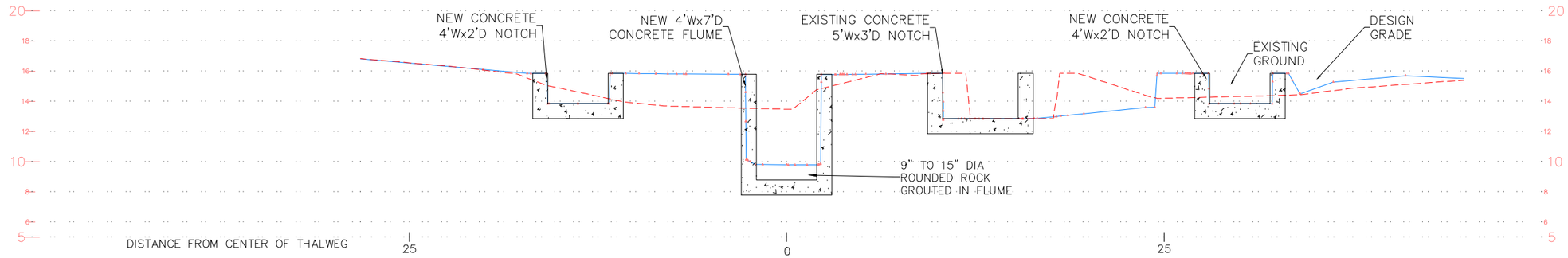
TYPICAL SECTIONS
A & B

SPEC. NO.	SHEET NO.	REVISION	DRAWING NO.
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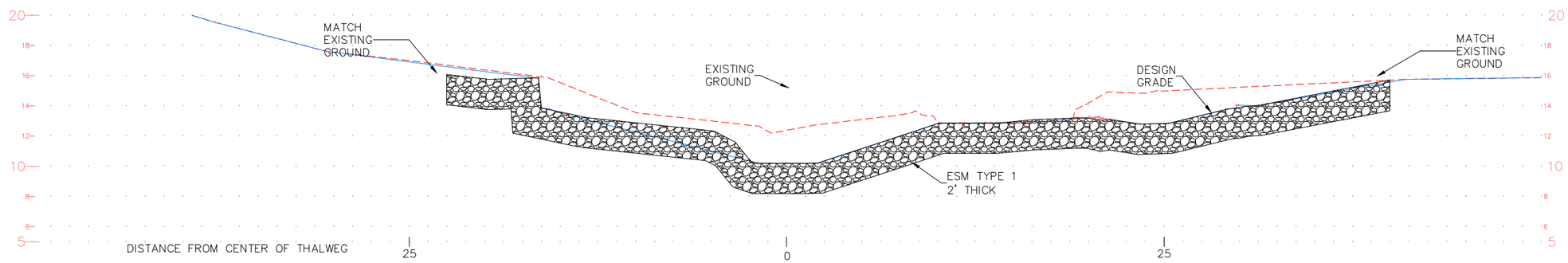
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C CROSS-SECTION AT POOL



D CROSS-SECTION AT FLUMES



E CROSS-SECATION AT ROCK APRON

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DEPARTMENT OF WATER RESOURCES
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STATE WATER FACILITIES

REV.	DESCRIPTION	SUB.	APP.

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APPROVED: DATE:

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ENVIRO RESTORATION AND ENHANCEMENT

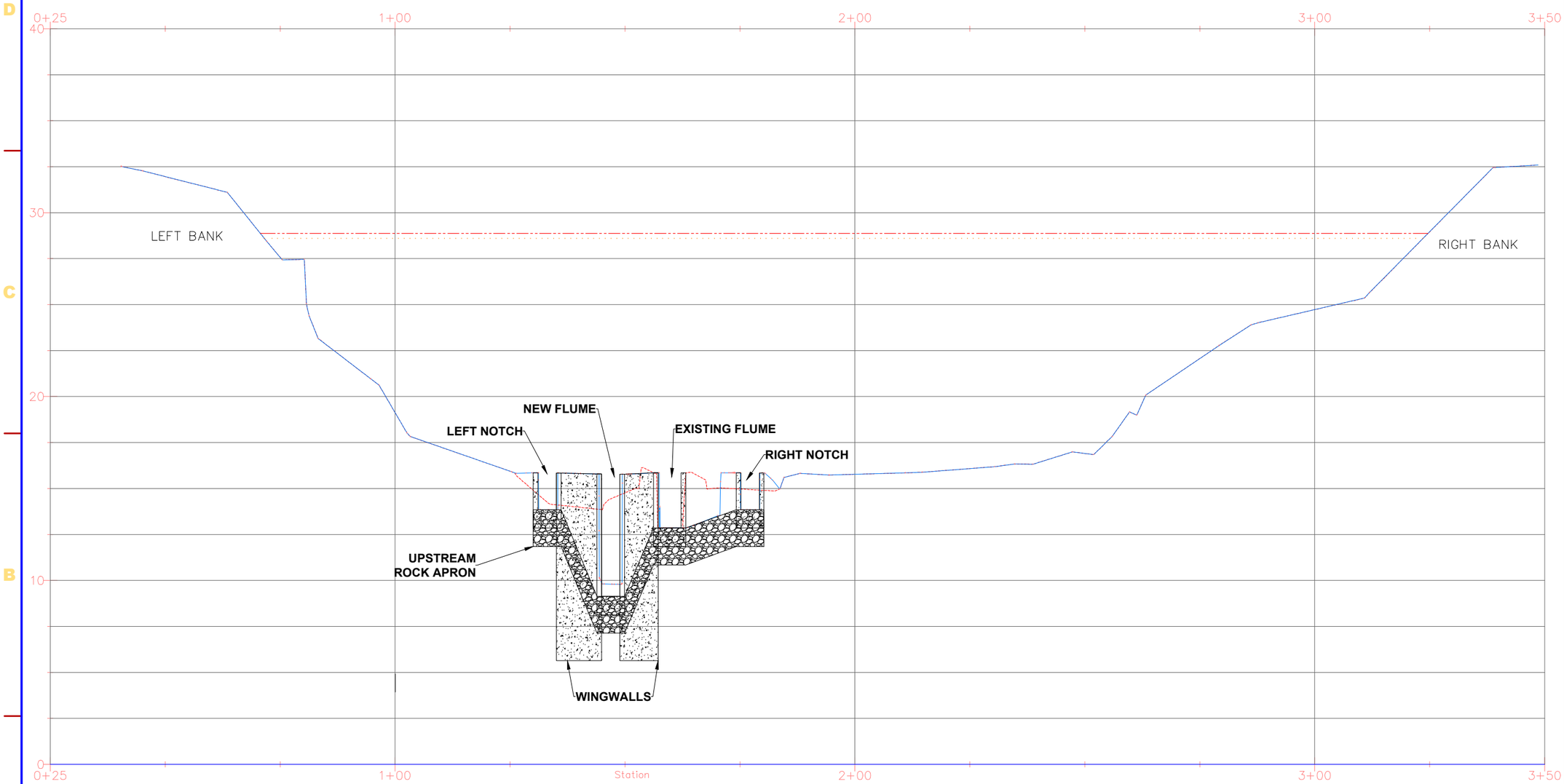
CALAVERAS RIVER
CENTRAL CA TRACTION RAILROAD

FISH PASSAGE IMPROVEMENT

SECTIONS C, D, & E AND PROFILE

SPEC. NO.	SHEET NO.	REVISION	DRAWING NO.
			C - 8

VI= $$$$$PRFNAME$$$$$$$$ $$$DATE$$$$



LEGEND:

---- 200-YEAR WATER SURFACE (28.87FT, NGVD 29)

..... 100-YEAR WATER SURFACE (28.58FT, NGVD 29)

—— DESIGN GRADE

---- EXISTING GROUND

CROSS SECTION AT WINGWALLS

STATE OF CALIFORNIA
CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
DIVISION OF ENGINEERING
STATE WATER FACILITIES

REV.	DESCRIPTION	SUB.	APP.

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DESIGNED: XXXXXXXXXXXX
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REG. C.E No. XXXXX

APPROVAL RECOMMENDED: DATE:

CHIEF, CIVIL ENGR. SEC., REG. M.E. No. XXXXX

APPROVED: DATE:

CHIEF,XXXX.ENGR. BRANCH. REG. XX. No. XXXXX

THINK SAFETY -
ACT SAFELY

DA DEPT OF WATER RESOURCES
ENVIRO RESTORATION AND ENHANCEMENT

CALAVERAS RIVER
CENTRAL CA TRACTION RAILROAD

FISH PASSAGE IMPROVEMENT

FLOOD ELEVATIONS AT
FLUMES AND WINGWALLS

SPEC. NO.	SHEET NO.	REVISION	DRAWING NO.
			C - 9

VI= $$$$$PRFNAME$$$$$$$$$
$$$DATE$$$$

Attachment O.2. CCTR Project Description

CCTR Project Description

The Lower Calaveras Anadromous Fish Barrier Improvement Project consists of replacing or retrofitting up to 37 instream structures identified as passage impediments to salmon and steelhead trout in the lower Calaveras River system below Bellota Weir. High quality spawning and rearing habitat has been identified above Bellota Weir and it is expected that salmonid population numbers will increase once passage opportunities are improved. Four barriers have been initially identified and assessed for removal/retrofit. The Budiselich Flashboard Dam site was remediated in September 2011 and the Caprini Low-Flow Crossing site was completed in October 2013. Designs for the next site, the Central California Traction Railroad Crossing are complete and construction is planned for August-October 2018. This project will provide improved upstream fish passage and access to over 17 miles of important migratory habitat.

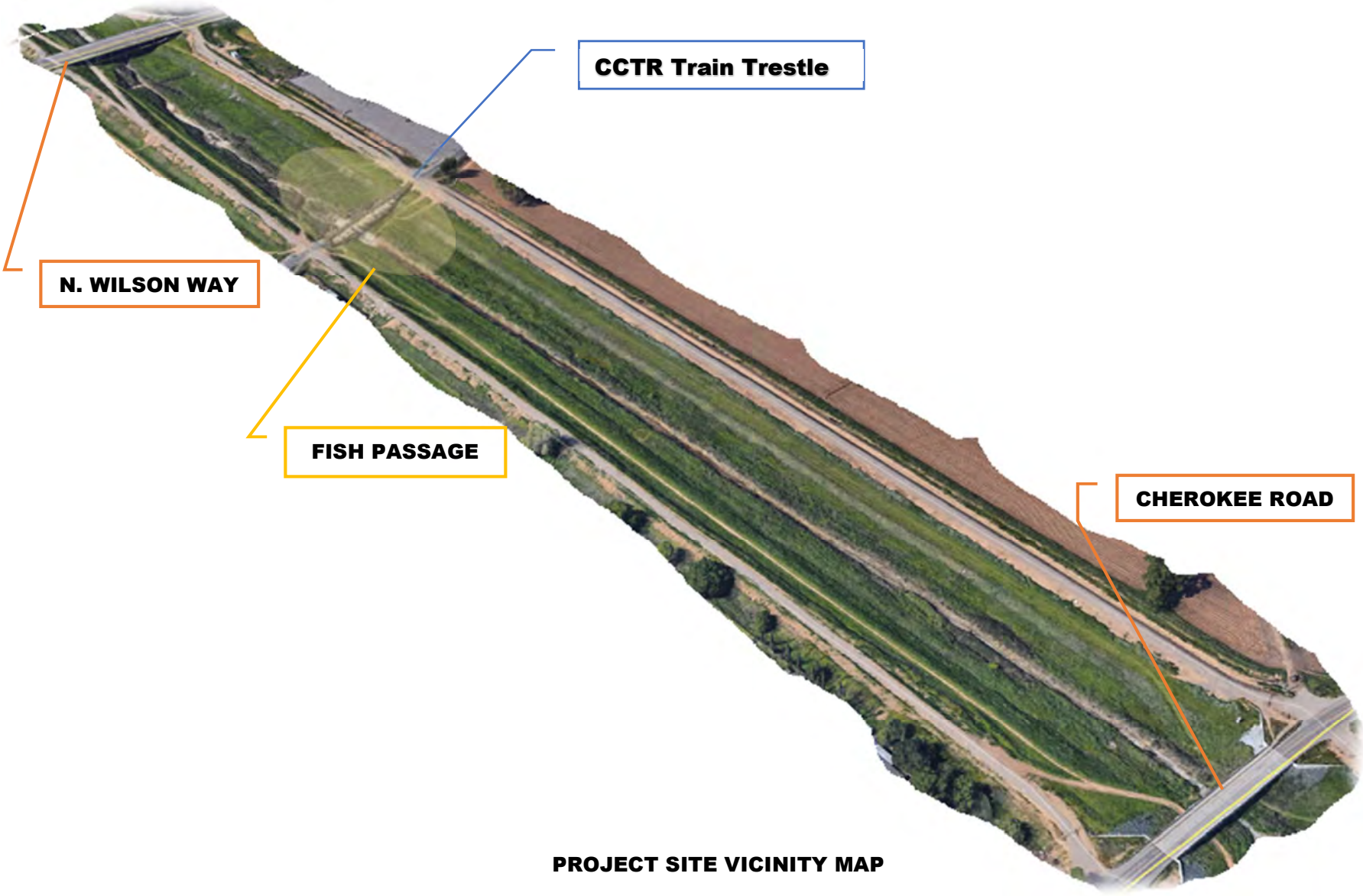
The Central California Traction Railroad Crossing Fish Passage Improvement Project will retrofit the existing concrete railroad bridge foundation located on APN 132-010-030 between North Wilson Way and Cherokee Road (Exhibits A through A-4) to provide improved salmon and steelhead passage on the Stockton Diverting Canal. The primary features of the project include the construction of a rock ramp (roughened channel) downstream of the bridge and the addition of second flume through the existing bridge foundation. These features will result in the crossing meeting fish passage criteria at all flows, reducing high water velocities and increasing water depths during lower flows.

The rock ramp will consist of Engineered Streambed Material (ESM), which will bury a series of five boulder weirs. The weirs are spaced 33 feet apart in the channel downstream of the crossing and will provide grade control for the ramp. The ramp will have a 3% downstream slope and contain an 8-foot-wide low-flow channel to provide at least one foot of water depth at flows above 35 cfs. The upper weir of the ramp will backwater an energy dissipation pool downstream of the flumes, which increases depths and lowers velocities through the flumes.

The new flume will be four feet wide and six feet deep, and will be installed in the bridge bay adjacent to and south of the existing flume between pillars 5 and 6 as shown in Exhibit A-3. The bottom of the new flume will be lined with 9" – 15" rock to increase boundary roughness and provide a lower velocity passage route. Thus, the invert of the new flume will be two feet below that of the existing flume, which will provide greater depth at lower flows. Two 2' deep notches will also be cut into the concrete bridge foundation in the bays on either side of the existing and new flume bays (between pillars 3 and 4 and pillars 6 and 7) to provide alternate migratory routes for those fish moving along the fringes of the channel. Concrete will be used to cover the areas disturbed by construction under the bridge, fill the holes in the existing downstream apron, and construct the upstream wing walls. Upstream of the flumes, ESM will be used as an apron, to stabilize the channel as water constricts to enter the flumes and notches.

Earthwork for the project involves the removal of approximately 2,200 yd^3 of native material and 500 yd^3 of broken concrete that was previously part of the erosion control effort for the bridge. As for fill, approximately 1,900 yd^3 of ESM will be brought in to form the rock ramp and streambanks. The ESM will consist of a mix of particles ranging from 2-foot boulders down to a small portion of sand and silt (used to decrease the porosity of the mix and help water flow above the surface of the ESM). The ESM is sized to remain stable at all flows. In total, the project will result in the net removal of 155 yd^3 of material from the channel.

Attachment O.3. Project Site Vicinity Map



PROJECT SITE VICINITY MAP



TRAIN TRESTLE SITE MAP
AND
CONSTRUCTION NEAR STEEL PILLAR SUPPORTS

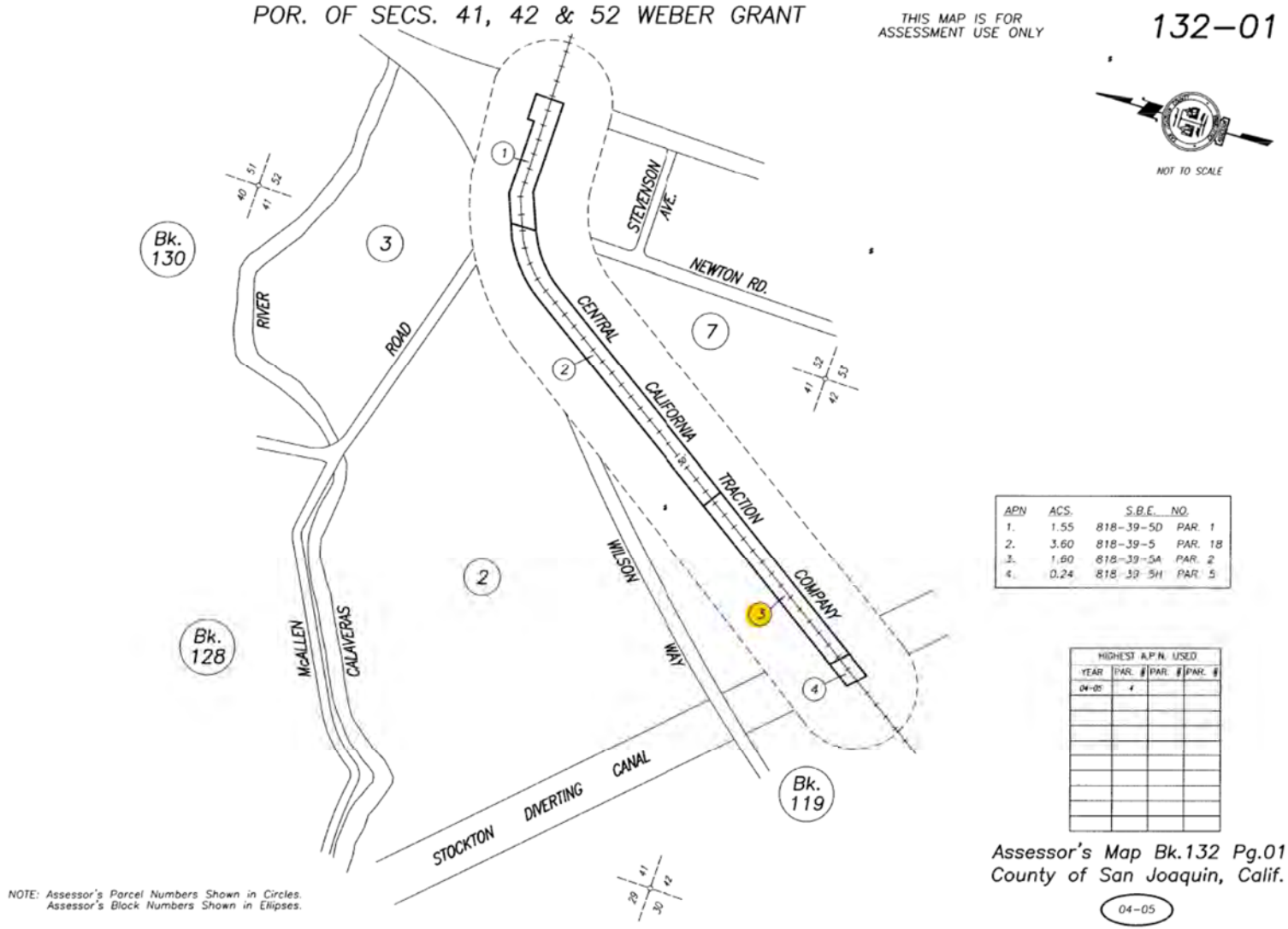


CENTRAL CALIFORNIA TRACTION COMPANY TRAIN TRESTLE APN: 132-010-030

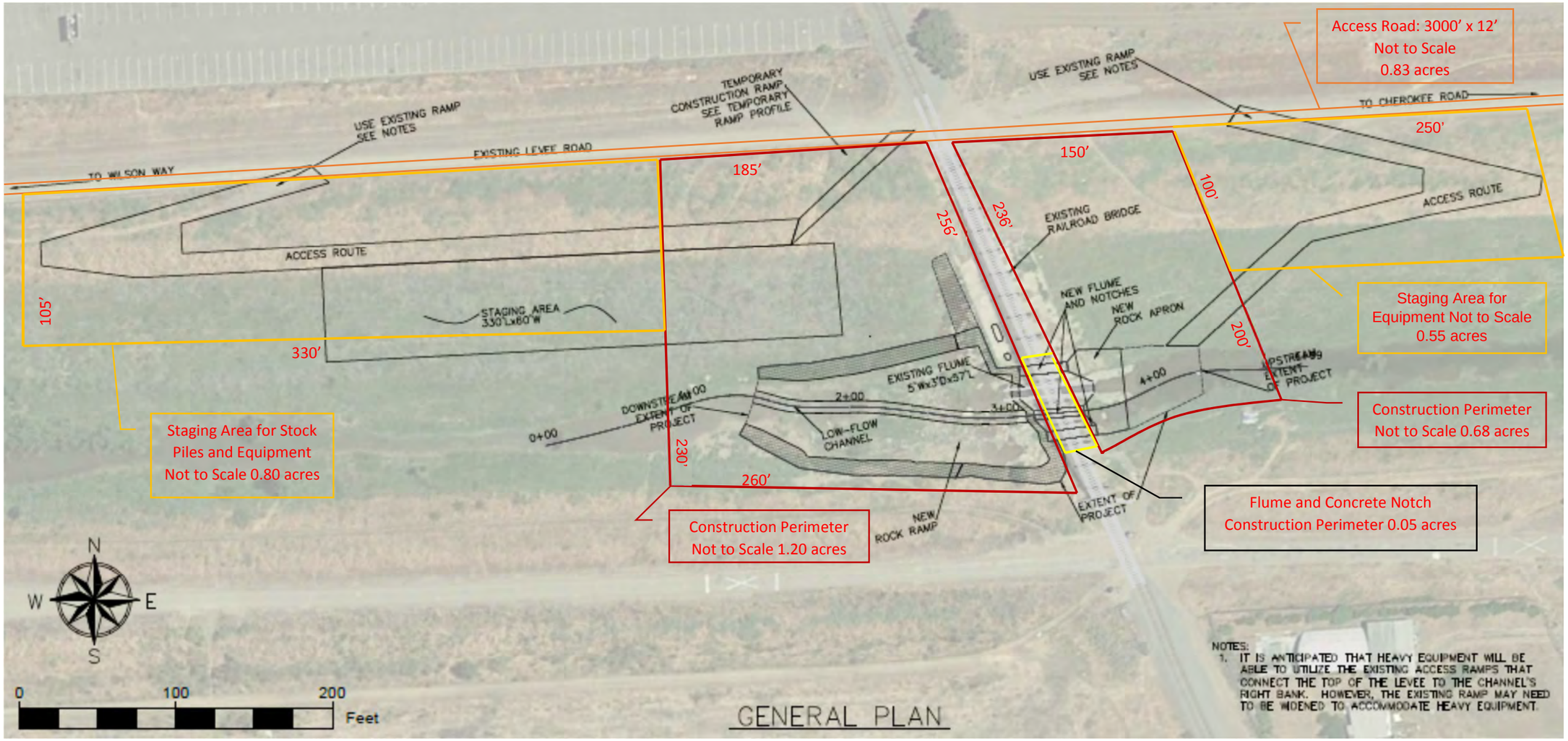
- Steel pillar supports are “One” thru “Nine” from left to right
- Construction will occur between steel pillars 3 thru 7



CONSTRUCTION BETWEEN STEEL PILLARS



ASSESSORS PARCEL MAP FOR TRAIN TRESTLE



Construction Site Disturbance Zones





















Attachment O.4. California Traction Railroad Wetland Determination Letter

FISHBIO
1617 S. Yosemite Avenue • Oakdale, CA 95361 • Phone: (209) 847-6300 • Fax: (209) 847-1925

Scot A. Moody
General Manager
Stockton East Water District
6767 E. Main Street
Stockton, CA 95215

July 31, 2018

RE: Potential impact to wetlands by the Central California Traction Railroad Crossing Fish Barrier Removal Project, Stockton Diverting Canal, San Joaquin County, CA.

Dear Mr. Moody:

Central California Traction Railroad Crossing (CCTRC) is located at RM 6.5 (latitude & longitude: 37°59'16.63"N; 121°15'51.85"W; USGS Quadrangle: Stockton West: Section, Township, Range: Sec.42,T.2 N.,R.6 E.) within Stockton Diverting Canal in the Calaveras River watershed, San Joaquin County, CA (Figures 1 and 2). The Mormon Slough/Stockton Diverting Canal is an actively maintained flood control channel that was modified in 1969 by the US Army Corps of Engineers to provide a 12,500 cfs flood control capacity.

The existing CCTRC structure has a footing and apron structure with 16 piers (Figures 3-6). The crest of the apron is about five (5) feet above the upstream channel invert and acts as a weir. A 6-foot-wide flume cuts the apron between the 5th and 6th pier to about three (3) feet deep, allowing lower flows to pass and reducing the amount of backwater in the upstream channel (Figure 4). Downstream of the apron, flow spreads out and runs over 55 ft of riprap before becoming channelized again (Figure 6). CCTRC presents a significant barrier to fish migration on the Stockton Diverting Canal because the crossing footings and apron form a weir across the channel with a steep drop (8 ft) over the downstream side and the flume does not reach passage depths and velocities until the channel flow reaches 1,900 cfs. The proposed project design for improving fish passage at the structure includes creating a ramped stream channel by installing six grade control structures (i.e., boulder weirs), similar to those constructed upstream at Budiselich Flashboard Dam in 2011. These passage improvements will concentrate flows into a low flow channel downstream of the weir meeting passage depth and velocity criteria to overcome the 8-foot-drop downstream of the apron/weir, and achieve acceptable velocities at the structure for fish passage.

Based on a general reconnaissance survey of the Project site and staging area conducted on April 20, 2012, aerial imagery from May 17, 2017 and a USFWS Wetlands Database query conducted on July 31, 2018 (Figure 7), there are no wetlands within the Project's Area of Potential Effects (APE). The Project temporary staging area is located off site on top of an adjacent levee road. The APE is comprised of a wide channel with steep, mostly degraded and irregularly contoured banks having little to no vegetative cover. Lack of vegetative cover is a result of flood control maintenance required by the San Joaquin County Flood Control Agency; whereby vegetation must be removed annually from the streambanks and channel bed. The channel substrate consists of compacted clay, sand, and silts with concrete or rock riprap. Neither the Project footprint nor staging area possesses the hydrology, soils, or flora to meet the definition of a wetland.

Sincerely,



Jim Inman
Wetland Delineator

Enclosures:
Figures depicting the Project Location (2)
Figures depicting Project site conditions (4)
USFWS National Wetlands Inventory (1)

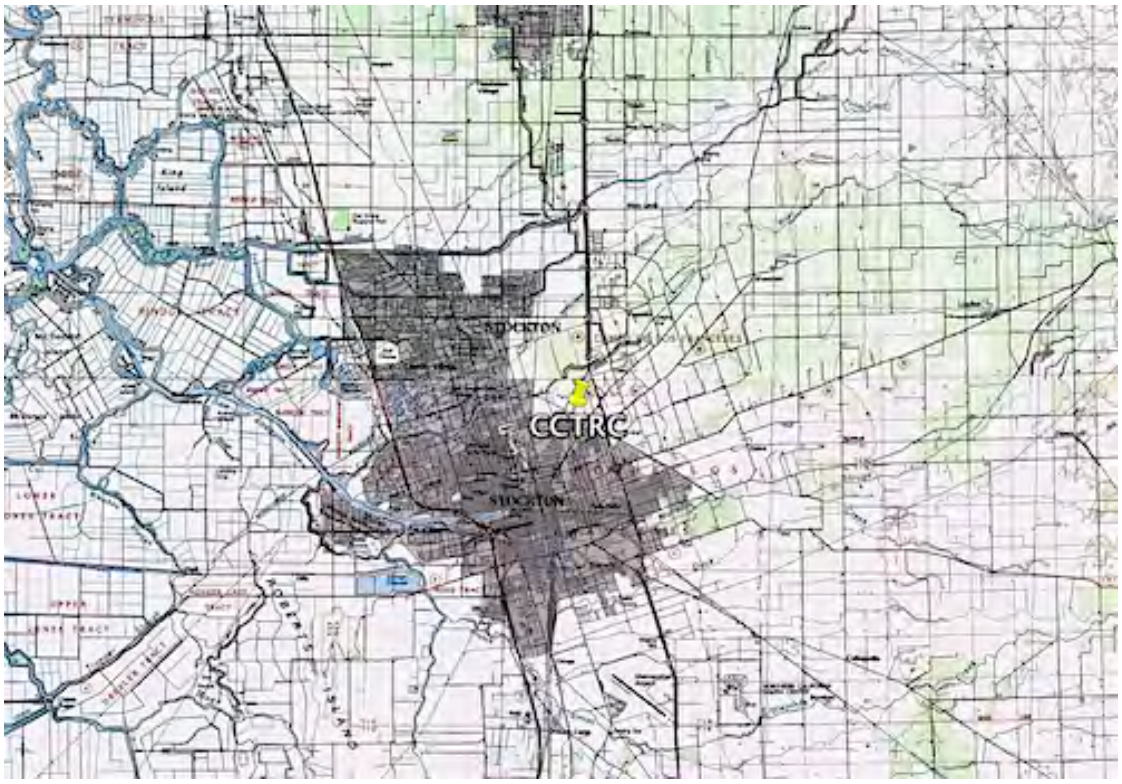


Figure 1. Location of the Central California Traction Railroad Crossing.

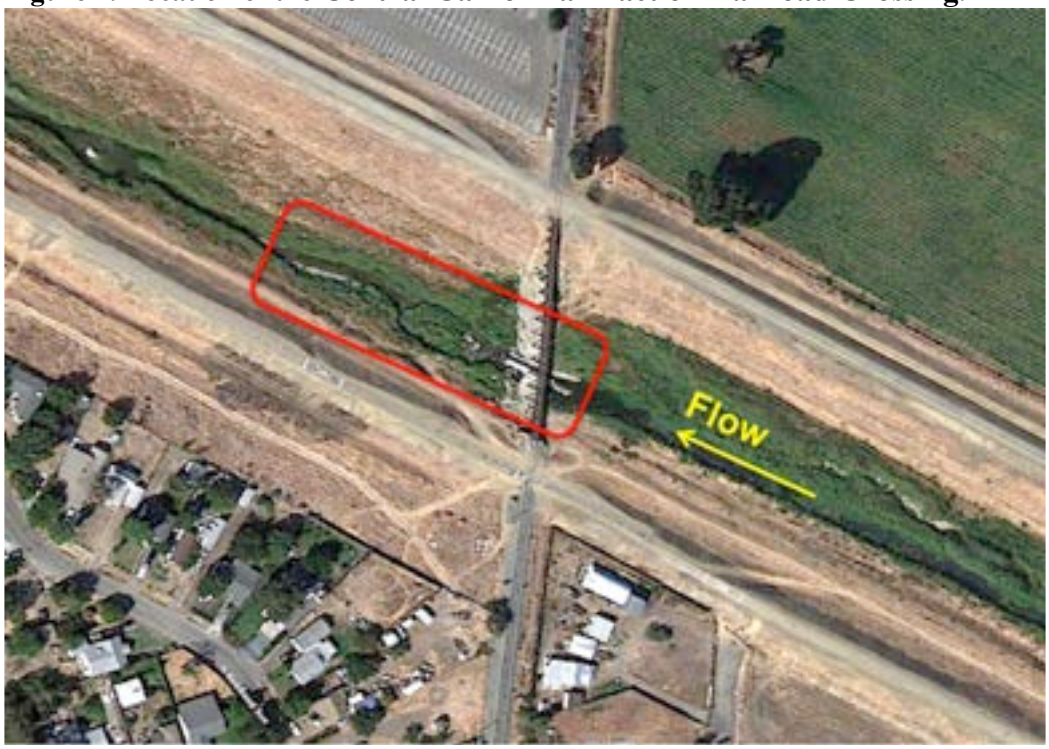


Photo 2. Aerial view of Central California Railroad Crossing with approximate Project footprint.



Photo 3. Upstream of Central California Railroad Crossing.



Photo 4. Downstream of Central California Railroad Crossing apron and flume.



Photo 5. Looking upstream from the Central California Railroad Crossing.



Photo 6. Looking downstream from the Central California Railroad Crossing.

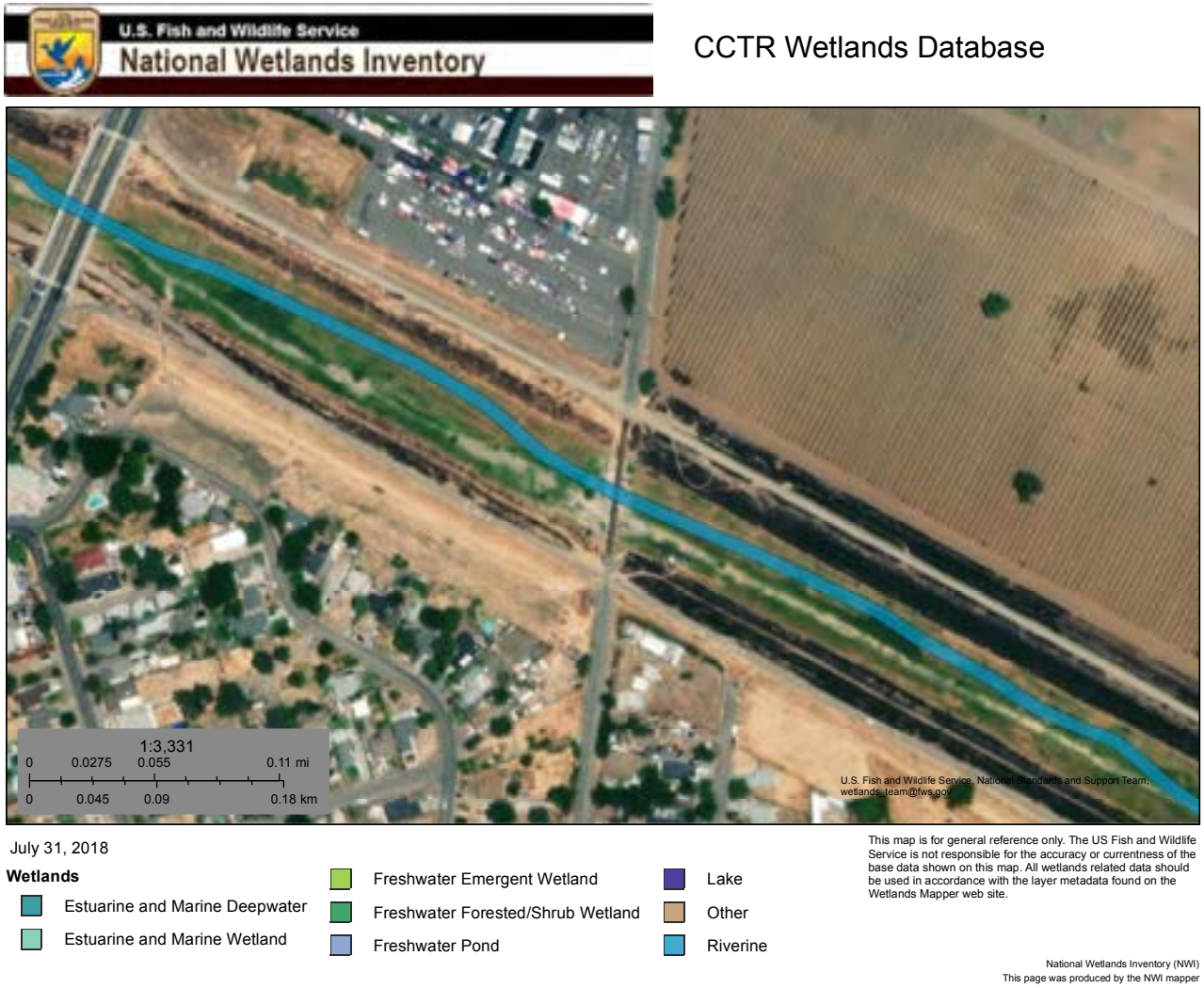


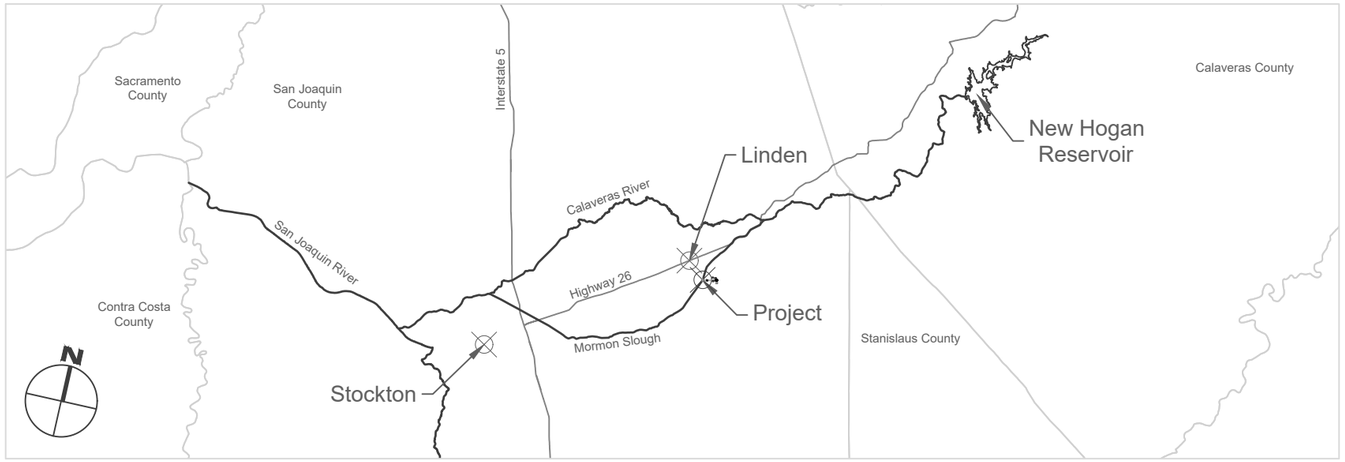
Figure 7. USFWS Wetlands Database query- vicinity of Central California Traction Railroad Crossing Fish Barrier Improvement Project, Stockton Diverting Canal, CA.

Attachment O.5. Hosie Low-Water Crossing Design

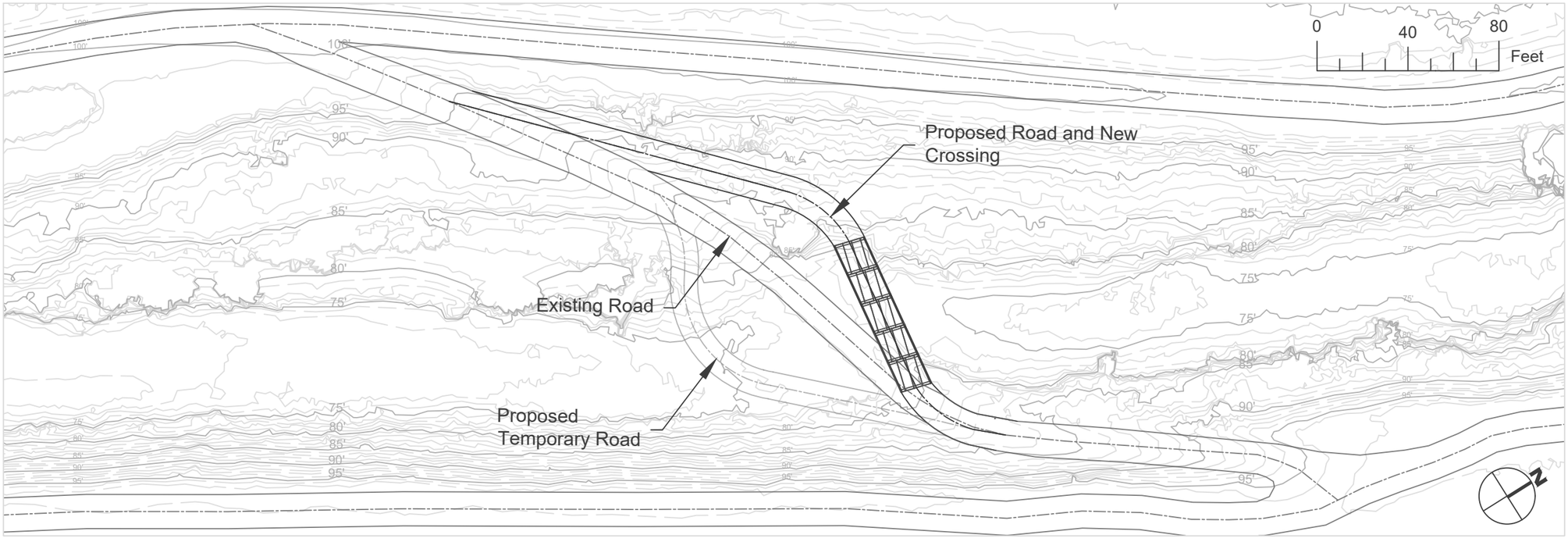
HOSIE LOW-WATER CROSSING REPLACEMENT PROJECT
FINAL DESIGN



Project Location



Project Overview



Notes:

Stockton East Water District (SEWD) will make the final decisions on construction of this crossing.

SEWD will be responsible for determining best methods for dewatering that will cause minimal impacts to fish and other aquatic species.

SEWD will be also be responsible for the temporary road crossing. The alignment shown below is a proposed temporary road crossing that requires minimal material for construction and stays out of the way of construction of the new crossing. However, this location and alignment is subject to change based on SEWD's knowledge of the site and landowner access usage. The temporary road should be located and constructed in what is determined to be a suitable area that will not present a risk to those crossing it.

REV:	DESCRIPTION:	BY:	DATE:
C	FINAL DESIGN	DE	7/3/2023
B	90% PRELIMINARY	AH/TK	6/30/2023
A	65% PRELIMINARY	AH/JK	11/25/2020

STATUS: FINAL DESIGN

REGISTERED PROFESSIONAL ENGINEER
DANIEL E. EVERSON
55528
CIVIL
STATE OF CALIFORNIA

CLIENT:

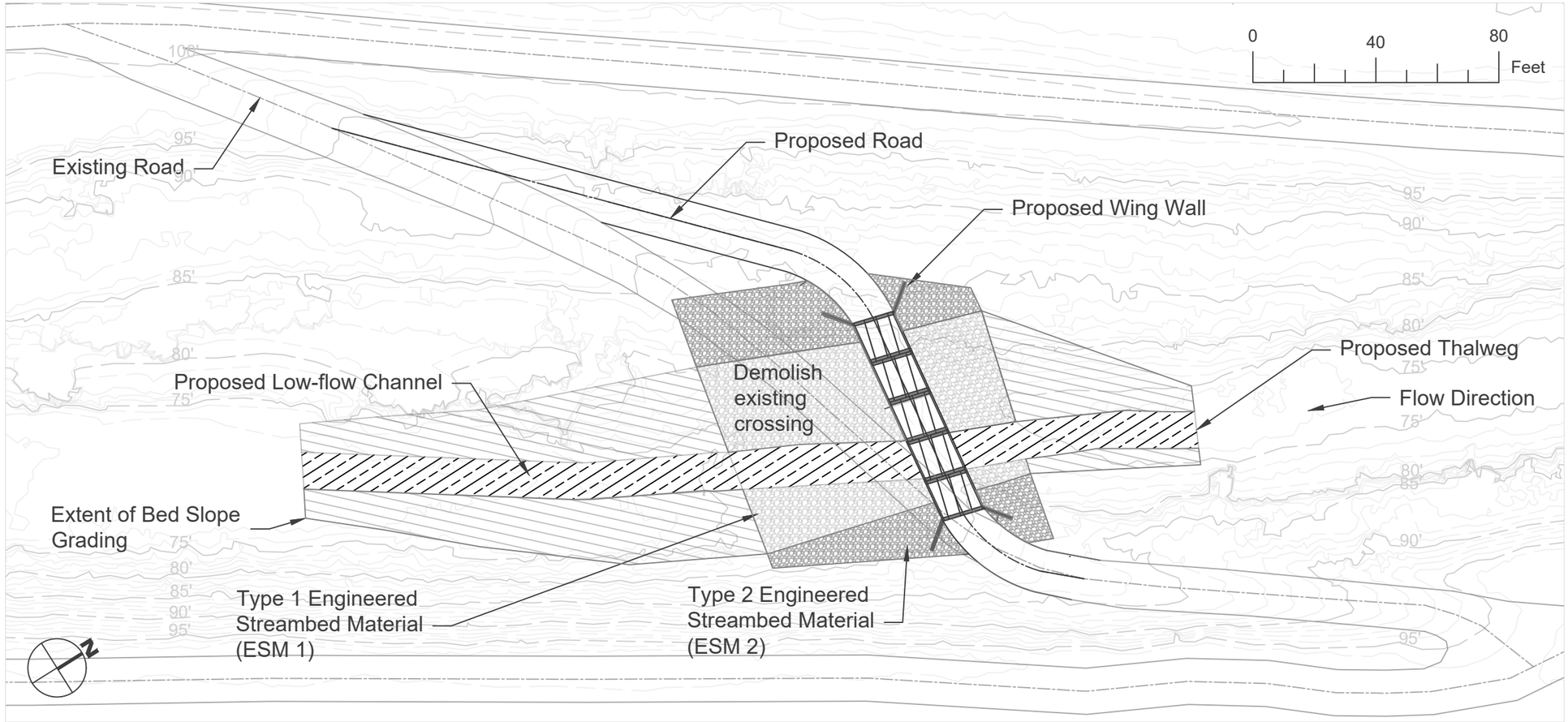
ENGINEER:

SITE: HOSIE LOW-WATER CROSSING

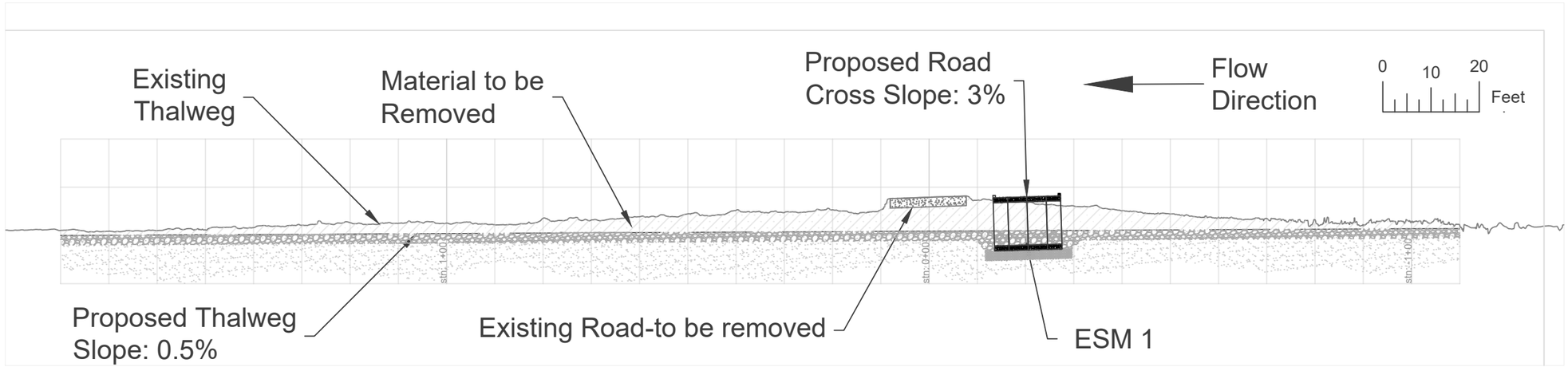
TITLE: CROSSING REPLACEMENT
BOX CULVERTS

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
Varies			
PROJECT NO:	SHEET NO:		REVISION:
1	1		1

Project Overview With Proposed Design Features



Thalweg Profile



Notes:

Type 1 and Type 2 Engineering streambed material (ESM) should be used. Suggested gradations of ESM mixes are listed in the tables below. Similar gradations were used in the Caprini low-water crossing downstream of the project area. This gradation may be adjusted based on available materials.

ESM placement should extend approximately 25 ft upstream of the crossing and approximately 50 ft downstream of the crossing. ESM should extend up the slope of the bank to an even height above the road crossing. Precise configuration of thalweg and ESM placement can also be adjusted in the field based on professional judgement of best placement strategies. Material should also be placed behind the wing walls so that there are no gaps behind the wing walls.

TYPE 1 ESM GRADATION	
20%	LIGHT RIPRAP
30%	5" X 12" RIPRAP
15%	2" X 4" COBBLE
30%	1.5" AGGREGATE
5%	NATIVE MATERIAL (FINES)

TYPE 2 ESM GRADATION	
20%	$\frac{1}{4}$ TON RIPRAP
15%	LIGHT RIPRAP
20%	5" X 12" RIPRAP
10%	2" X 4" COBBLE
30%	1.5" AGGREGATE
5%	NATIVE MATERIAL (FINES)

REV:	DESCRIPTION:	BY:	DATE:
C	FINAL DESIGN	DE	7/3/2023
B	90% PRELIMINARY	AH/TK	6/30/2023
A	65% PRELIMINARY	AH	11/25/2020

STATUS: FINAL DESIGN

REGISTERED PROFESSIONAL ENGINEER DANIEL E. EVANSON 55528 CIVIL STATE OF CALIFORNIA

CLIENT:

ENGINEER:

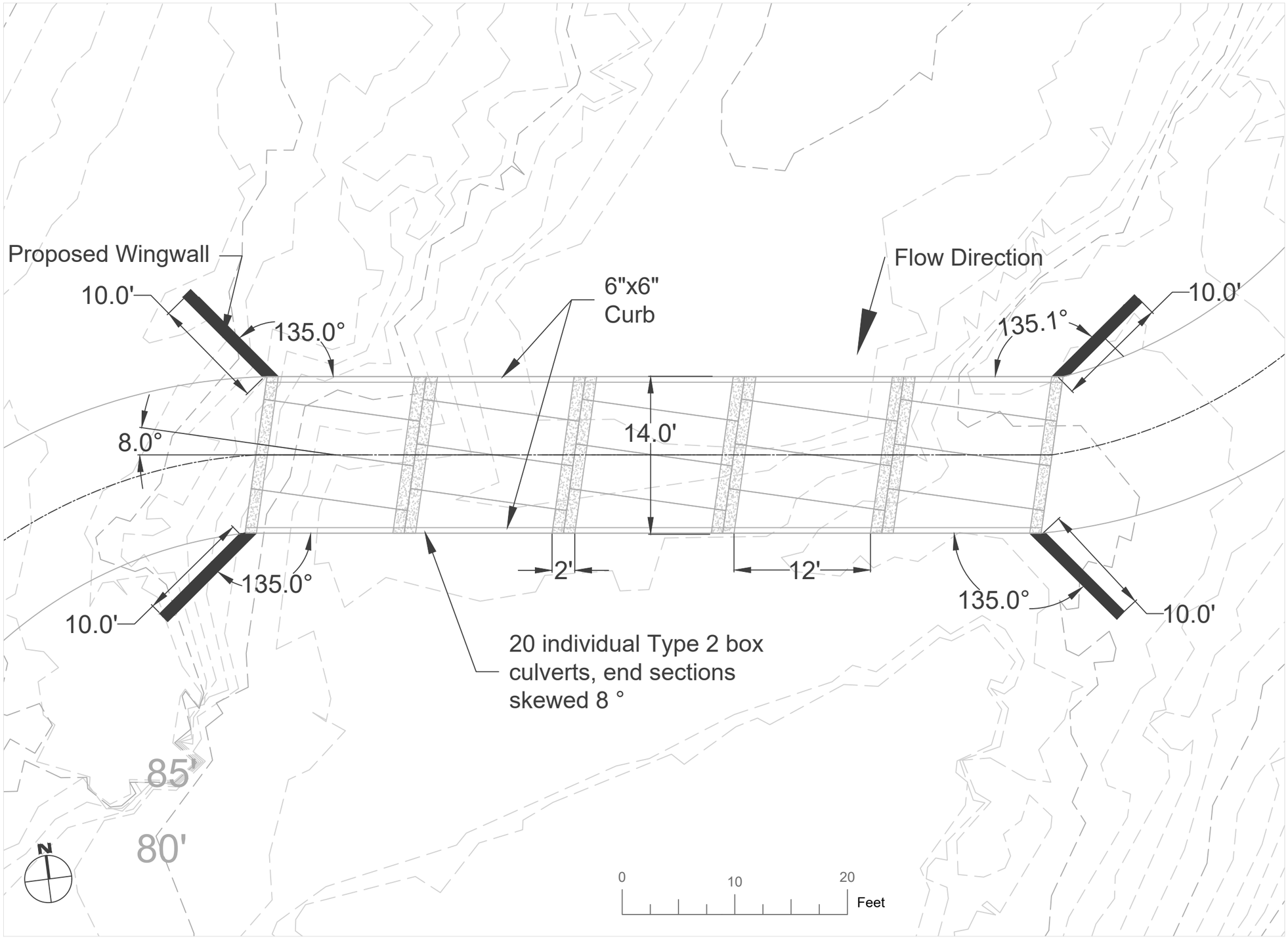
SITE: HOSIE LOW-WATER CROSSING

TITLE: CROSSING REPLACEMENT BOX CULVERTS

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
Varies			

PROJECT NO:	SHEET NO:	REVISION:
1	2	1

Low Flow Crossing Detail



Notes:

For previous work on the Caprini Low-Water Crossing, culverts were placed with a 3" gap in between each set. This may be challenging here due to the number of culverts being used. Placement should be decided upon based on professional judgement. Similarly, length and angle of wing walls should be adjusted based on professional judgment.

REV:	DESCRIPTION:	BY:	DATE:
C	FINAL DESIGN	DE	7/3/2023
B	90% PRELIMINARY	AH/TK	6/30/2023
A	65% PRELIMINARY	AH/JK	11/25/2020

STATUS: FINAL DESIGN

REGISTERED PROFESSIONAL ENGINEER
DANIEL E. EVERSON
55528
CIVIL
STATE OF CALIFORNIA

CLIENT:

ENGINEER:

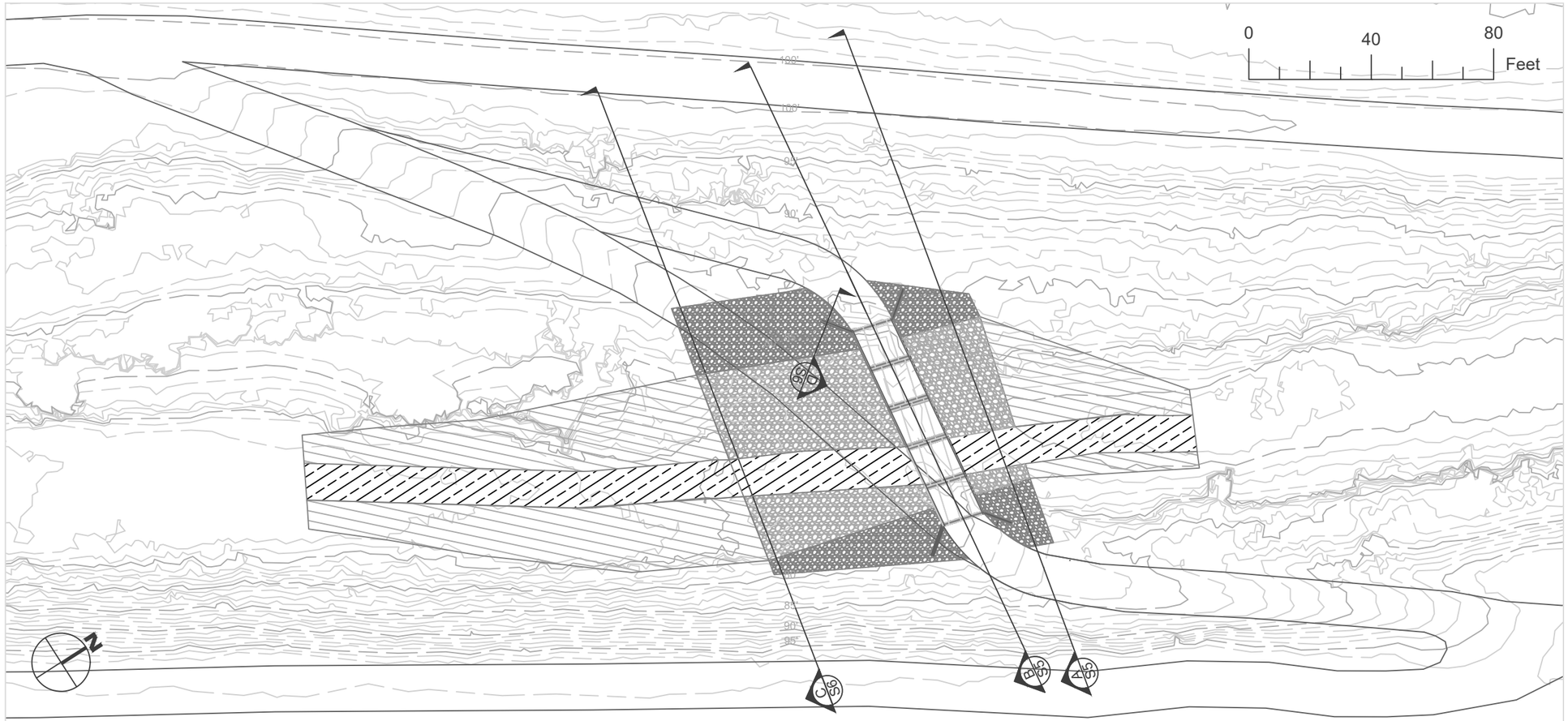
SITE: HOSIE LOW-WATER CROSSING

TITLE: CROSSING REPLACEMENT BOX CULVERTS

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
Varies			

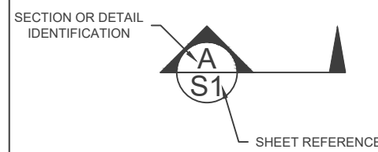
PROJECT NO:	SHEET NO:	REVISION:
1	3	1

Overview With Section Call Outs



Notes:

SECTION AND DETAIL CONVENTION



REV:	DESCRIPTION:	BY:	DATE:
C	FINAL DESIGN	DE	7/3/2023
B	90% PRELIMINARY	AH/TK	6/30/2023
A	65% PRELIMINARY	AH/JK	11/25/2020

STATUS: FINAL DESIGN

REGISTERED PROFESSIONAL ENGINEER
DANIEL E. EVANSON
55528
CIVIL
STATE OF CALIFORNIA

CLIENT:

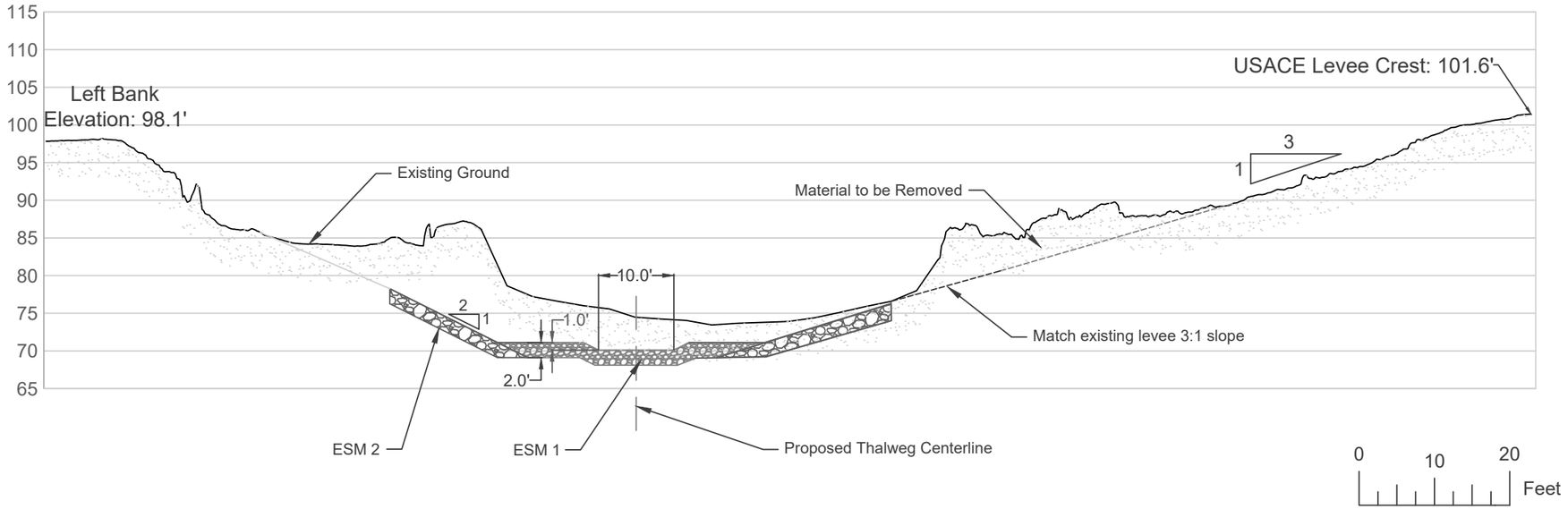
ENGINEER:

SITE: HOSIE LOW-WATER CROSSING

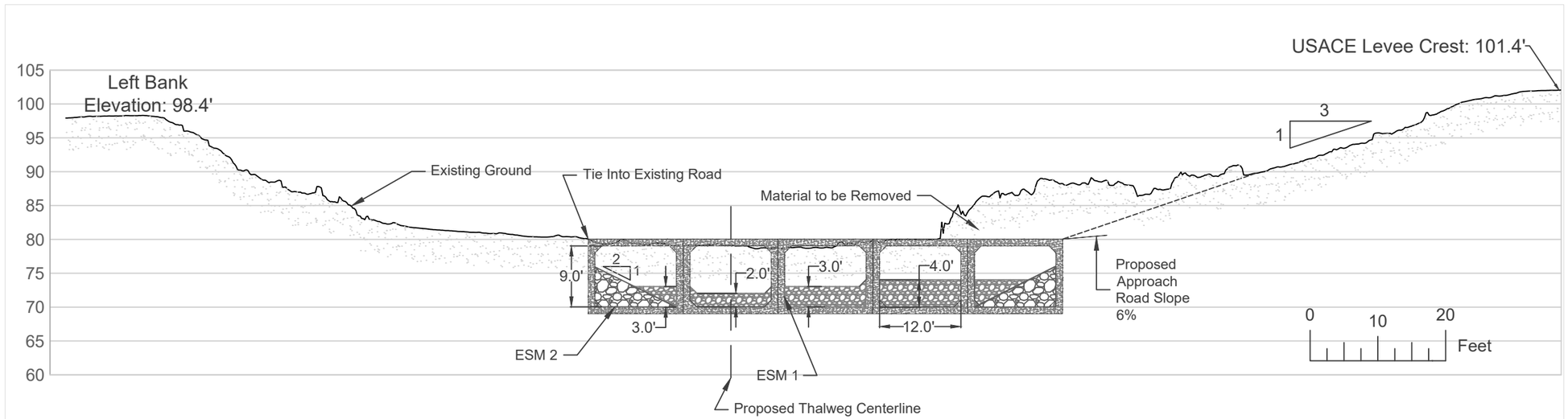
TITLE: CROSSING REPLACEMENT BOX CULVERTS

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
Varies			
PROJECT NO:	SHEET NO:		REVISION:
1	4		1

A Section A: Typical Upstream Section



B Section B: Proposed Box Culvert Crossing



Notes:

These represent typical sections. Current features and elevations should be verified in the field prior to construction.

REV:	DESCRIPTION:	BY:	DATE:
C	FINAL DESIGN	DE	7/3/2023
B	90% PRELIMINARY	AH/TK	6/30/2023
A	65% PRELIMINARY	AH/JK	11/25/2020

STATUS: FINAL DESIGN

REGISTERED PROFESSIONAL ENGINEER DANIEL E. EVERMAN 55528 CIVIL STATE OF CALIFORNIA

CLIENT:

ENGINEER:

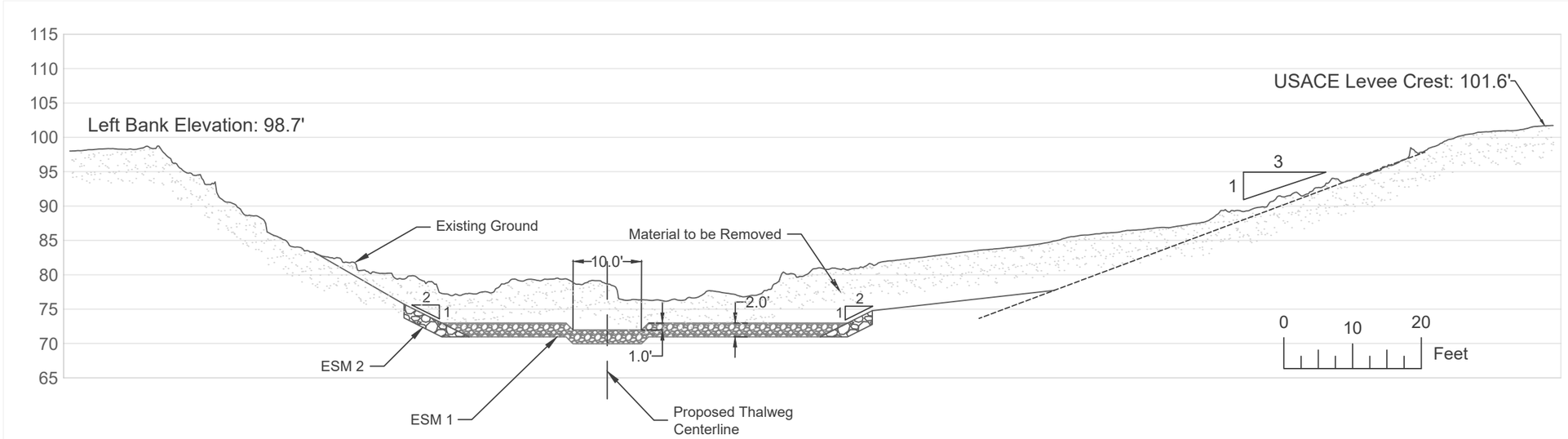
SITE: HOSIE LOW-WATER CROSSING

TITLE: CROSSING REPLACEMENT BOX CULVERTS

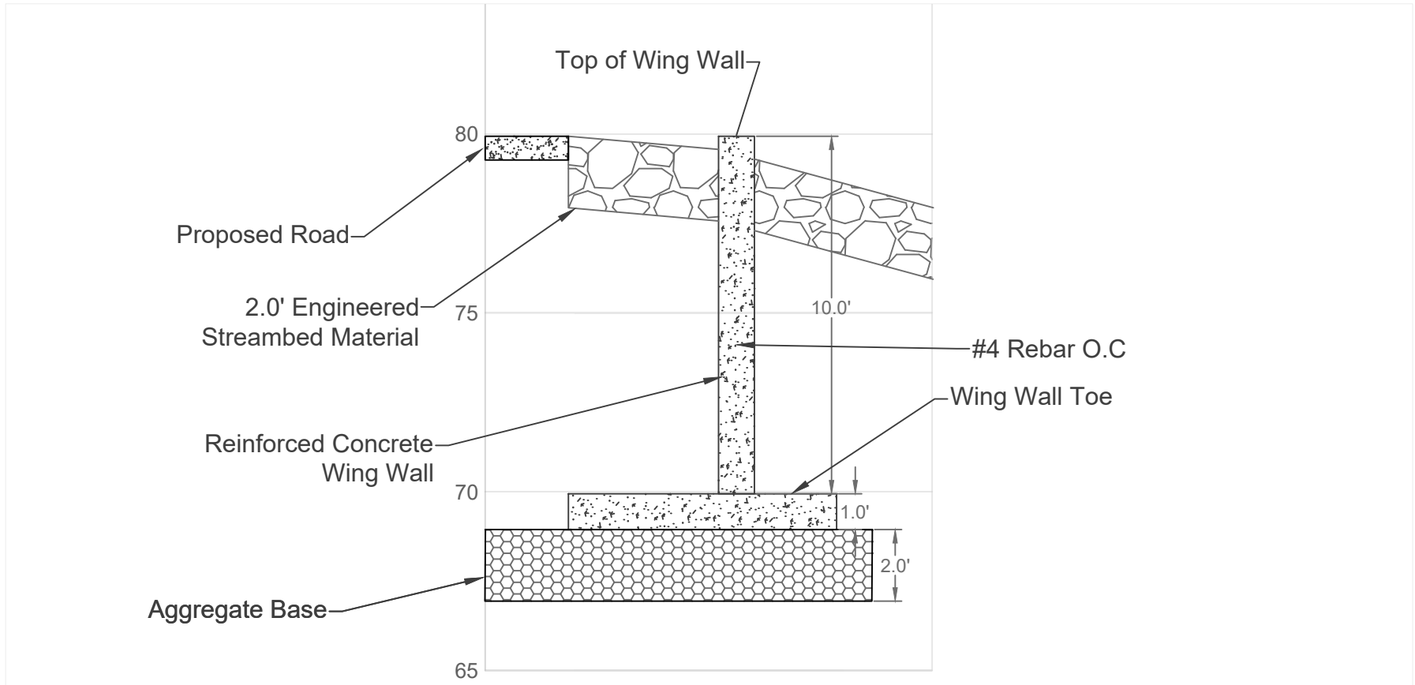
SCALE AT A3:	DATE:	DRAWN:	CHECKED:
Varies			

PROJECT NO:	SHEET NO:	REVISION:
1	5	1

C Profile C: Typical Downstream Section



D Typical Wing Wall Section



Notes:

These represent typical sections. Current features and elevations should be verified in the field prior to construction.

Wing wall section was developed using the CalTrans standard plan sheet. These dimensions and additional structural components such as reinforcing steel bar size and placement should be considered prior to construction.

REV:	DESCRIPTION:	BY:	DATE:
C	FINAL DESIGN	DE	7/3/2023
B	90% PRELIMINARY	AH/TK	6/30/2023
A	65% PRELIMINARY	AH	11/25/2020

STATUS: FINAL DESIGN

REGISTERED PROFESSIONAL ENGINEER DANIEL E. EVERMAN 55528 CIVIL STATE OF CALIFORNIA

CLIENT:

ENGINEER:

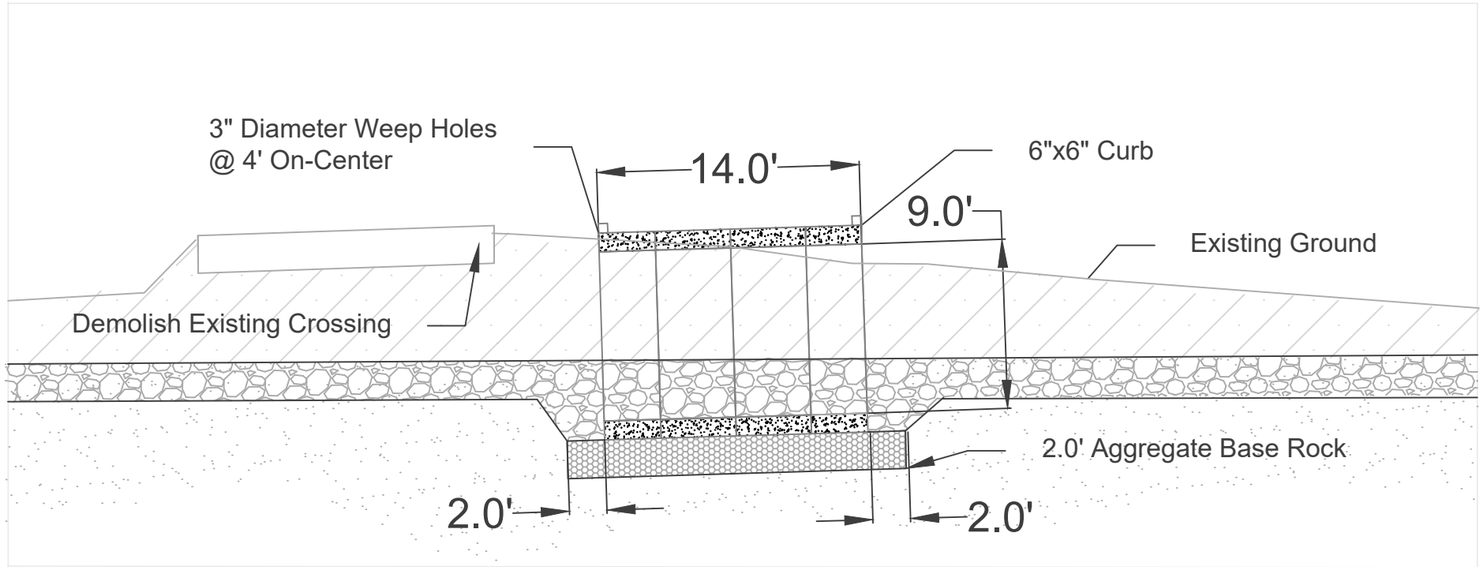
SITE: HOSIE LOW-WATER CROSSING

TITLE: CROSSING REPLACEMENT BOX CULVERTS

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
Varies			

PROJECT NO:	SHEET NO:	REVISION:
1	6	1

Culvert Road Crossing Detail



Notes:

Gap cuts were used instead of weep holes for the Caprini Crossing. Small gap cuts can be used instead of weep holes based on professional judgement.

REV:	DESCRIPTION:	BY:	DATE:
C	FINAL DESIGN	DE	7/3/2023
B	90% PRELIMINARY	AH/TK	6/30/2023
A	65% PRELIMINARY	AH	11/25/2020

STATUS: FINAL DESIGN

REGISTERED PROFESSIONAL ENGINEER
DANIEL E. EVERSON
55528
CIVIL
STATE OF CALIFORNIA

CLIENT:

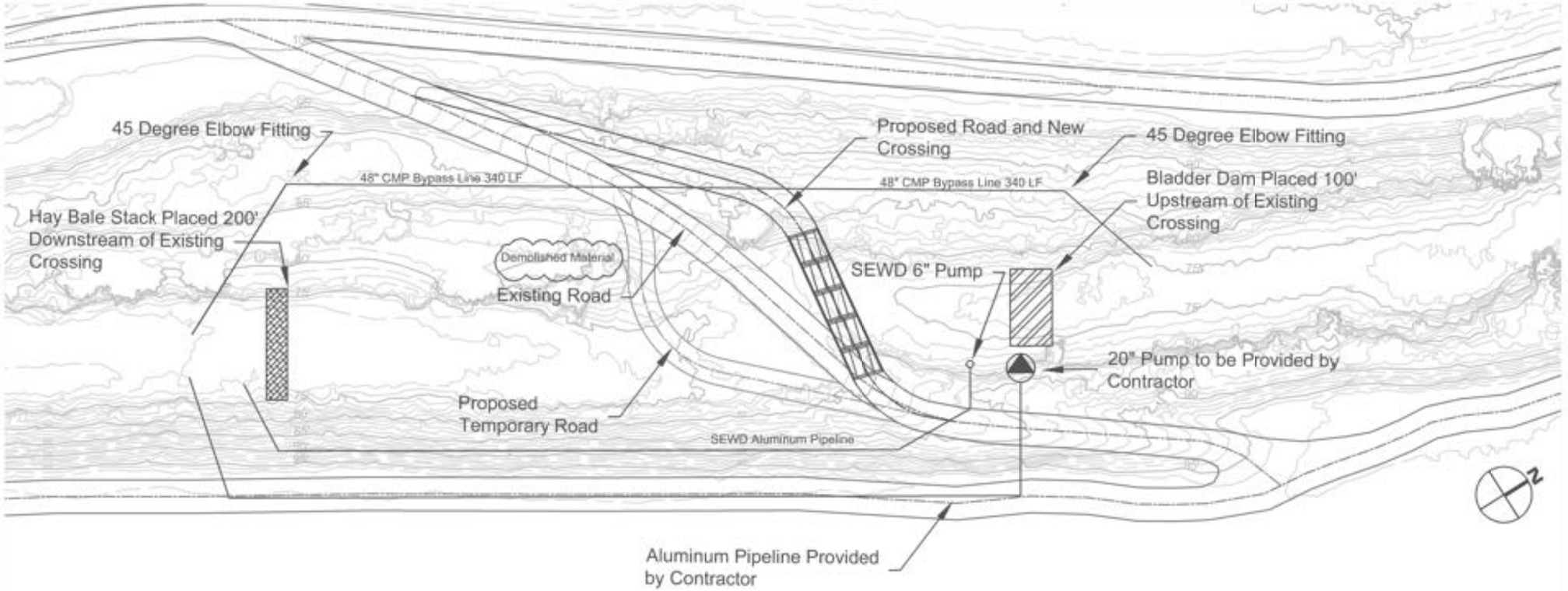
ENGINEER:

SITE: HOSIE LOW-WATER CROSSING

TITLE: CROSSING REPLACEMENT BOX CULVERTS

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
Varies			
PROJECT NO:	SHEET NO:		REVISION:
1	7		1

Dewatering Overview



Notes:

SEWD will be responsible for determining best methods for dewatering that will cause minimal impacts to fish and other aquatic species.

REV:	DESCRIPTION:	BY:	DATE:
C	FINAL DESIGN	DE	7/3/2023
B	90% PRELIMINARY	AH/TK	6/30/2023
A	65% PRELIMINARY	AH/JK	01/25/2022

STATUS: FINAL DESIGN

CLIENT:

ENGINEER:

SITE: HOSIE LOW-WATER CROSSING

TITLE: CROSSING REPLACEMENT BOX CULVERTS

SCALE AT A3:	DATE:	Drawn:	CHECKED:
Varies			

PROJECT NO:	SHEET NO:	REVISION:
1	8	1

Attachment O.6. Hosie Low-Water Crossing

Hosie Low-Water Road Crossing Fish Passage

Purpose

The Hosie Low-water Road Crossing Fish Passage Project is a collaboration between Stockton East Water District and CA Department of Water Resources (DWR) with the goal of remediating an existing fish passage barrier on the lower Calaveras River system. Removal of these barriers and remediation of Bellota Weir would restore passage for Central Valley Steelhead (*Oncoryhnchus mykiss)* to high quality habitat in the Calaveras River reaches below New Hogan dam. The proposed design consists of removing and replacing the existing road crossing with a set of concrete box culverts and regrading the streambed to match the natural channel slope.

Location

The crossing is located at river mile 13.2 of Mormon Slough and is one four barriers targeted for removal by the two agencies (Figure 1).

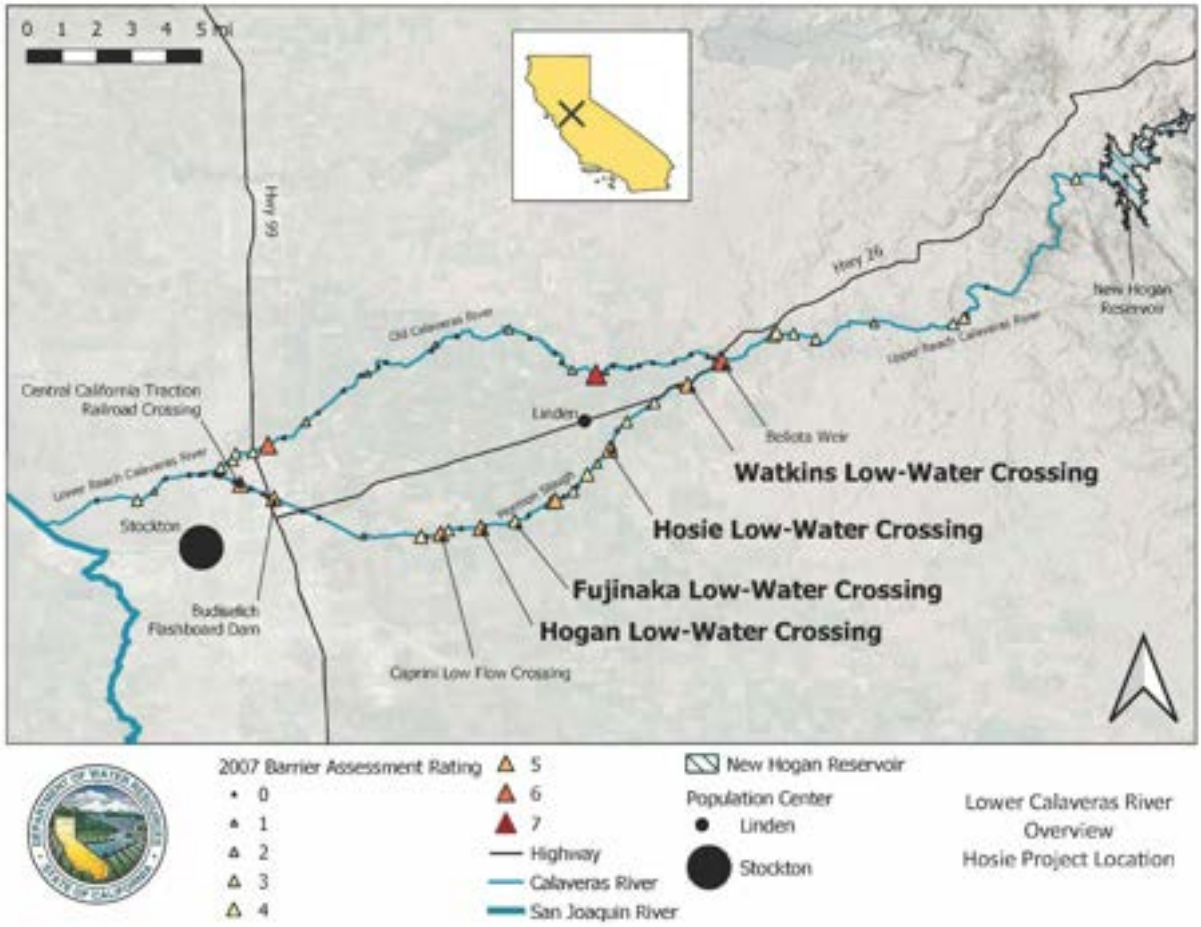


Figure 1: Map showing Hosie Low-water crossing along with the other three barriers slated for removal.

Demolition

The crossing (Figures 2 and 3) is a concrete road prism with no culverts, lined with riprap downstream. Previous modeling of the site by DWR shows that the crossing does not meet state and federal depth criterion for adult salmonid passage for flows below 320 cfs. At the downstream riprap section, fish passage is impaired for flows below 460 cfs. In addition to creating insufficient water depths for salmon, the crossing also acts as a velocity barrier when flows are between 100 cfs and 190 cfs. Out-migrating juvenile fish are inhibited from passing the barrier for flows less than 100 cfs because of depths less than 6".





Figure 2 and 3: Existing barrier at Hosie Low-Water crossing.

Design

The proposed design will replace the existing crossing with a set of precast concrete box culverts. The crossing will be constructed approximately 20 feet upstream of the existing crossing and rotated to better align with the existing channel. The new 14-foot wide road crossing will contain 20 individual culvert sections with openings measuring 9 feet tall and 12 feet across. A 3% cross slope will be used to facilitate drainage of the road. Wingwalls will be installed at the corners of the crossing at 45-degree angles for stability and improved hydraulics through the structure. The existing crossing will be demolished, and the concrete and riprap will be removed.

The streambed around the existing crossing will be regraded to a 0.5% downstream slope, removing material over a 300-foot long section of the stream. Based on preliminary full-pool surveys, this would regrade approximately 15,148 square feet of the stream. A mix of engineered streambed material (ESM) will be used in the treated area to provide stability across the project. A coarser mix (ESM 2) will be used on and near the banks to prevent increased scour protection, and a finer mix (ESM 1) will be used on the bed. Both mixes will be placed in a 2-foot-deep layer. In total, approximately 10,400 cubic feet of ESM 1 and 3,900 cubic feet of ESM 2 will be used in the project. Native material (fines) will be incorporated into the mixes to seal the mixes and allow water to flow over the surface of the material. The 300-foot regraded section of the stream will also include a 1-foot-deep by 10-foot-wide low-flow channel, to provide deeper flows during low flow conditions.

The new road will be cut into the west bank and connect the proposed box culvert crossing. This road will be graded at approximately 6% and overlap with the existing approach road for the first ~100 feet. The east end of the box culvert crossing will tie into the existing concrete road slab to minimize earthwork on a steeper section of the banks. A temporary road crossing will be constructed, using material removed from the channel bed, downstream of the existing crossing to maintain access across Mormon Slough during construction. This crossing will diverge from the exiting road near the streambed to minimize earthwork and required fill. The temporary crossing will be removed after the new crossing is completed.

Benefits

The project will not increase flood risk, because the design calls for the removal of an estimated 40,000 cubic feet of material over a 300-foot-length of the channel. , increasing conveyance through the reach. As part of the US Army Corps of Engineers 408 process, any encroachment on the waterside of the levee requires, at minimum, a preliminary blockage calculation to determine flood risk. Blockage is calculated by dividing the blocked area by the total cross-sectional area. If blockage is less than 1% for the design flow, then the project is considered unlikely to increase flooding and would likely not require additional hydraulic analysis. If the proposed upstream crossing road surface is assumed at the design flow (as shown in Figure 4), the existing cross sectional flow area is 93 sq ft. Implementing the project would increase the cross sectional flow area under the culverts to 286 sq ft, which effectively constitutes a "negative blockage" of ~200%. All other project cross sections result in a similar result.

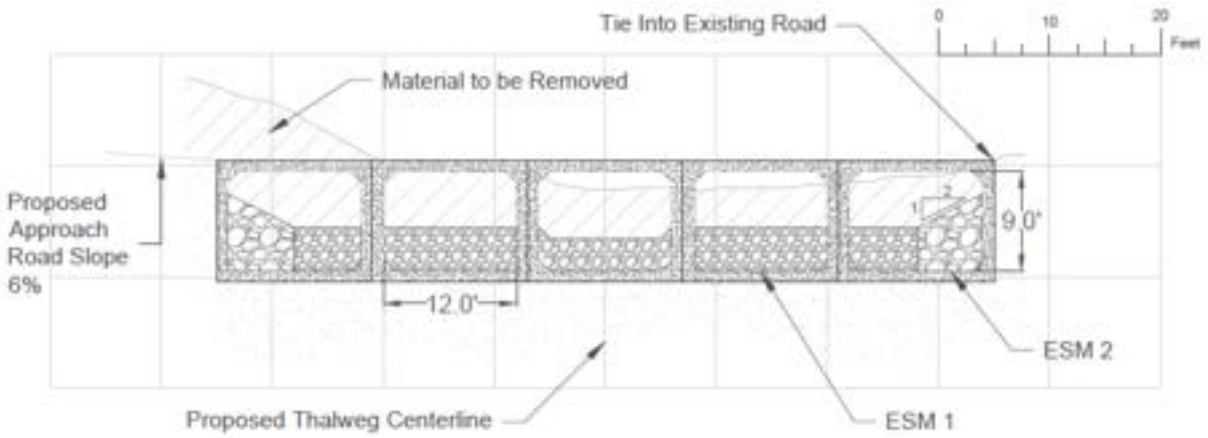


Figure 4: Section at the proposed crossing. Channel flow area will significantly increase as the result of the project.

Results

Construction was completed on October 30, 2023. Figure 5 and 6 show the new crossing.



Figure 5: Upstream of new crossing. In-channel work completed. Construction team working on out-channel work.



Figure 6: Downstream of new crossing. In-channel work completed. Construction team working on out-channel work.

Attachment P California Act Establishing the Stockton East Water District

CHAPTER 819

An act to repeal Chapter 1775 of the Statutes of 1963, to change the name of the Stockton and East San Joaquin Water Conservation District to the Stockton-East Water District and to grant certain powers to such district, relating to water conservation and water supply, and declaring the urgency thereof to take effect immediately.

[Approved by Governor September 29, 1971. Filed with Secretary of State September 29, 1971.]

CHAPTER 553

An act to amend Section 4 of, and to add Section 21.5 to Chapter 819 of the Statutes of 1971, relating to the Stockton-East Water District.

[Approved by Governor September 5, 1975. Filed with Secretary of State September 6, 1975.]

CHAPTER 1126

(Senate Bill No. 1120)

An act to repeal and add Sections 4 and 9 of, and to add Sections 9.2, 9.3 and 9.4 to, Chapter 819 of the Statutes of 1971, relating to the Stockton-East Water District, and declaring the urgency thereof, to take effect immediately.

[Approved by Governor September 27, 1979 Filed with Secretary of State September 25, 1979.]

CHAPTER 1287

(Senate Bill No. 1449)

An act to amend Sections 4247, 4402, 5019, 5020, and 5021 of the Education Code, to amend Sections 75, 318, 512, 1007, 1017, 1340, 1508.5, 1515, 3520, 3521, 4011, 4055, 5353, 6460, 10211, 14213, and 35006 of, to repeal Section 6509 of, and to repeal and add Section 14000 of, the Elections Code, to amend Sections 24001 and 31105.2 of the Government Code, and to amend Section 34 of Chapter 819 of the Statutes of 1971, relating to elections, and declaring the urgency thereof, to take effect immediately.

The people of the State of California do enact as follows:

SECTION 1
Chapter 1775 of the Statutes of 1963 is repealed.

SECTION 2
(a) The name of the Stockton and East San Joaquin Water Conservation District is changed to the Stockton-East Water District.
(b) In all respects not inconsistent with this act, the Stockton-East Water District shall continue to be organized under; and governed by, the Water Conservation District Law of 1931, Division 21 (commencing with Section 74000) of the Water Code as the same now exists and as it may be amended hereafter. The provisions of Division 21 (commencing with Section 74000) of the Water Code and all other acts of the Legislature applicable to the district and not inconsistent with the provisions of this act shall remain in full force and effect and shall be fully applicable to the district.
(c) In all cases in which it may be otherwise required that the district be described as a "water conservation district" it shall be sufficient to describe the district as a "water district".

SECTION 3
(a) The Legislature finds and declares that the problems of providing for the management of the underground water basin and the provision of supplemental water supplies, in the area of the Stockton-East Water District are peculiar to that district and that area and for that reason it is necessary to deal specially with such area and to provide special provisions for the government and operation of that district.
(b) The Legislature further finds and declares that this act is necessary to the solution of a problem arising out of the following unique and special circumstances: The water supplies in the underground basin in the area of the-Stockton-East Water District are insufficient to meet the water demands of the area, and, because of the geologic conditions peculiar to the area and because excessive pumping has seriously depleted the underground water storage, there has been an intrusion of saline waters into the underground water basin causing serious water quality deterioration and the destruction of the usefulness of a portion of the underground water basin. Further excessive pumping, without proper management of the underground water basin and the provision of supplemental water supplies, is certain to destroy the usefulness of a major portion of the underground water basin and endanger the health and welfare of the district.
(c) The Legislature further finds and declares that the district includes within its territory a large urban area, a large agricultural area, and territory formerly within an irrigation district, and that for these reasons it is necessary in order to accommodate the various interests within the district to provide special procedures to be observed by the district in its government and operation.
(d) The Legislature further finds and declares that only a portion of the City of Stockton and only a portion of the Metropolitan Stockton Planning Area as defined by the City of Stockton and the County of San Joaquin are within the district, and that unless all of such city and all of the Metropolitan Stockton Planning Area are within the district there will be uneconomic duplications and inefficiencies and it will be both more costly and more difficult to solve the grave and urgent water problems of the Stockton Metropolitan Area and the existing Stockton-

East Water District. The Legislature further finds and declares that the territory that is outside the district but within the Metropolitan Stockton Planning Area includes territory that is within the City of Stockton, within county maintenance districts, within other water conservation districts, and within an irrigation district. The Legislature further finds and declares that the special problems of including all of the City of Stockton and the Metropolitan Stockton Planning Area within the Stockton-East Water District are peculiar to that district and that area, and for that reason it is necessary to deal specially with such inclusion and to provide special provisions and procedures for such inclusion and the necessary adjustment of district boundaries.

SECTION 4

(a) The definition of a word applies to any of its variants.

(b) The following words and phrases shall have the following meanings:

(l) "Accumulated overdraft" means the aggregate amount by which the quantity of ground water removed from the ground water supplies within the district during all preceding water years shall have exceeded the quantity of water replaced therein by the replenishment of the, ground water supplies in such water years by any natural or artificial means, based upon reports, records, and other data or evidence appropriate for the purpose of making such determination.

(2) "Administration division" means the budgeting and accounting division established by Section 9 which is primarily concerned with administration of the district and with obtaining and making available to the other divisions a supply of water.

(3) "Advisory commission" means the California District Securities Advisory Commission.

(4) "Agricultural division" means the budgeting and accounting division established by Section 9 which is primarily concerned with the supply of water for agricultural purposes.

(5) "Agricultural water" and "water used for agricultural purposes" shall mean water used primarily in the commercial production of agricultural crops or livestock on parcels of land of more than two acres and shall not include water used for agricultural product-processing purposes.

(6) "Annual overdraft" means the amount by which the production of water from the ground water supplies within the district during the water year exceeds the natural replenishment of such ground water supplies in such year.

(7) "Assessor" means the assessor of the county.

(8) "Auditor" means the auditor of the county.

(9) "Benefit review procedure" means the procedure set forth in subdivisions (g) through (i) of Section 28.

(10) "Board" means the board of directors of the Stockton-East Water District.

(11) "Board of Supervisors" means the board of supervisors of the county.

(12) "Collector" means the person appointed by the board to determine and collect the accounts due the district prior to their transfer to the auditor, as set forth in this act. The collector shall be appointed by the board and hold office at the pleasure of the board. The collector may hold other offices, including, but not limited to, the office of secretary, or may perform other duties for the district but shall not be a member of the board.

(13) "Committee" means a group of directors of the district consisting of three directors, one of whom shall be appointed chairperson by the president of the board, together with

an alternate member, which shall study particular areas and recommend policy to the full board. The members and alternate member shall be appointed by the president of the board. There shall be the Agricultural Operations Committee and the Municipal Operations Committee, and there may be such other committees as may be established by the board.
(14) "County" means the County of San Joaquin.
(15) "Delinquent account" means any sum or sums due the district from an owner as disclosed by an annual bill presented by the collector pursuant to Section 13 which is not paid within the times set forth in Section 15, together with all penalties applicable to such sum or sums pursuant to this act.
(16) "Delinquent landowner" means the owner or owners of a parcel of land upon which one or more delinquent water-producing facilities are located as such ownership is disclosed by the last equalized assessment roll of the county.
(17) "Delinquent parcel" means a parcel of land upon which one or more delinquent water-producing facilities are located.
(18) "Delinquent water-producing facility" means a water-producing facility for which payment is required by this act and for which payment in full, has not been received by the district within the times set forth in Section 15.
(19) "Director" means a member of the board.
(20) "District" means the Stockton-East Water District.
(21) "Division" means a division of the district established pursuant to the Water Conservation District Act of 1931, Division 21 (commencing with Section 74000) of the Water Code.
(22) "Domestic ground water" means water produced from the underground on any parcel of two acres or less where the water is used and disposed of on that parcel, and also means water produced from the underground and used for residential or commercial purposes on agricultural parcels larger than two acres.
(23) "Dry year" means any year in which the board determines that there may be insufficient quantities of surface water to meet the needs of users who are dependent upon surface water sources.
(24) "Full tax area" means any area within a planning area which has been excluded from the partial tax area; in the manner provided in subdivision (b) of Section 27.
(25) "Ground water" means potable water beneath the surface of the ground suitable for municipal, domestic and irrigation use.
(26) "Municipal division" means the budgeting and accounting division established by Section 9 which is primarily concerned with the supply of water for municipal and industrial purposes.
(27) "Municipal ground water" means water produced from the underground other than domestic ground water or agricultural ground water.
(28) "Owner" means the person or persons owning any water-producing facility or any interest therein other than a lien to secure the payment of a debt or other obligation. Unless there is filed with the district by an owner, information to the contrary, the district may presume that the owner of the parcel of land on which a water-producing facility is located is the owner of the water-producing facility.
(29) "Partial tax area" means all areas of the district which pursuant to the terms of subdivision (a) of Section 27 are not required to pay the taxes, assessments, and charges

specified in subdivision (a) of Section 27.
(30) "Person" means any public agency or public corporation, whether federal, state, or local, or any private corporation, firm, partnership, individual, or group of individuals.
(31) "Planning area" means any one of the planning areas mentioned in subdivision (a) of Section 24 or in Section 35.
(32) "Prior act" means Chapter 1775 of the Statutes of 1963, as amended.
(33) "Production" or "producing" means the diversion or taking of stream-delivered water or the extraction or extracting of ground water, by any means, for domestic, municipal, irrigation, industrial, or other beneficial use.
(34) "Revenue sources" means those sources of expected revenue which shall be used to establish a budget, respectively, for each of the administration, agricultural, and municipal divisions. These revenue sources for each division are as follows:

(i) Administration division: General property taxes, other general revenue sources which may be provided by state law, payments from other divisions, or other sources of revenue which may be established in the future by law or by rule of the board.

(ii) Agricultural division: Stream-delivered water charges, domestic ground water assessments, agricultural ground water assessments, penalties collected on such charges and assessments, and other sources of revenue which may be established in the future by law or by rule of the board.

(iii) Municipal division: Contract sales of treated surface water, contract sales of ground water, municipal ground water assessments, penalties collected on such sales and assessments, and other sources of revenue which may be established in the future by law or by rule of the board.

(35) "Stream delivered water" means surface water used for agricultural purposes and taken by an owner's water-producing facility directly from the Stockton Diverting Canal, the Calaveras River, the Old Calaveras River, Mosher Creek, Mormon Slough, Potter Creek, or any other watercourse within the district except those portions of any of the foregoing watercourses which are located within the boundaries of the Sacramento-San Joaquin Delta, as such boundaries are presently defined by Section 12220 of the California Water Code.
(36) "Tax collector" means the tax collector of the county.
(37) "Treasurer" means the treasurer of the county.
(38) "Water-producing facility" means any device or method, mechanical or otherwise, for the production of ground water from the ground water supplies within the district, or for the diversion of stream delivered water.

SECTION 5
In addition and supplemental to the powers conferred upon the district by the Water Conservation District Law of 1931, Division 21 (commencing with Section 74000) of the Water Code, and by all other laws applicable to the district, the district shall have power:
(a) To acquire, control, distribute, store, spread, sink, treat, purify, reclaim, recapture, process, and salvage any water, including sewage and storm waters for the beneficial use or uses of the district, its inhabitants, or the owners of the rights to water in the district.
(b) To sell treated and untreated water under its control to any municipal corporation, political subdivision of the State of California, public utility, or other person at such charges and rates

as shall be set by the board by contract, agreement, rule, or otherwise, for use within the district.
(c) Subject to the requirements of Section 6, to sell treated and untreated water under its control to any municipal corporation, political subdivision of the State of California, public utility, or other person for use outside the district.
(d) Within or outside the district to construct, purchase, lease, or otherwise acquire, and to operate and maintain, waterworks, water treatment plants, spreading grounds, pipelines, conduits, canals and other facilities for the distribution of water, pumps and other facilities for the production of water, dams, weirs, reservoirs, and other facilities, installations, works, equipment, and machinery useful or necessary to replenish the underground water basin within the district, to manage, for the purpose of repelling saline intrusion, the underground water basin within the district for the common benefit of the district, to augment the common water supplies of the district, or to otherwise provide water for the beneficial use or uses of the district, its inhabitants, or the owners of rights to water in the district.
(e) For the common benefit of the district to store water in underground water basins or surface reservoirs within or outside the district, to appropriate and acquire water or water rights within or outside the district, to purchase or import water into the district, and to conserve water within or outside the district.
(f) Subject to the provisions of Sections 9 to 19, inclusive, to levy and collect a ground water assessment for the production of water from the ground water supplies within the district, and to fix and collect charges for stream-delivered water and to require such measuring devices as may be necessary for the purposes of this act and to inspect and test any such measuring devices whether installed by the district or by others.
(g) To maintain reserve funds in amounts deemed advisable by the board for the purpose of water for replenishment purposes, the stream delivery of agricultural surface water, or for other district purposes.
(h) To acquire real and personal property and interests therein, but the district shall not exercise the power of eminent domain for any purpose of this act or in carrying out any power granted by this act outside the boundaries of the district unless the board of supervisors of the county in which the property to be acquired is located has consented to such acquisition.

SECTION 6
(a) The district may sell treated and untreated water under its control for use outside of the district only pursuant to a written agreement made as provided in this section.
(b) The district may make an agreement to sell water for use outside the district for periods not in excess of one year where the board prior to the district's agreement to sell such water has found and declared by resolution that such water is not required for use within the district during the period, not to exceed one year, for which the agreement is to be made. The board's resolution shall be adopted no earlier than three months preceding the commencement of the period for which the agreement is to be made. The price charged for water sold pursuant to an agreement made pursuant to this subdivision shall be sufficient to at least cover the costs of the district, as determined by the board, in furnishing and delivering the subject water to its point of delivery.
(c) The district may make agreements to sell water for use outside the district for periods in excess of one year if the board prior to the district's agreement to sell water has by resolution found and declared that the subject water will not be required for use within the district for the

period for which the agreement is made and declares that the sale of the water and its use in the manner provided in the applicable agreement is for the direct and substantial furtherance of the purposes of the district. The charge for water sold pursuant to an agreement made pursuant to this subdivision shall at least be sufficient to cover the costs of the district, as determined by the board, in furnishing and delivering such water to its point of delivery, plus the equivalent of all applicable ad valorem property taxes that would be assessed by district on the property upon which such water is to be used, or in the case of a sale to a political subdivision, municipal corporation, public utility, or other operator of a common water distribution system on all of the property served by such common water distribution system, if the subject property were included within the district during the period covered by the agreement.

(d) The district may make agreements to sell water that would not be otherwise owned or possessed by the district that comes into the district's possession due to provisions of a contract with another political subdivision that operate when such other political subdivision fails to pay for such water or the costs related to such water, on any basis the board determines if the board makes the determination that such water is not needed for sale within the district for the period of the agreement.

SECTION 7

The board shall, from time to time, order an investigation and report to be made by an engineer or engineers employed by the district for the purpose of investigating and reporting upon the ground water conditions of the district and making recommendations as to water management practices to be followed by the district. The report shall include an estimate as to the accumulated overdraft, if any, as of the date of the report, estimates of the ground water production anticipated by years for the period covered by the report, and an estimate of the average annual overdraft, if any, for the period covered by the report. The report shall also include recommendations as to necessary and desirable surface and underground water management practices to be followed during the period covered by the report.

SECTION 8

The engineering investigation and report shall be delivered to the secretary in writing. The secretary shall publish pursuant to Section 6061 of the Government Code a notice of the receipt of such report and fixing a date for a public hearing to be held by the board, the publication to be in a newspaper of general circulation, printed and published within the district, at least 10 days prior to the date at which the public hearing is to be held. The notice, among other information which the district may include, shall contain an invitation to all owners of water-producing facilities within the district and all other interested parties to call at the office of the district to examine the engineering investigation and report.

SECTION 9

(a) There are hereby established within the district, budgeting and accounting divisions as follows: administration, agricultural, and municipal. Each such budgeting and accounting division shall have established a separate budget, and separate accounts shall be kept of the revenues and expenditures for each division.

(b) Notwithstanding the establishment of such divisions, the board shall have authority to approve temporary transfers between divisions on such terms and with such repayment

provisions, as may be approved by the board.

SECTION 9.2
(a) The board at a regular, special, or continued meeting between November 1st and December 15th of each year shall hold a public hearing to consider the budget for each of the administration, agricultural and municipal divisions, and an overall budget for the district, for the next calendar year.
(b) Notice of the hearing shall be published pursuant to Section 6061 of the Government Code at least 10 days prior to the date of the hearing. Any person interested in the district may, in person or by representative, appear and submit evidence concerning the water conditions of the district, the financial needs of the district, proposals for rates, and other relevant matters.
(c) The board shall at the hearing receive recommendations from the. Agricultural Operations Committee as to the budget to be established for the agricultural division and from the Municipal Operations committee as to the budget to be established for the municipal division. Each of such committees shall also make recommendations to the board as to the budget of the administration division.
(d) Following the budget hearing by the full board, the board shall adopt by resolution prior to December 15 of each year a budget for the administration division, for the agricultural division for the municipal division and for the district overall.

SECTION 9.3
The rates to be established pursuant to Section 9.4 shall equitably divide the cost of meeting a balanced agricultural division budget among the sources of revenue for the agricultural division, but in a manner which will encourage the use of surface water available for agricultural use within the district.

SECTION 9.4
(a) The board at a regular, special, or continued meeting between March 15 and April 15 of each year shall hold a public hearing to consider the necessity, amount, and rates of a municipal ground water assessment, an agricultural ground water assessment, and a domestic ground water assessment, if any, to be levied for the then current calendar year and charges to be made for stream delivered water to the extent that such charges for stream delivered water are not controlled by contract or agreement.
(b) Notice of the hearing shall be published pursuant to Section 6061 of the Government Code at least 10 days prior to the date of the hearing. Any person interested in the district may, in person or by representative, appear and submit evidence concerning the water conditions of the district, the financial needs of the district, proposals for rates, and other relevant matters.
(c) Following the hearing, and prior to April 15 of that year, the board may, by adoption of an ordinance, determine, levy, and assess a municipal ground water assessment against all owners of water-producing facilities within the district which produce municipal ground water during the current year and an agricultural ground water assessment against all owners of water-producing facilities within the district which produce water from the ground during the current year for agricultural purposes and a domestic ground water assessment against all owners of water-producing facilities within the district which produce domestic ground water and shall determine and fix charges for stream delivered water for the current year to the extent that such charges for stream delivered water are not governed by contract or

agreement.
(d) The method of computing ground water assessments and charges for stream-delivered water may be uniform for all water-producing facilities or may be uniform for each of several classes of water-producing facilities. The board shall, by rule, establish one or more methods to be used in computing the amount of water production from a water-producing facility which is not measured by a water-measuring device approved by the collector. Such methods shall be established by rule adopted by the board and may be based on any criteria which may be used to determine or estimate with reasonable accuracy the amount of water production.
(e) The board, by rule, may waive any assessment upon any class or classes of water-producing facilities which it determines because of the small amount of water produced by such facilities, would yield to the district a sum less than the estimated cost of making and collecting the assessment.
(f) Any ground water assessment or charges for stream-delivered water levied or made pursuant to this section shall be in addition to any general assessment levied by the district.
(g) Clerical errors in the name of any owner or in other recorded information, or in the making or extension of any assessment upon the records which do not affect the substantial rights of the subject owner or owners shall not invalidate the assessment.
(h) The procedures established by Sections 9 to 9.4 inclusive, shall not be applicable for calendar year 1979. The rates for calendar year 1979 only are established as fol1ows:

(1) The domestic ground water assessment shall be ten dollars ($10) per domestic use unit, as such unit is established by the board.

(2) The rate for sales of stream-delivered water shall be seven dollars and sixty cents ($7.60) per acre-foot of water.

(3) The agricultural ground water assessment rate shall be one dollar and sixteen cents ($1.16) per acre-foot of water.

(4) The municipal ground water assessment rate shall be set at three dollars ($3) per acre-foot of water. It is not the intent of the Legislature that the rates set for 1979 shall serve as precedent for future rates.

(i) For calendar year 1980 and thereafter, water rates shall be established in accordance with Sections 9 to 9.4 except that no rate may be established in any calendar year which exceeds the individual rates set in paragraph (1), (2), or (3) of subdivision (h) by 20 percent plus a factor to reflect the percentage increase in the federal consumer price index with calendar year 1979 as a base; provided, however, that this subdivision (i) shall not be effective from and after the date of any election in which a majority of those electors voting approve a contract by the district for new supplement water or approve bonds for financing a distribution system for new supplemental water.
(j) During calendar year 1980 and thereafter, water rates shall be established by ordinance following public notice. Such ordinances shall be subject to referendum; provided, however, that no referendum shall modify or affect the terms of any bond resolution issuing bonds approved by the voters.

SECTION 10
All assessments and charges due for water produced within the district during the 1971 calendar year and for water produced within the district prior to 1971 shall be assessed, charged, calculated, determined, billed, and collected pursuant to the prior act and all applicable rules duly adopted by the board, and for those purposes the prior act shall remain

in effect until such sums have been collected in full or otherwise discharged in the manner provided by the prior act and the applicable rules duly adopted by the board.

SECTION 11

(a) Commencing with 1972, not later than the first day of October of each year the collector shall mail progress bills to each owner of one or more water-producing facilities within the district. The progress bills shall state an amount due which shall be computed by multiplying one-half of each owner's water production for the preceding calendar year in acre-feet by the respective ground water assessment rates and the stream-delivered water charges applicable for the current year.

(b) Any progress bill may be reduced in amount or canceled by the collector, if upon good cause shown, the collector determines that the production of water from the water-producing facility or facilities of the owner during the current year, to the date of the collector's determination, is such that a progress payment based on one-half of the preceding year's water production will be substantially in excess of one-half of such owner's next succeeding annual bill as the same will ultimately be determined pursuant to Sections 12, 13, and 14.

(c) The board may, by rule, establish alternate procedures for the computation and payment of progress bills in the case of water-producing facilities within the district, the water production of which is measured by a water measuring device approved by the collector.

(d) Should any owner of a water-producing facility fail to pay on or before the 31st day of October, or any alternate date specified in a rule adopted pursuant to subdivision (c) of this section, the amount disclosed by a progress bill the district shall impose a penalty against such owner in an amount of 5 percent of the total sum due the district for the current calendar year as such sum is finally determined in accordance with Sections 12, 13, and 14. The 5-percent penalty shall be added to the annual bill and shall be due and payable at the same time as the other amounts included in the annual bill.

(e) The board may, by rule, waive the requirement of making a progress payment as required by this section as to any one or more classes of water-producing facilities.

SECTION 12

(a) Commencing with 1973, each owner of one or more water-producing facilities within the district shall, after January 1st and not later than January 15th, file with the collector on a form acceptable to the collector a water use statement showing the amount of water produced by the water-producing facility or facilities of such owner in the case of facilities the water production of which is measured by a water-measuring device approved by the collector and as to all other facilities the information the collector determines to be reasonably necessary to permit the determination, or estimation with reasonable accuracy, of the amount of water produced during the preceding calendar year by the subject water-producing facility or facilities. The collector may require that all statements of fact in the water use statement be verified by a written declaration that they are made under the penalties of perjury.

(b) The board, by rule, may waive the filing of water use statements as to any one or more classes of water-producing facilities.

SECTION 13

(a) Commencing with 1973, not later than the last day of February, the collector shall mail an annual bill for the preceding calendar year to each owner of one or more water-producing

facilities within the district.

(b) The collector in preparing the annual bill for submission to each owner of water-producing facilities shall consider the information disclosed by the annual water use statement if one has been filed, the information disclosed by existing district records, district inspections, if any, of the water-producing facilities or the area served by such water-producing facilities, and any other information, of which the collector is aware and which is relevant to the amount of water production by each of the owner's water-producing facilities and shall determine the amount of each owners water production.

(c) In all cases where an annual water use statement has been filed and where a water-measuring device approved by the collector is permanently attached to a water-producing facility and the water production has been reported on the basis of the approved water-measuring device, the record of water production as disclosed by such water-measuring device shall be presumed to be accurate and the burden is upon the collector to establish to the contrary.

(d) The amount of the annual bill shall be computed by multiplying the production in acre feet of water as determined by the collector by the respective ground water assessment rates and stream-delivered water charges. After determining the amount due the collector shall add the penalty provided in Section 11, if applicable, and shall also add a penalty of 5 percent of the total sum due the district for water produced during the preceding year by any water-producing facility for which an annual water use statement was required and not filed within the time specified in Section 12.

(e) Upon the discovery by the collector of any water-producing facility within the district:

(1) For which no water use statement has been filed for any year in which the same was required by virtue of Section 12 and any applicable rules of the district and for which no annual bill was submitted pursuant to this section; or

(2) For which a water use statement was filed as required but for which the collector has good cause to believe that the production of water from such water-producing facility was in excess of that disclosed by a filed water use statement; or

(3) For which no water use statement was required to be filed by virtue of Section 12 and the applicable rules of the district but for which no annual bill has been submitted by the collector pursuant to this section; the collector shall immediately investigate and estimate the amount of unreported or unbilled water production by such water-producing facility. In making such estimate, as to cases arising under subparagraph (3) above, the estimate of prior water production shall not include water production for more than three (3) preceding calendar years.

(f) After making an estimate of water production pursuant to subdivision (e) of this section, the collector shall calculate the amount due for ground water assessments and stream-delivered water charges during the subject years at the rates applicable during those years, and add the amount so calculated as a separate item to the next annual bill submitted to the owner of such water-producing facility together with the penalties, if any, applicable pursuant to subdivision (d) of Section 11 and subdivision (d) of this section.

(g) After computing the amount of the annual bill the collector shall allow as a credit against the amount due, and show such allowance on the annual bill, the sums paid for the subject water-producing facilities as a result of the applicable progress bill or bills for the subject year.

SECTION 14
(a) An annual bill shall be conclusive on all persons having an interest in the subject water-producing facilities unless the owner files with the secretary on or before March 15th a written objection on forms made available by the district setting forth the owner's ground or grounds for objecting to the amount of current or prior, if any, production and the assessments, charges, and penalties so fixed.
(b) Upon the filing of an objection the secretary shall schedule a hearing on the objection before the board at which time the total amount of the water production and the ground water assessment and stream-delivered water charges thereon shall be determined together with any applicable penalties, which determinations by the board shall be conclusive if based upon substantial evidence.
(c) A notice of such hearing before the board shall be mailed to the objector at least 10 days before the date fixed for the hearing unless the form furnished by the district for the filing of the objection specifies the date, time, and place for the hearing.
(d) Notice of the final determination by the board as to his objection shall be mailed to each objector by the secretary.

SECTION 15
(a) All annual bills presented by the collector pursuant to Section 13 shall be due when mailed by the collector and shall be delinquent after April 30th with the exception of any bill as to which an objection has been filed pursuant to Section 14.
(b) Annual bills, as to which an objection is filed, shall become delinquent not later than April 30th, or 20 days from the date of mailing by the secretary to the owner a notice of the final determination by the board as to his objection, whichever is later.

SECTION 16
Any annual bill not paid when delinquent shall be subject, on the date of its delinquency, to a further penalty of 5 percent of the amount of the ground water assessment and stream-delivered water charges set forth in the annual bill.

SECTION 17
(a) Upon the delinquency of all or any portion of an annual bill the collector shall transmit to the secretary the amount of the delinquent account, together with the name of the delinquent landowner and the current description of the delinquent parcel as such is then disclosed by the applicable records of the assessor. The description provided for in this section shall be the description or other designation currently used by the assessor and shall include the tax account number and the code area of the delinquent parcel.
(b) The secretary shall maintain a list of delinquent accounts as furnished to him by the collector. If prior to the transmission of the list of delinquent accounts to the auditor pursuant to subdivision (d) of this section, all or any portion of a delinquent account is collected by the collector, the collector shall report such payment to the secretary and the secretary shall reflect such payment in his list of delinquent accounts.
(c) Annually as of August 1st the secretary shall add to each delinquent account then on the list of delinquent accounts a penalty of 5 percent of the sum of the ground water assessments and stream-delivered water charges included in each delinquent account.
(d) Annually after August 1st and on or before August 10th the secretary shall transmit a

certified copy of his current list of delinquent accounts to the auditor. The list of delinquent accounts may combine all assessments, charges, and penalties into a single sum due for each delinquent account.
(e) Upon receipt of the certified copy of the list of delinquent accounts, the auditor shall enter the amount of each delinquent account against the delinquent parcel designated in the list of delinquent accounts as such parcel appears on the then current assessment roll.
(f) The tax collector shall then include the amount of each delinquent account on bills for county taxes levied against the delinquent parcel.
(g) Thereafter the amount of each delinquent account shall be collected at the same time and in the same manner as county taxes are collected, and are subject to the same penalties and the same procedure and sale in case of delinquency, as provided for ordinary county taxes.
(h) Upon collection of delinquent accounts, within a reasonable time the auditor shall deposit the sums so collected to the account of the district, but the auditor may deduct, from time to time, an amount not to exceed one-quarter of 1 percent of the sums collected pursuant to this section to defray the costs of the county in processing such accounts.
(i) All laws applicable to the levy, collection, and enforcement of county taxes are applicable to such delinquent accounts so transmitted to the auditor pursuant to this section.
(j) All or any portion of any such delinquent accounts shall on order of the board of supervisors be canceled by the auditor if uncollected, or except in the case provided for in paragraph (5) of this subdivision, refunded by the treasurer out of district funds, if collected, if it or they were entered, charged, or paid:

(1) More than once;

(2) Through clerical error;

(3) Through the error or mistake of the collector, secretary, or board in respect to any material fact, in the course of establishing the amount of the assessments, charges, and penalties due upon said delinquent account under this act;

(4) Illegally; or

(5) On property acquired after the lien date by the State of California or by any county, city, school district, or other political subdivision of the State of California and because of such public ownership not subject to sale for delinquent taxes.

(k) No order for a refund under the subdivision (j) shall be made except on a claim:

(l) Verified by the person who paid said delinquent account and penalties or his guardian, conservator, executor, or administrator; and

(2) Filed within three years after making the payment sought to be refunded.

(l) The provisions of this subdivision do not apply to cancellation. The provisions of this Section 17 shall not be applicable to a delinquent parcel owned by the State of California or by any county, city, school district or other political subdivision of the State of California.

SECTION 18

The owner of any parcel of land within the district, two acres or more in size, on which no water is produced during any calendar year, shall file an annual report stating that no water was produced on the property during the subject calendar year. The annual report shall be filed annually on or before January 15th of each year for the immediately preceding calendar year.

SECTION 19

The board shall establish rules providing for the making of refunds in the event of the overpayment of any ground water assessment or stream-delivered water charges. Such rules shall provide that no overpayment shall be refunded unless a request for refund is filed with the secretary within three years of such overpayment, Such rules may provide for the payment of a fee to cover all or a portion of the district's costs in processing a request for refund.

SECTION 20

The district may bring a suit in any court of competent jurisdiction against any person or persons indebted to the district for the collection of any delinquent sums due the district for any ground water assessment, stream-delivered water charge, penalties, or charges due for any sale or use of water by contract, or otherwise. Should the district, as a provisional remedy in bringing suit, seek an attachment against any property of any named defendant therein, the district shall not be required to provide a bond or undertaking as is otherwise provided in Chapter 4 (commencing with Section 537) of Title 7 of Part 2 of the Code of Civil Procedure. All procedures and remedies applicable to the processing, collection, and enforcement of delinquent accounts and penalties granted to the district by this act or otherwise are alternative and the utilization of one such procedure shall not bar the use of another.

SECTION 21

Any person who injures, alters, removes, resets, adjusts, manipulates, obstructs or in any manner interferes or tampers with or procures or causes or directs any person to injure, alter, remove, reset, adjust, manipulate, obstruct or in any manner interfere or tamper with any water-measuring device affixed to any water producing facility as required by this act, so as to cause such water-measuring device to improperly or inaccurately measure and record such water production, is guilty of a misdemeanor and is punishable by a fine not to exceed five hundred dollars ($500) or imprisonment in the county jail not to exceed six months, or by both such fine and imprisonment.

SECTION 21.5

The board is authorized to establish a reserve fund financed by the transfer of up to ten cents ($0.10) for each acre-foot of water to which the ground water assessment rate or the stream-delivered surface water charges levied pursuant to subdivision (a) of Section 9, in addition to ten cents ($0.10) for each acre-foot of treated water sold by the district under either an existing or future water service contract executed pursuant to Section 6. Such amounts transferred into a reserve fund created pursuant to this section shall be a part of, and not in addition to, the above-referenced ground water assessment rates, stream-delivered surface water charges, and contract prices. The reserve fund established under the authority of this section shall be a limited-purpose reserve fund. Expenditures out of such fund shall only he made for the purpose of constructing, leasing or purchasing, maintaining, and operating ground water pumping facilities capable of delivering ground water into then existing district watercourses, water supply, or distribution facilities for the purpose of insuring the availability, to the extent possible, of a full supply of water to all users during dry years.

SECTION 22
The board is authorized to adopt the rules it deems necessary and proper for carrying out the provisions of this act, including but not limited to, rules providing that the district shall not deliver or make available water to water users who fail to pay for water when required by statute, contract, or rule.

SECTION 23
No rules shall be adopted by the board without first reviewing such at a public hearing held by the board. Notice of the public hearing shall be published pursuant to Section 6061 of the Government Code at least 10 days prior to the date of such a hearing and the notice shall contain a brief description of any rule to be considered at the hearing.

SECTION 24
(a) There is hereby included within the Stockton-East Water District the following territories:
(1) The North Stockton Planning Area which shall include the following territory:
Beginning at a point on the Stockton and East San Joaquin Water Conservation District boundary, said point being on the intersection of the North line of Township Two (2) North and the centerline of State Highway 99, said Stockton and East San Joaquin Water Conservation District boundary being described in notice of election for the organization of the Stockton and East San Joaquin Water Conservation District, said election being held on June 1, 1948; thence Southerly 3.5 miles, more or less, along said District boundary and along said centerline of State Highway 99 to intersection with the centerline of the Calaveras River; thence Westerly six (6 miles, more or less, along said District boundary and said centerline of the Calaveras River downstream to intersection with the centerline of the Stockton Deep Water Channel; thence leaving said District boundary Northwesterly one (1) mile, more or less, along said centerline of the Stockton Deep Water Channel to centerline Station 286+00, said Station 286+00 bearing Southwesterly 375 feet at right angles to said centerline from U.S.E.D., B.M. 4008; thence Northeasterly at right angle to said centerline 300 feet, more or less, to a point on the Southerly boundary of the Elmwood Tract; thence Easterly and Northerly along the Southerly and Easterly boundary of said Elmwood Tract 1.9 miles, more or less, to the point of intersection of said Easterly boundary with the Southerly levee of Fourteen Mile Slough (formerly called Twelve Mile Slough); thence North 500 feet, more or less, to the Stockton City Limits Line, said City Limits Line being along the centerline of said Fourteen Mile Slough; thence Westerly, Northwesterly, and Northeasterly 0.6 mile, more or less, along said City Limits Line and said centerline of Fourteen Mile Slough to a point on the West line of Section 19, Township 2 North, Range 6 East, Mount Diablo Base and Meridian; thence Northerly 0.5 mile, more or less, along said West line of Section 19 and said City Limits Line to the Southeasterly corner of Mitchell Slough-Wright Tract Annexation—A-7-67; thence along the City Limits Lines established by Annexation—A-7-67 and by Wright Tract Annexation—A-1-62 the following eight (8) courses, (1) South 57° 47’ 30” West 150 feet, more or less, to a point, said point being on the water toe of levee of said Fourteen Mile Slough, (2) South 57° 47’ 30” West 949.75 feet, (3) South 58° 35’ 30” West 1011.23 feet to a point on the centerline of an existing drainage ditch, (4) Northerly along said drainage ditch centerline to intersection with centerline of a 75 foot wide Pacific Gas & Electric Company easement, as described in deed recorded in

Book of Official Records, Volume 2076, Page 470, San Joaquin County Records, (5) continuing Northerly along said drainage ditch centerline to a point on the water toe of the South levee of said Fourteen Mile Slough, (6) meandering Easterly along said water toe of the South levee to intersection with centerline of said 75 foot wide Pacific Gas & Electric Company easement, (7) continue meandering Easterly along said water toe of said South levee to a point bearing South 45° 00' West from the Northwest corner of said-Section 19, and (8) North 45° 00' East to said Northwest corner of Section 19; thence Easterly 1900 feet, more or less, along the North line of said Section 19 and along Stockton City Limits Line to the Southeast corner of the Shima Tract thence leaving said City Limits Line Northerly 6600 feet, more or less, along the Easterly boundary of said Shima Tract to a corner thereof; thence Westerly 1500 feet, more or less, along the Northerly boundary of said Shima Tract to the Southeast corner of the Atlas Tract; thence Northerly 3,800 feet, more or less, along the Easterly boundary of said Atlas Tract to the Southwest corner of Section 6, Township 2 North, Range 6 East, Mount Diablo Base and Meridian; thence Northerly one (1) mile, more or less, along the West line of said Section 6 to the Northwest corner thereof; thence Easterly six (6) miles, more or less, along said North line of Township 2 North to the point of beginning, containing 20,200 acres, more or less.

(2) The Central Stockton Planning Area which shall include the following territory:
Beginning at the point of intersection of the centerline of the Calaveras River with the centerline of the Stockton Deep Water Channel; thence Southerly and Easterly along the Southerly and Westerly line of the Stockton and East San Joaquin Water Conservation District Boundary to the point of intersection of the North line of Section 23, C. M. Weber Grant with the Easterly line of McKinley Avenue, said Stockton and East an Joaquin Water Conservation District Boundary being described in Notice of Election for the organization of the Stockton and East San Joaquin Water Conservation District, said election being held on June 1, 1948; thence Southerly 0.5 mile, more or less, along the Easterly line of McKinley Avenue to intersection with the centerline of Duck Creek; thence Westerly 1.3 miles, more or less, along the centerline of said Duck Creek and along the centerline of Walker Slough and the Southwesterly projection of said centerline of Walker Slough to a point on the Southerly bank of French Camp Slough, said point being on the boundary of Reclamation District No. 17; thence Westerly one (1) mile, more or less, along said boundary of Reclamation District No. 17 to the right or Easterly bank of the San Joaquin River; thence Northwesterly 1.0 mile, more or less, downstream along the said right or Easterly bank of the San Joaquin River to a point bearing East 500 feet, more or less, from the Southeast corner of the 3.55 acre parcel of Oxidation Pond Annexation No. 3—A-1-66; thence West 500 feet, more or less, to said Southeast corner; thence Westerly 1.6 miles, more or less, along the Stockton City Limits Line to the Easterly line of Dagget Road; thence Northerly one (1) mile, more or less, along said Easterly line of Dagget Road and along the Stockton City Limits Line to a point on the centerline of Burns Cutoff; thence in a general Westerly, Northerly, and Northeasterly direction 3.09 miles, more or less, along said centerline of Burns Cutoff to intersection with said centerline of the Stockton Deep Water Channel; thence Southeasterly 0.1 mile, more or less, along said centerline of the Stockton Deep Water Channel to the point of beginning, containing 4,900 acres, more or less.

(3) The South Stockton Planning Area which shall include the following territory:
Beginning at the Northeast corner of Section 58, C. M. Weber Grant, said corner being a point on the boundary of the Central San Joaquin Water Conservation District; thence along said Central San Joaquin Water Conservation District boundary the following four (4) courses, (1) Southerly along the West line of Sections 68, 69, and 70 of said C. M. Weber Grant to the Southerly line of said Grant being also the North line of Section 28, Township 1 North, Range 7 East, Mount Diablo Base and Meridian; (2) Westerly along said Weber Grant line and along said North line of Section 28 to the Northwest corner of said Section 28; (3) Southerly along the West line of said Section 28 to intersection with the South line of Section 59, C. M. Weber Grant; and (4) Westerly along the said South line of Section 59 to a point on the Easterly right-of-way line of Highway 99; thence Southerly 3.4 miles, more or less, along said Easterly right-of-way line of Highway 99 to the intersection of said Easterly right-of-way with the Southwesterly boundary of French Camp Road, also known as French Camp Toll Road or Turnpike; thence Northwesterly 3 miles, more or less, along said Southwesterly boundary of French Camp Road to the Westerly right-of-way line Of the Western Pacific Railroad Company property; thence Southerly 1.8 miles, more or less, along said Westerly right-of-way to a point on the Southerly line of Section P of C. M. Weber Grant; thence Westerly 1.2 miles, more or less, along the South line of said C. M. Weber Grant to the Northeast corner of the Northwest ¼ of the Northwest ¼ of Section 14, Township 1 South, Range 6 East, Mount Diablo Base and Meridian, said corner being a point in the boundary of Reclamation District No. 17; thence Westerly 0.75 mile, more or less, along the boundary of said Reclamation District No. 17 to the Southeast corner of fractional Section 10 of said Township and Range and being the Southwest corner of the C.M. Weber Grant; thence along the boundary of said Reclamation District No. 17 and the boundary of said C. M. Weber Grant the following four (4) courses, (1) Northerly 232.41 chains, more or less, along the Easterly boundary of fractional Sections 10 and 3 of said Township and Range and along the Easterly boundary of fractional Section 34, Township 1 North, Range 6 East, Mount Diablo Base and Meridian to the Northeast corner of said fractional Section 34, (2) East 20 chains, (3) North 40 chains, and (4) East 1076 feet; thence leaving said C. M. Weber Grant boundary and continuing along the boundary of said Reclamation District No. 17 the following five (5) courses, (1) North 255.64 feet, (2) North 89° 15' East 364.98 feet, (3) North 66° 30' East 1246.34 feet to a point on the West line of said French Camp Road, (4) Northerly 1850 feet, more or less, along said West line of French Camp Road to the South bank of French Camp Slough, and (5) Westerly 0.75 mile, more or less, downstream along the Southerly bank of French Camp Slough to the intersection of said Reclamation District No. 17 boundary with the Southwesterly projection of the centerline of Walker Slough; thence Easterly 1.5 miles, more or less, along said centerline of Walker Slough and the centerline of Duck Creek to the Easterly line of McKinley Avenue; thence Northerly 0.3 mile, more or less, along said Easterly line of McKinley Avenue to a point of intersection with the North line of Section 23, C. M. Weber Grant, said point being on the Southerly boundary of the Stockton and East San Joaquin Water Conservation District; thence Easterly 3.6 miles, more or less, along said Southerly boundary of said Stockton and East San Joaquin Water Conservation District to the point of beginning, containing 12,800 acres, more or less.

(b) The inclusion of each of such three planning areas (the North Stockton Planning Area, the Central Stockton Planning Area, and the South Stockton Planning Area) shall occur and be complete for all purposes, subject to Section 26, unless on or before the 60th day after the effective date of this act there is filed with the secretary of the district, at the district's office, a petition requesting an election signed by at least 25 percent of the registered voters in such planning area.
(c) A petition may consist of any number of separate instruments, which identify the planning area to which it is applicable and shall contain a request that an election shall be held to determine whether such planning area shall be included within the district.
(d) Within 20 days of the date of the filing of such a petition the secretary of the district shall examine the same and ascertain whether or not such petition is signed by the requisite number of voters.
(e) When the secretary of the district has completed his examination of the petition he shall attach to the same his certificate properly dated showing the result of such examination, and if from such examination he finds that such petition is signed by the requisite number of voters or is not so signed, he shall certify that the same is sufficient or insufficient, as the case may be.
(f) If such petition is sufficient the proposition of whether or not the subject planning area shall be included within the district shall be submitted to the vote of the voters in the subject planning area at an election called by the board and held within 70 days after the filing of a sufficient petition requesting an election.
(g) The manner of holding and conducting the election, the selection of officers to conduct it, the designation of precincts and polling places, the preparation, receipt, counting, and returning of ballots, and the canvassing and determining results of the election shall be as provided in Chapter 3 (commencing with Section 74790) of Part 6 of Division 21 of the Water Code, and in particulars not so provided shall be in accordance with the general laws of the state relative to elections at which propositions are submitted and voted upon.
(h) Upon the canvassing of the votes cast in the election if it appears that a majority of all votes cast are in favor of the inclusion of the subject planning area, then the inclusion of the subject planning area shall occur and be considered completed at the conclusion of the canvass, subject to the provisions of Section 26. Upon the canvassing of the votes cast in the election if it appears that a majority of all votes cast are against the inclusion of the subject planning area within the district, the inclusion shall be of no force and effect.
(i) If on or before the 60th day after the effective date of this act sufficient petitions have been filed with the secretary of the district requesting elections in more than one planning area, then the question of such inclusion shall be submitted to the vote of the voters in each of the subject planning areas at an election called and held on the same day.
(j) The secretary of the district may contract with the County Clerk of San Joaquin County to perform any of the duties imposed upon the secretary by this section. In such cases the costs of the county clerk in connection with such duties shall be paid by the district.

SECTION 25
(a) There is hereby excluded from the Central San Joaquin Water Conservation District the following territory:
Beginning at the intersection of the North line of Section 24, C. M. Weber Grant, with the Easterly line of the Tidewater and Southern Railroad, and being a point on the Central San

Joaquin Water Conservation District Boundary; thence along said Central San Joaquin Water Conservation District Boundary the following five (5) courses, (1) Southeasterly along the Easterly boundary of said railroad to its intersection with the North line of Section 39, C. M. Weber Grant, (2) Northeasterly along the Northerly line of said Section 39 and its extension to a point on the West line of fractional Section 5, Township 1 South, Range 7 East, Mount Diablo Base and Meridian, (3) Southerly along said Westerly line of fractional Section 5 and the Easterly line of C. M. Weber Grant to the North line of the property conveyed to Joe Marchesotti, a married man, by Deed recorded January 8, 1957 in Book of Official Records, Volume 1933, Page 221, San Joaquin County Records, (4) Easterly along the North line of said Marchesotti property to the Easterly line of Highway 99, and (5) Northerly along said Easterly line of Highway 99 to the intersection of the North line of Section 4, Township 1 North, Range 7 East, Mount Diablo Base and Meridian; thence leaving said Central San Joaquin Water Conservation District Boundary Northerly along said Easterly line of Highway 99 to its intersection with the Southerly line of Section 59, C. M. Weber Grant and being a point on the Northerly boundary of said Central San Joaquin Water Conservation District; thence along said Central San Joaquin Water Conservation District Boundary the following six (6) courses, (1) Westerly along the Southerly lines of Sections 59 and 48 of C. M. Weber Grant to the Southwest corner of said Section 48, (2) Northerly along the West line of said Section 48 and Section 47 of said C. M. Weber Grant to the Northeast corner of land described in Deed to John S. Ladd, Jr. recorded September 17, 1947 in Book of Official Records, Volume 1082, Page 344, San Joaquin County Records, (3) South 72’ 35’ West along the North line of said Ladd land 35 chains, (4) South 73° 10’ West 34.72 chains to a point on the West line of Section 35, C. M. Weber Grant, (5) Southerly along said West line of Section 35 to the Northeast corner of said Section 24, C. M. Weber Grant, and (6) Westerly along the Northerly line of said Section 24 to the point of beginning, containing 3150 acres, more or less.

(b) Such exclusion shall take effect at the same time that the inclusion of the South Stockton Planning Area takes effect, and if the inclusion of the South Stockton Planning Area is of no force and effect by virtue of an election held pursuant to Section 24, such exclusion from the Central San Joaquin Water Conservation District shall similarly be of no force and effect.

(c) The inclusion of territory into the district pursuant to this act, except as specifically provided in this section, shall have no effect upon the continuing inclusion of the subject territory in other water conservation districts or in any irrigation district or any other special districts.

SECTION 26

(a) After the time for filing petitions pursuant to Section 24 has expired or an election has been held pursuant to Section 24, as the case may be, the board shall adopt a resolution confirming the inclusion of any planning area within the district pursuant to Section 24 and the exclusion of territory from the Central San Joaquin Water Conservation District pursuant to Section 25 if such inclusion and exclusion has not been disapproved at an election held pursuant to Section 24, and the secretary shall then prepare and execute a certificate of completion. Such certificate shall contain the following:

(1) The name of each district affected.

(2) A description of any territory included in the district and any territory excluded from the Central San Joaquin Water Conservation District, which descriptions may be made by

reference to the boundary shown on a map attached to such certificate.

(3) The date of adoption of the resolution confirming the inclusion and exclusion.

(4) A statement of the fact that the territory included shall be subject to a one-half-mill tax rather than the tax permitted by Section 75357 of the Water Code, as provided in Section 27.

(b) The secretary shall file his certificate of completion with the Secretary of State. Thereupon the Secretary of State shall execute a certificate of filing identifying the certificate of completion filed with him and stating the date of such filing. The Secretary of State shall transmit to the secretary a counterpart original of the certificate of filing.

(c) After receipt of the Secretary of State's certificate of filing, the secretary shall file with the County Recorder of the County of San Joaquin:

(1) A counterpart original of the secretary's certificate of completion; and

(2) The original or a counterpart original of the Secretary of State's certificate of filing.

(d) After recordation of the secretary's certificate of completion the Recorder of the County of San Joaquin shall file with the County Surveyor of the County of San Joaquin a copy of each of the boundary descriptions included in the certificate of completion.

(e) Any inclusion or exclusion confirmed by resolution of the board adopted pursuant to this section shall be completed from the date of filing the certificate of completion with the Secretary of State and shall be effective upon the date of the recordation made with the county recorder.

(f) The secretary shall also make such filings as may be provided for by Chapter 8 (commencing at Section 54900) of Part 1 of Division 2 of Title 5 of the Government Code, and for such purpose the inclusion and exclusion shall be deemed to be effective from the date of filing of the certificate of completion with the Secretary of State.

SECTION 27

(a) Upon the effective date of the inclusion of a planning area into the district pursuant to this act, each planning area shall thereafter be treated in all respects as a part of the district, except that the following special provisions shall apply within each planning area included within the district:

(1) The assessment permitted by Section 75357 of the Water Code shall not exceed one-half mill ($0.0005) on each one hundred cents ($1) of the assessed value of the lands within such planning area according to the last assessment rolls instead of the maximum two and one-half mills ($0.0025) permitted by Section 75357 of the Water Code.

(2) No ground water assessment or stream-delivered water charge shall be levied.

(b) A parcel of land within a planning area shall cease to be excluded from the full taxes, assessments, and charges as such exclusions are set forth in subdivision (a) in the event of either of the following:

(1) A parcel within a planning area is within the service area of a publicly or privately owned water utility which distributes domestic and industrial water which is all or in part furnished to such utility as treated surface water by the district; or

(2) The independent benefit commission pursuant to procedures set forth in Section 28 determines that a subject parcel is receiving a substantial benefit from district operations.

(c) In the case of the North Stockton Planning Area, the Central Stockton Planning Area, and the South Stockton Planning Area, no removal from the partial tax area shall take effect for any purpose prior to July 1, 1974.

(d) As used in this act "substantial benefit", means an actual raising by prior district operations, of ground water levels under a subject parcel or the actual retarding, by prior district operations, of the lowering of ground water levels under a subject parcel.
(e) Whenever one or more parcels are transferred from a partial tax area to a full tax area, the secretary shall file a statement as to all parcels which are transferred to a full tax area, as required by Chapter 8 (commencing at Section 54900) of Part 1 of Division 2 of Title 5 of the Government Code.
(f) After a parcel has been excluded from a partial tax area such exclusion shall be permanent.

SECTION 28
(a) If any one or more of the planning areas are finally included within the district, then following such final inclusion the board shall give written notice to the California District Securities Advisory Commission, and the advisory commission shall thereupon appoint a three-member commission, one of whom shall be a civil engineer whose practice encompasses irrigation, and one of whom shall be a civil engineer whose practice encompasses municipal water supply. Such independent benefit commission shall serve at the pleasure of the advisory commission. When a vacancy occurs in the membership of the independent benefit commission the secretary shall give notice to the advisory commission, and the advisory commission shall promptly appoint a successor. If the advisory commission fails to appoint a successor or to initially appoint the three members of the independent benefit commission, then after 60 days notice in writing to the advisory commission by the board, the board may fill such vacancy or make such appointments and the person so appointed by the board shall serve until such time as they are replaced by the advisory commission. The advisory commission may charge the district for the actual cost of performing the services required of the State Treasurer by this section.
(b) It shall be the duty of the independent benefit commission from time to time, in the manner set forth in this section, to determine whether a parcel within a planning area is receiving a substantial benefit from district operations.
(c) No member of the independent benefit commission shall have any interest in any land in the district, either directly or indirectly.
(d) Each member of the independent benefit commission, before entering upon his duties, shall take and subscribe an oath that he is not in any manner interested either directly or indirectly in any land in the district, and that he will perform the duties of commissioner to the best of his ability.
(e) The members of the independent benefit commission shall be paid by the district compensation for the services rendered by them in the amount or amounts fixed by the State Treasurer from time to time.
(f) The members of the independent benefit commission, upon their appointment and thereafter from time to time, shall select one of their members as chairman.
(g) Within 60 days of its appointment, and thereafter as provided in subdivision (j) of this section, the independent benefit commission shall meet at the district office. At the time of such initial meeting and thereafter as requested by the independent benefit commission the board shall furnish or make available to the independent benefit commission all data and information possessed by the district and which in the judgment of the independent benefit commission is relevant to the determinations to be made by it.
(h) After its initial meeting the independent benefit commission within the next succeeding

120 days shall determine which parcels within the partial tax areas are receiving a substantial benefit by the operations of the district and shall prepare a preliminary report of its findings. Upon its completion the preliminary report of the independent benefit commission shall be delivered to the secretary in writing. Such preliminary report shall list and identify each parcel which the independent benefit commission has determined is receiving a substantial benefit from district operations by the current description of such parcel as such description is then disclosed by the applicable current records of the assessor, and accordingly should be transferred from the partial tax area to the full tax area, Upon receipt of such preliminary report of the independent benefit commission the secretary shall publish pursuant to Section 6061 of the Government Code a notice of the receipt of such preliminary report. Such notice shall fix a date for a public hearing to be held on the report. Such publication shall be by a display advertisement in a newspaper of general circulation printed and published within the district, at least 20 days prior to the date at which the public hearing is to be held. The notice, among other information, shall contain an invitation to all interested persons to call at the office of the district and to examine said report of the independent benefit commission. At the time appointed in the notice, the independent benefit commission shall meet in the district office and hold a public hearing on its preliminary report. At the hearing any person interested in the district, including the board and members of the board, may, in person or by representative, appear and submit evidence concerning the matters contained in the preliminary report and the matters pending before the independent benefit commission. Within 30 days of the conclusion of its public hearing the independent benefit commission shall deliver its final report to the secretary.

(i) Upon receipt of the final report of the independent benefit commission the secretary shall publish a notice that such final report has been received and that the same is available for inspection by all interested persons at the office of the district. The notice shall be published pursuant to Section 6061 of the Government Code by display advertisement in a newspaper of general circulation printed and published within the district, and shall advise interested persons of their right to request review pursuant to this paragraph. Within 30 days of the publication of the notice required by this paragraph any person interested in a parcel affected by the final report of the independent benefit commission who is dissatisfied with the action of the independent benefit commission in connection with such parcel may file a request for review in writing on forms provided by the secretary requesting review by the board of the action of the independent benefit commission as to the parcel in which such person is interested. Upon the filing of a request for review the secretary shall set the matter for hearing by the board. At least 20 days prior to the hearing the secretary shall mail notice of such hearing to the person or persons requesting review. At the hearing the board shall hear evidence concerning the subject parcel and whether it is receiving a substantial benefit by the operations of the district. At the conclusion of the hearing the board may modify the report of the independent benefit commission by excluding one or more parcels from the list of parcels to be transferred from the partial tax area to the full tax area, but the board shall have no power to include any parcel within the full tax area which was not initially so included by the final report of the independent benefit commission. A final report of the independent benefit commission shall be final and shall take effect for all purposes upon either the expiration of 30 days after the publication of the notice provided for in this subdivision or upon the final action of the board in modifying the final report or determining not to modify the final report following the public hearing of the board in the event of the filing of a request for review

pursuant to this subdivision.
(j) After the initial hearing of the independent benefit commission so long as any portion of the district is not within the full tax area the independent benefit commission shall again hold an initial meeting as provided in subdivision (i) of this section during the fifth year next succeeding the year of the final adoption of the last final report of the independent benefit commission or at more frequent intervals upon written request of the board, and after such initial meeting shall proceed to the adoption of a new final report of the independent benefit commission in the manner set forth in subdivisions (g) to (i), inclusive, of this section.

SECTION 29
Failure of the district at any time to take action to collect any delinquent replenishment assessment or charge shall not be a waiver of the right of the district to collect such account at any time in the future by the utilization of such procedures and remedies as are granted to the district by this act.

SECTION 30
Whenever the district is required to mail any bill or notice to any owner the requirement of mailing shall be satisfied by deposit of such bill or notice in any postal facility regularly maintained by the government of the United States, with postage paid, addressed to the owner at his address as disclosed by the most recent record of the district. If the records of the district do not contain an address for such owner, such mailing shall be to his address as disclosed by the most recent equalized tax roll of the county. Any owner may, from time to time, file notices of change of address with the district.

SECTION 31
Notwithstanding Section 74223 of the Water Code and any other provisions of law in conflict with this section, the board shall hold regular meetings on the third Tuesday of each month. The board may by resolution change the frequency of, and the day for, holding regular meetings. Notice of any such change shall be published once a week for at least two consecutive weeks before the time for a regular meeting on the new meeting date in a newspaper of general circulation circulated in the district.

SECTION 32
Notwithstanding Section 74091 of the Water Code and any other provisions of law in conflict with this section, one director, who shall be an elector of the division in which such director resides, shall be elected for such division, by vote of the electors of the entire district, This section shall be applicable to voting at any district election held after January 1, 1972.

SECTION 33
The boundaries of the divisions of the district are relocated as follows:

Division No. 1

Beginning at a point on the Stockton and East San Joaquin Water Conservation District boundary, said point being the Southwest corner of the Northeast ¼ of Section 25, Township 2 North, Range 8 East, Mount Diablo Base and Meridian, said Stockton and East San Joaquin

Water Conservation District boundary being described in notice of election for the organization of the Stockton and East San Joaquin Water Conservation District, held June 1, 1948; thence along said Stockton and East San Joaquin Water Conservation District boundary the following thirty-five (35) courses, (1) East 1.0 mile, more or less, along the South line of the Northeast ¼ of said Section 25 and along the South line of the Northwest ¼ of Section 30, Township 2 North, Range 9 East to the center of said Section 30, (2) North 2½ miles, more or less, along the half section line running North and South through Sections 30, 19, and 18, Township 2 North, Range 9 East to the Southwest corner of the Southeast ¼ of Section 7, Township 2 North, Range 9 East, (3) East ½ mile, more or less, along the South line, of said Section 7 to the Southeast corner thereof, (4) North ¼ mile, more or less, along the East line of said Section 7 to the Southwest corner of the Northwest ¼ of the Southwest ¼ of Section 8, Township 2 North, Range 9 East, (5) East ¼ mile, more or less, along the South line of said Northwest ¼ of the Southwest ¼ of said Section 8 to the centerline of the Escalon-Bellota Road, (6) North ¼ mile, more or less, along said centerline of the Escalon-Bellota Road to its intersection with the South line of the North one-half of said Section 8, (7) East ¾ mile, more or less, along the South line of the North ½ of said Section 8 to the Southeast corner of the North ½ of said Section 8, (8) North ¼ mile, more or less, along the East line of Section 8 to the Southwest corner of the Northwest ¼ of the Northwest ¼ of Section 9, Township 2 North, Range 9 East, (9) East ¼ mile, more or less, along the South line of the Northwest ¼ of the Northwest ¼ of Section 9 to the Southeast corner thereof in the center of the Gilmore Road No.616, (10) North along the ¼, ¼ section line and along the center of said Gilmore Road No. 616 to a point 300.0 feet Southerly from the South line of Section 4, Township 2 North, Range 9 East, Mount Diablo Base and Meridian, (11) East 750.0 feet, (12) North 300.0 feet to a point on said South line of Section 4, (13) East along the South line of Section 4 to the Southeast corner of the Southwest ¼ of said Section 4, (14) North ½ mile, more or less, along the East line of the Southwest ¼ of Section 4 to the center of said Section 4, (15) East ½ mile, more or less, along the South line of the Northeast ¼ Section 4 to the Southeast corner of the Northeast ¼ of said Section 4, (16) North ½ mile, more or less, along the East line of said Northeast ¼ of Section 4 to the Southwest corner of Section 34, Township 3 North, Range 9 East, (17) East 1.0 mile, more or less, along the South line of Section 34 to the Southeast corner thereof, (18) South, along the West line of Section 2, Township 2 North, Range 9 East, to the center of the Bellota River Road, (19) Northeasterly along the center of said road to the East line of the Northwest ¼ of said Section 2, (20) North along said East line of the Northwest ¼ of said Section 2 to the Southwest corner of the Southeast ¼ of Section 35, Township 3 North, Range 9 East, (21) East $^{5}/_{16}$ mile, more or less, along the South line of Section 35 to the center of the Bellota River Road, (22) Northeasterly ¾ mile, more or less, along the center of said road to a point on the South line of the North ½ of Section 36, Township 3 North, Range 9 East, Mount Diablo Base and Meridian, (23) East ⅝ mile, more or less, along the South line of said North ½ of Section 36 to the County line between San Joaquin and Stanislaus Counties, (24) North ½ mile, more or less, along said County line to the corner common to San Joaquin, Stanislaus and Calaveras Counties, (25) Northwesterly ½ mile, more or less, along County Line between San Joaquin and Calaveras Counties to its intersection with the North line of the South ½ of Section 25, Township 3 North, Range 9 East, (26) West, along said North line to the Northwest corner of the Southwest ¼ of said Section 25, (27) South ½ mile, more or less, to the Southwest corner of said Section 25, (28) West ½ mile, more or less, to the Northwest corner of the Northeast,

¼ of Section 35 of Township 3 North, Range 9 East, (29) South ¼ mile, more or less, to the Northeast corner of the South ½ of the Northwest ¼ of said Section 35, (30) West ½ mile, more or less, to the Northwest corner of said South ½ of the Northwest ¼ of said Section 35, (31) South ¼ mile, more or less, to the Northeast corner of the South ½ of Section 34, Township 3 North, Range 9 East, (32) West 1½ miles, more or less, to a point in the center of the Linden Road at the center of Section 33, (33) Westerly ½ mile, more or less, along the center of said Linden Road to its intersection with the West line of Section 33, Township 3 North, Range 9 East, (34) South ½ mile, more or less, along the West line of Section 33 to the Northeast corner of Section 5, Township 2 North, Range 9 East, (35) West 3¼ miles, more or less, along the North line of Sections 5 and 6 of Township 2 North, Range 9 East, and the North line of Sections 1 and 2 of Township 2 North, Range 8 East to the Southwest corner of the East ½ of the East ½ of Section 35, Township 3 North, Range 8 East to a point on the boundary of that certain petition dated May 14, 1953, for inclusion in the Stockton and East San Joaquin Water Conservation District; thence along the boundary described in said petition, dated May 14, 1953 the following eighteen (18) courses, (1) Northerly ¾ mile, more or less, along the Westerly line of said East ½ of the East ½ of said Section 35 to the Northeast corner of the Southwest ¼ of the Northeast ¼ of said Section 35, (2) Westerly 418.3 feet along the North line of the Southwest ¼ of the Northeast ¼ of said Section 35, (3) Northerly ¼ mile, more or less, along a line parallel with, 418.3 feet Westerly of, measured at right angles to the West line of the Northeast ¼ of the Northeast ¼ of said Section 35 to intersection with the North line of said Section 35, (4) Westerly 1072.5 feet, more or less, along the North line of said Section 35 to the Northwest corner of the East 5 acres of the Northeast ¼ of the Northwest ¼ of said Section 35, (5) Southerly along the West line of said 5 acre tract to intersection with the North line of the Southeast ¼ of the Northwest ¼ of said Section 35, (6) Westerly along said North line to the Northwest corner of the Southeast ¼ of the Northwest ¼ of said Section 35, (7) Southerly 2645 feet, more or less, along the West line of the East ½ of the West ½ of said Section 35 to the Northeast corner of the Southwest ¼ of the Southwest ¼ of said Section 35, (8) Westerly 1324.5 feet, more or less, along the North line of the Southwest ¼ of the Southwest ¼ of said Section 35 to the Northwest corner of said Southwest ¼ of the Southwest ¼ of said Section 35, (9) Northerly 1 ¼ miles, more or less, along the East line of Sections 34 and 27, Township 3 North, Range 8 East, Mount Diablo Base and Meridian, to the Northeast corner of the Southeast ¼ of said Section 27, (10) Westerly ¼ mile, more or less along the North line of said Southeast ¼ to the Northwest corner of the Northeast ¼ of said Southeast ¼, (11) Southerly ⅛ mile, more or less, along the West line of the Northeast ¼ of the Southeast ¼ of said Section to the Southeast corner of the Northeast ¼ of the Northwest ¼ of the Southeast ¼ of said Section 27, (12) Westerly $^{1}/_{16}$ mile, more or less, along the South line of the Northeast ¼ of the Northwest ¼ of the Southeast ¼ of said Section to the Northwest corner of the East ½ of the Southwest ¼ , of the Northwest ¼ of the Southeast ¼ of said Section 27, (13) Southerly ⅓ mile, more or less, along the West line of the East ½ of the Southeast ¼ of the Northwest ¼ of the Southeast ¼ of said Section to the Southwest corner thereof, (14) Westerly $^{1}/_{16}$ mile, more or less, along the North line of the East ½ of the Southwest ¼ of the Southeast ¼ of said Section 27 to the Northwest corner thereof, (15) Southerly ¼ mile, more or less, along the West line of the East ½ of the Southwest ¼ of the Southeast ¼ to the Southwest corner thereof, (16) Westerly ⅞ mile, more or less, along the North line of Sections 34 and 33, Township 3 North, Range 8 East, Mount Diablo Base and Meridian to the Northwest corner of the Northeast ¼ of the

Northeast ¼ of said Section 33, (17) Southerly ¼ mile, more or less, along the West line of the Northeast ¼ of the Northeast ¼ of said Section to the Southwest corner thereof, and (18) Westerly ¼ mile, more or less, along the South line of the Northwest ¼ of the Northeast ¼ of said Section to the Southwest corner thereof being a point on said Stockton and East San Joaquin Water Conservation District boundary; thence along last said boundary the following four (4) courses; (1) Northerly ¼ mile, more or less, along the East line of the Northwest ¼ of said Section 33 to the Northeast corner of said Northwest ¼ , (2) Westerly ½ mile, more or less, along the North line of said Northwest ¼ to the Northwest corner thereof, (3) Northerly ½ mile, more or less, along the East line of the Southeast ¼ of Section 29, Township 3 North, Range 8 East to the Northeast corner of said Southeast ¼, and (4) Westerly ½ mile, more or less, along the North line of said Southeast ¼ to the Northwest corner thereof being a point on the centerline of Tully Road; thence leaving said Stockton and East San Joaquin Water Conservation District boundary the following seven (7) courses, (1) Southerly 2½ miles, more or less, along said centerline of Tully Road to intersection with the centerline of Comstock Road, said intersection being at the Southeast corner of the West ½ of Section 5, Township 2 North, Range 8 East, Mount Diablo Base and Meridian, (2) Westerly ¼ mile, more or less, along said centerline of Comstock Road to intersection with Tully Road at the Northeast corner of the West ½ of the West ½ of Section 8, Township 2 North, Range 8 East, Mount Diablo Base and Meridian, (3) Southerly 1.0 mile, more or less, along said centerline of Tully Road to intersection with the centerline of Baker Road at the Southeast corner of said West ½ of the West ½ of Section 8, (4) Easterly 3.0 miles, more or less, along said centerline of Baker Road and the ½ mile extension thereof to intersection with the centerline of Wall Road and being at the Southeast corner of the West ½ of the West ½ of Section 11, Township 2 North, Range 8 East, Mount Diablo Base and Meridian, (5) Southerly ½ mile, more or less, along said centerline of Wall Road to intersection with the centerline of Linden Road, (6) Northeasterly 1.3 miles, more or less, along said centerline of Linden Road to intersection with the centerline of Fine Road and (7) Southerly 2½ miles, more or less, along said centerline of Fine Road to the point of beginning.

Division No. 2

Beginning at a point on the Stockton and East San Joaquin Water Conservation District boundary, said point being the Southwest corner of fractional Section 1, Township 1 North, Range 7 East, Mount Diablo Base and Meridian, and being a point on the Easterly boundary of C. M. Weber Grant, said Stockton and East San Joaquin Water Conservation District boundary being described in notice of election for the organization of the Stockton and East San Joaquin Water Conservation District, held June 1, 1948; thence along said Stockton and East San Joaquin Water Conservation District boundary the following seven (7) courses, (1) Easterly ½ mile, more or less, along the Southerly line of said fractional Section 1 to the Southeast corner thereof, said corner being on the centerline of Jack Tone Road, (2) Easterly 4.0 miles, more or less, along the South lines of Sections 6, 5, 4, and 3, Township l North, Range 8 East, to the Southeast corner of said Section 3, (3) Northerly 1.0 mile, more or less, along the East line of said Section 3 to the Southwest corner of Section 35, Township 2 North, Range 8 East, being a point on the centerline of Copperopolis Road, (4) Easterly 1.0 mile, more or less, along the South line of said Section 35 and being along said centerline of Copperopolis Road to the Southeast corner of said Section 35 (5) Northerly ½ mile, more or

less, along the East line of said Section 35 to the Southwest corner of the Northwest ¼ of Section 36, Township 2 North, Range 8 East, (6) Easterly ½ mile, more or less, along the South line of said Northwest ¼ to the center of said Section 36 and being a point on the centerline of Fine Road, and (7) Northerly 1.0 mile, more or less, along the ¼ section line of Sections 36 and 25, Township 2 North, Range 8 East and along said centerline of Fine Road to the center of Section 25, Township 2 North, Range 8 East; thence leaving said Stockton and East San Joaquin Water Conservation District boundary the following nine (9) courses, (1) Northerly 2½ miles, more or less, along the said centerline of Fine Road to intersection with the centerline of Linden Road, (2) Southwesterly 1.3 miles, more or less, along said centerline of Linden Road to intersection with the centerline of Wall Road, (3) Northerly ½ mile, more or less, along said centerline of Wall Road to intersection with the Easterly projection of the centerline of Baker Road at a point being the Northeast corner of the West ½ of the Northwest ¼ of Section 14, Township 2 North, Range S East, (4) Westerly 3¼ miles, more or less, along said Easterly projection and said centerline of Baker Road to the Northwest corner of Section 17, Township 2 North, Range 8 East, said projection and said centerline of Baker Road being along the North lines of Sections 14, 15, 16, and 17, Township 2 North, Range 8 East, (5) Southerly 1.7 miles, more or less, along the West lines of Sections 17 and 20 to a point on the said centerline of Linden Road, (6) Southwesterly 3.7 miles, more or less, along said centerline of Linden Road to intersection with the centerline of Alpine Road, (7) Southeasterly 0.8 mile, more or less, along said centerline, of Alpine Road to intersection with the centerline of the Southern Pacific Railroad Company property, (8) Easterly 1¾ miles, more or less, along said centerline of the Southern Pacific Railroad Company property to a point on the Northerly projection of said Westerly line of fractional Section 1, Township I North, Range 7 East, and (9) Southerly 1½ miles, more or less, along said Northerly projection and said Easterly line of fractional Section 1 to the point of beginning.

Division No. 3

Beginning at a point on the Stockton and East San Joaquin Water Conservation District boundary, said point being the Northeast corner of the Southwest ¼ of Section 29, Township 3 North, Range 8 East, Mount Diablo Base and Meridian, said Stockton and East San Joaquin Water Conservation District boundary being described in notice of election for the organization of the Stockton and East San Joaquin Water Conservation District, held June 1, 1948; thence along said Stockton and East San Joaquin Water Conservation District boundary the following four (4) courses, (1) Westerly 1½ mile, more or less, along the ½ Section lines of Sections 29 and 30, Township 3 North, Range 8 East to the Northeast corner of the Southeast ¼ of Section 25, Township 3 North, Range 7 East, Mount Diablo Base and Meridian, (2) Westerly 3½ miles, more or less, along the ½ Section lines of Sections 25, 26, 27, and 28, Township 3 North, Range 7 East to intersection with the centerline of Alpine Road, (3) Southerly 1½ miles, more or less, along said centerline of Alpine Road to intersection with the North line of Section 4, Township 2 North, Range 7 East, Mount Diablo Base and Meridian, and being on the centerline of Eight Mile Road, (4) Westerly 0.9 mile, more or less, along the North line of Sections 4 and 5, Township 2 North, Range 7 East and being along said centerline of Eight Mile Road to intersection with the centerline of Hildreth Road; thence Southerly 1¼ mile, more or less, along said centerline of Hildreth Road to

intersection with centerline of Ashley Road; thence Southeasterly 1¼ mile, more or less, along said centerline of Ashley Road to intersection with centerline of the Calaveras River; thence Northeasterly 1.1 mile, more or less, along said centerline of the Calaveras River to intersection with centerline of Alpine Road; thence Southeasterly 3.7 miles, more or less, along said centerline of Alpine Road to intersection with the centerline of Linden Road; thence Northeasterly 3.7 miles, more or less, along said centerline of Linden Road to intersection with the West line of Section 20, Township 2 North, Range 8 East, Mount Diablo Base and Meridian; thence Northerly 1.7 miles, more or less, along said West line of Section 20 and along the West line of Section 17, Township 2 North, Range 8 East, Mount Diablo Base and Meridian to the Northwest corner thereof, being a point on the centerline of Baker Road; thence Easterly ¼ mile, more or less, along the North line of said Section 17 and the centerline of Baker Road to intersection with the centerline of Tully Road at the Southeast corner of the West ½ of the West ½ of Section 8, Township 2 North, Range 8 East, Mount Diablo Base and Meridian; thence Northerly 1.0 mile, more or less, along said centerline of Tully Road to intersection with the centerline of Comstock Road at the Northeast corner of said West ½ of West ½ of Section 8; thence Easterly ¼ mile, more or less, along said centerline of Comstock Road being along the South line of Section 5, Township 2 North, Range 8 East, Mount Diablo Base and Meridian to intersection with centerline of Tully Road at the Southeast corner of the West ½ of said Section 5; thence Northerly 2½ miles, more or less, along said centerline of Tully Road and the ½ Section line of said Section 5 and the ½ Section lines of Sections 32 and 29, Township 3 North, Range 8 East, Mount Diablo Base and Meridian to the point of beginning.

Division No. 4

Beginning at a point on the Stockton and East San Joaquin Water Conservation District boundary, said point being on the intersection of the centerline of Hildreth Road and the North line of Section 5, Township 2 North, Range 7 East, Mount Diablo Base and Meridian, said Stockton and East San Joaquin Water Conservation District boundary being described in notice of election for the organization of the Stockton and East San Joaquin Water Conservation District, said election being held June 1, 1948; thence leaving said District boundary Southerly 1¼ mile, more or less, along said centerline of Hildreth Road to intersection with the centerline of Ashley Road; thence Southeasterly 1¼ mile, more or less, along said centerline of Ashley Road to intersection with the centerline of the Calaveras River; thence Southwesterly 6.0 miles, more or less, along said centerline of the Calaveras River to intersection with the centerline of Pacific Avenue; thence Northerly 1.2 mile, more or less, along said centerline of Pacific Avenue to intersection with the centerline of Robinhood Drive; thence Westerly 0.6 mile, more or less, along said centerline of Robinhood Drive to intersection with the centerline of Pershing Avenue; thence Northerly 0.2 mile, more or less, along said centerline of Pershing Avenue to intersection with the South line of Swain Oaks Manor; thence South 69° 40’ West 1652.20 feet along said South line of Swain Oaks Manor to the Southwest corner thereof; thence North 02° 35’ West 112.62 feet along the West line of said Swain Oaks Manor to the North line of Section 29, Township 2 North, Range 6 East, Mount Diablo Base and Meridian; thence Westerly 1.0 mile, more or less, along said North line of Section 29 to the Northwest corner thereof; thence Southerly ⅛ mile, more or less, along the West line of said Section 29 to intersection with the centerline of Fourteen Mile

Slough (formerly called Twelve Mile Slough); thence Southerly and Westerly ½ mile, more or less, along said centerline of Fourteen Mile Slough to a point on the City Limits line; thence Westerly, Northwesterly, Northerly and Northeasterly 1.3 miles, more or less, along said centerline of Fourteen Mile Slough and said City Limits line to intersection with the West line of Section 19, Township 2 North, Range 6 East, Mount Diablo Base and Meridian; thence Northerly 0.5 mile, more or less, along said West line of Section 19 and said City Limits line to the Southeasterly corner of Mitchell Slough-Wright Tract Annexation—A-7-67; thence Westerly, Northerly, and Easterly 1.3 miles, more or less, along the City Limits line established by said Annexation—A-7-67 and by the Wright Tract Annexation—A-1-62 to the Northwest corner of said Section 19; thence Easterly 1900 feet, more or less, along the North line of said Section 19 and said City Limits line to the Southeast corner of the Shima Tract; thence leaving said City Limits line Northerly 6600 feet, more or less, along the Easterly boundary of said Shima Tract to a corner thereof; thence Westerly 1500 feet, more or less, along the Northerly boundary of said Shima Tract to the Southeast corner of the Atlas Tract; thence Northerly 3800 feet, more or less, along the Easterly boundary of said Atlas Tract to the Southwest corner of Section 6, Township 2 North, Range 6 East, Mount Diablo Base and Meridian; thence Northerly 1.0 mile, more or less, along the West line of said Section 6 to the Northwest corner thereof; thence Easterly 7⅞ miles, more or less, along the North line of said Township and Range and along the North line of Township 2 North, Range 7 East, Mount Diablo Base and Meridian, to the point of beginning.

Division No. 5

Beginning at a point on the Stockton and East San Joaquin Water Conservation District boundary, said point being the Southwest corner of fractional Section 1, Township 1 North, Range 7 East, Mount Diablo Base and Meridian, and being a point on the Easterly boundary of C. M. Weber Grant, said Stockton and East San Joaquin Water Conservation District boundary being described in notice of election for the organization of the Stockton and East San Joaquin Water Conservation District, held June 1, 1948; thence Northerly 1½ mile, more or less, along the Westerly line of said fractional Section 1 and the Northerly projection thereof to intersection with the centerline of the Southern Pacific Railroad Company property; thence Westerly 1¾ miles, more or less, along said centerline of the Southern Pacific Railroad Company property to intersection with the centerline of Alpine Road; thence Northwesterly 4½ miles, more or less, along said centerline of Alpine Road to intersection with the centerline of the Calaveras River; thence Westerly 5.1 miles, more or less, along said centerline of the Calaveras River to intersection with the centerline of the Stockton Diverting Canal; thence Southeasterly ¾ mile, more or less, along said centerline of the Stockton Diverting Canal to intersection with the centerline of North Wilson Way; thence Southerly 4⅝ miles, more or less, along the centerline of North Wilson Way and South Wilson Way to intersection with the centerline of Charter Way; thence Easterly 1¾ miles, more or less, along said centerline of Charter Way to intersection with the centerline of State Highway 99; thence Northerly 0.6 mile, more or less, along said centerline to the centerline of Washington Street; thence Easterly 1.4 miles, more or less, along said centerline of Washington Street to intersection with the centerline of the Stockton Diverting Canal; thence Southeasterly 0.8 mile, more or less, along said centerline of the Stockton Diverting Canal to intersection with the centerline of Copperopolis Road; thence Southwesterly 0.1 mile, more or less, along said

centerline of Copperopolis Road to intersection with Gillis Road; thence Southerly ⅞ mile, more or less, along said centerline of Gillis Road to a point on the boundary of said Stockton and East San Joaquin Water Conservation District, on the South line of State Highway Route 4 (Farmington Road); thence Easterly 1¼ mile, more or less, along said South line to intersection with the North line of fractional Section 11, Township 1 North, Range 7 East, Mount Diablo Base and Meridian and being also the Southerly boundary of C. M. Weber Grant; thence Easterly 1¼ mile, more or less, along said Southerly boundary of C. M. Weber Grant to a point where the Farmington Road turns Southeasterly; thence North 80.0 feet to a point on the Northerly line of a private roadway 80.0 feet in width; thence Easterly ¼ mile, more or less, along the Northerly line of said roadway to a point on the Westerly line of the Northeast ¼ of Section 12, Township 1 North, Range 7 East, Mount Diablo Base and Meridian, said point being on the Easterly line of the C. M. Weber Grant and distant 80.0 feet Northerly from the center of said Section 12; thence Northerly ½ mile, more or less, along said Easterly boundary of C. M. Weber Grant to the point of beginning.

Division No. 6

Beginning at the Northeast corner of Section 58, C. M. Weber Grant, said corner being a point on the boundary of the Central San Joaquin Water Conservation District; thence along said Central San Joaquin Water Conservation District boundary the following four (4) courses, (1) Southerly along the West line of Sections 68, 69, and 70 of said C. M. Weber Grant to the Southerly line of said Grant being also the North line of Section 28, Township 1 North, Range 7 East, Mount Diablo Base and Meridian; (2) Westerly along said Weber Grant line and along said North line of Section 28 to the Northwest corner of said Section 28; (3) Southerly along the West line of said Section 28 to intersection with the South line of Section 59, C. M. Weber Grant, and (4) Westerly along the said South line of Section 59 to a point on the Easterly right-of-way line of Highway 99; thence Southerly 3.4 miles, more or less, along said Easterly right-of-way line of Highway 99 to the intersection of said Easterly right-of-way with the Southwesterly boundary of French Camp Road, also known as French Camp Toll Road or Turnpike; thence Northwesterly 3 miles, more or less, along said Southwesterly boundary of French Camp Road to the Westerly right-of-way line of the Western Pacific Railroad Company property; thence Southerly 1.8 miles, more or less, along said Westerly right-of-way to a point on the Southerly line of Section P of C. M. Weber Grant; thence Westerly 1.2 miles, more or less, along the South line, of said C. M. Weber Grant to the Northeast corner of the Northwest ¼ of the Northwest ¼ of Section 14, Township 1 South, Range 6 East, Mount Diablo Base and Meridian, said corner being a point in the boundary of Reclamation District No. 17; thence Westerly 0.75 mile, more or less, along the boundary of said Reclamation District No. 17 to the Southeast corner of fractional Section 10 of said Township and Range and being the Southwest corner of the C. M. Weber Grant; thence along the boundary of said Reclamation District No. 17 and the boundary of said C. M. Weber Grant the following, four (4) courses, (1) Northerly 232.41 chains, more or less, along the Easterly boundary of fractional Sections 10 and 3 of said Township and Range and along the Easterly boundary of fractional Section 34, Township 1 North, Range 6 East, Mount Diablo Base and Meridian to the Northeast corner of said fractional Section 34, (2) East 20 chains, (3) North 40 chains, and (4) East 1076 feet; thence leaving said C. M. Weber Grant boundary and continuing along the boundary of said Reclamation District No. 17 the following five (5)

courses, (1) North 255.64 feet, (2) North 89° 15' East 364.98 feet, (3) North 66° 30' East 1246.34 feet to a point on the West line of said French Camp Road, (4) Northerly 1850 feet, more or less, along said West line of French Camp Road to the South bank of French Camp Slough, and (5) Westerly 1.75 mile, more or less, continuing along said boundary of Reclamation District No. 17 to the right or Easterly bank of the San Joaquin River; thence Northwesterly 1.1 mile, more or less, downstream along said right or Easterly bank of the San Joaquin River to intersection with the centerline of State Highway 4; thence Easterly 1¾ miles, more or less, along said centerline of Highway 4 to intersection with the centerline of Charter Way; thence Easterly 3½ miles, more or less, along said centerline of Charter Way to intersection with centerline of State Highway 99; thence Northerly 0.6 mile, more or less, along said centerline of State Highway 99 to intersection with centerline of Washington Street; thence Easterly 1.4 miles, more or less, along said, centerline of Washington Street to intersection with the centerline of the Stockton Diverting Canal; thence Southeasterly 0.8 mile, more or less, along said centerline of the Stockton Diverting Canal to intersection with the centerline of Copperopolis Road; thence Southwesterly 0.1 mile, more or less, along said centerline of Copperopolis Road to intersection with Gillis Road; thence Southerly ⅞ mile, more or less, along said centerline of Gillis Road to a point on the Stockton and East San Joaquin Water Conservation District boundary on the South line of Farmington Road, said Stockton and East San Joaquin Water Conservation District boundary being described in notice of election for the organization of the Stockton and East San Joaquin Water Conservation District, said election being held on June 1, 1948; thence along said Stockton and East San Joaquin Water Conservation District boundary the following three (3) courses, (1) Westerly ¼ mile, more or less, along said South line of Farmington Road to intersection with the Easterly line of Section 67, C. M. Weber Grant, (2) Southerly 0.4 mile, more or less, along said Easterly line of Section 67 to the Southeast corner thereof, and (3) Westerly 0.9 mile, more or less, along the Southerly line of said Section 67 to the point of beginning.

Division No. 7

Beginning at the point of intersection of the centerline of the Calaveras River with the centerline of Pacific Avenue, said point being on the Stockton and East San Joaquin Water Conservation District boundary, said Stockton and East San Joaquin Water Conservation District boundary being described in notice of election for the organization of the Stockton and East San Joaquin Water Conservation District, said election being held June 1, 1948; thence Easterly 2.0 miles, more or less, meandering the centerline of the Calaveras River upstream to intersection with centerline of the Stockton Diverting Canal; thence Southeasterly ¾ mile, more or less, along said centerline of Stockton Diverting Canal to intersection with the centerline of North Wilson Way; thence Southerly 4⅝ miles, more or less, along the said centerline of North Wilson Way and the centerline of South Wilson Way to intersection with the centerline of State Highway 4; thence Westerly 3.5 miles, more or less, along said centerline of State Highway 4 to the intersection with the right or Easterly bank of the San Joaquin River; thence Southerly 0.1 mile, more or less, along said right or Easterly bank of the San Joaquin River to a point bearing East 500 feet, more or less, from the Southeast corner of the 3.55 acre parcel of Oxidation Pond Annexation No. 3—A-1-66; thence West 500 feet, more or less, to said Southeast corner; thence Westerly 1.6 miles, more or less, along the Stockton City Limits line to the Easterly line of Dagget Road; thence Northerly 1.0 mile,

more or less, along said Easterly line of Dagget Road and along the Stockton City Limits line to a point on the centerline of Burns Cutoff; thence in a general Westerly, Northerly, and Northeasterly direction 3.09 miles, more or less, along said centerline of Burns Cutoff to intersection with the centerline of the Stockton Deep Water Channel; thence Northwesterly 0.9 mile, more or less, along said centerline of the Stockton Deep Water Channel to centerline Station 286+00, said Station 286+00 bearing Southwesterly 375 feet at right angles to said centerline from U.S.E.D., B.M. 4008; thence Northeasterly 300 feet, more or less, at right angles to said centerline to a point on the Southerly boundary of the Elmwood Tract; thence Easterly and Northerly 1.9 mile, more or less, along the Southerly and Easterly boundary of said Elmwood Tract to the point of intersection of said Easterly boundary with the Southerly levee of Fourteen Mile Slough (formerly called Twelve Mile Slough); thence North 500 feet, more or less, to the Stockton City Limits line, said City Limits line being along the centerline of said Fourteen Mile Slough; thence Easterly 1.2 mile, more or less, along said centerline of Fourteen Mile Slough to intersection with the West line of Section 29, Township 2 North, Range 6 East, Mount Diablo Base and Meridian; thence Northerly ⅛ mile, more or less, along said West line to the Northwest corner of said Section 29; thence Easterly 1.0 mile, more or less, along the North line of said Section 29 to intersection with the West line of Swain Oaks Manor; thence South 02° 35’ East 112.62 feet along the West line of said Swain Oaks Manor to the Southwest corner thereof; thence North, 69° 40’ East 1652.20 feet along the South line of said Swain Oaks Manor to the centerline of Pershing Avenue; thence Southerly 0.2 mile, more or less, along said centerline of Pershing Avenue to intersection with the centerline of Robinhood Drive; thence Easterly 0.6 mile, more or less, along said centerline of Robinhood Drive to intersection with the centerline of Pacific Avenue; thence Southerly 1.2 miles, more or less, along said centerline of Pacific Avenue to the point of beginning.

After the effective date of this section the division boundaries may be further relocated pursuant to the procedures set forth in Chapter 3 (commencing at Section 74430) of Part 4 of Division 21 of the Water Code, but no such relocation of division boundaries shall occur until four years after the effective date of this section, except that the board shall be authorized pursuant to the provisions of Section 74433 of the Water Code to relocate the boundaries of the division’s established by this section to the extent of any exclusion of land, including, but not limited to, any exclusion as a result of an election held pursuant to Section 24 of this act, and any inclusion of land or annexation of land to the district. This section shall not take effect until the adoption, pursuant to Section 26, of a resolution including one or more planning areas into the district.

SECTION 34

Notwithstanding the provisions of Sections 74019 and 74202 of the Water Code and Sections 23506 and 23509 of the Elections Code and any other provisions of law in conflict with this section, directors shall be elected as provided in this section. In all other respects the election of directors and the holding of office by directors and the expiration of their terms of office shall be governed by Division 21 (commencing at Section 74000) of the Water Code and the Uniform District Election Law. The general district election shall be held on the date of the general municipal election for the City of Stockton.

SECTION 35

Upon the annexation of any territory to the City of Stockton not within the district, such

territory shall automatically be included within the district and such inclusion shall take effect upon the effective date of the annexation of such territory to the City of Stockton. Upon the inclusion of any territory pursuant to this section, such territory shall be an additional planning area and shall be in the partial tax area, subject to the provisions of Section 27 as to inclusion in the full tax area. It shall not be necessary to undertake a benefit review procedure solely for the purpose of reviewing an area included within the district as an additional planning area pursuant to this section, but such additional planning area shall be reviewed at the time of subsequent benefit review procedures.

SECTION 36

Parcels of land within any planning area shall be excluded from paying all ad valorem taxes assessed by the district during any fiscal year (July 1 to June 30) following a preceding period extending from November 1 of any year to the next succeeding October 31 during which there was utilized on such a parcel for irrigated agricultural crops water taken from any watercourse which is located within the boundaries of the Delta Water Agency as the boundaries of the Delta Water Agency are presently defined by Section 10.1 of the Delta Water Agency Act of 1968 (Chapter 419 of the Statutes of 1968, as amended by Chapter 285 of the Statutes of 1969) or from the distribution system of the Woodbridge Irrigation District or from any watercourse entirely outside the boundaries of the district prior to the effective date of this act, if less than 50 percent of such a parcels water supply during such a subject period is extracted from the underground. This section shall be implemented by rule adopted by the board and any owner of a parcel desiring to take advantage of this section shall file such reports with the board as the board may require by rule. It shall be the duty of the secretary to annually file a statement as to all parcels to which this section is applicable, as provided by Chapter 8 (commencing at Section 54900) of Part 1 of Division 2 of Title 5 of the Government Code.

SECTION 37

The provisions of this act, insofar as they are substantially the same as existing law, are restatements and continuations of existing law and not new enactments.

SECTION 38

This act is an urgency statute necessary for the immediate preservation of the public peace, health or safety within the meaning of Article IV of the Constitution and shall go into immediate effect. The facts constituting such necessity are:

There is an urgent need to provide treated water within the Stockton-East Water District and facilities for such purpose cannot be adequately planned and initiated until such time as the extent of the jurisdiction of the district is determined, in order, therefore, to permit the provision of urgently needed water within the district at the earliest possible time, it is necessary that this act go into immediate effect.

Attachment Q Items to Address DWR Agricultural Water Management Plan Requirements

Attachment Q.1. Legal Certification and Apportionment Required for Water Measurement

Legal Certification and Apportionment Required for Water Measurement

SEWD can measure water at the farm-gate for all customers and therefore does not need to submit legal certification and apportionment required for water measurement. This DWR Legal Certification and Apportionment Required for Water Measurement requirement is not applicable to SEWD.

A recent field investigation conducted by SEWD, determined that five previously unmetered customer delivery are not metered, however, are inactive as of 2020. Meters will be installed if these connections become active. In the interim, SEWD could make comparisons with the groundwater metering usage for customers who are non-metered and help address self-reporting discrepancies regarding the irrigated acreage. Therefore, there are no legal constraints to installing or operating water meters for any of the District's customers.

Attachment Q.2. Engineer Certification and Apportionment Required for Water Measurement

Engineer Certification and Apportionment Required for Water Measurement

SEWD can measure water at the farm-gate for all customers and does not measure at the lateral (upstream of multiple customers). Therefore, SEWD does not need to submit engineer certification and apportionment required for water measurement. This DWR Engineer Certification and Apportionment Required for Water Measurement requirement is not applicable to SEWD.

A recent field investigation conducted by SEWD, determined that five previously unmetered customer delivery are not metered, however, are inactive as of 2020. Meters will be installed if these connections become active. In the interim, SEWD could make comparisons with the groundwater metering usage for customers who are non-metered and help address self-reporting discrepancies regarding the irrigated acreage. Therefore, there are no physical constraints at the farm-gate that prevent the installation or operation of water meters for any of the District's customers.

Attachment Q.3. Water Measurement Best Professional Practices

Water Measurement Best Professional Practices

Water Measurement Data Collection

Water measurement data are collected via manual readings. In 2019, SEWD began meter replacement program to replace the manual reading meters with a telemetry meter comply with California SB-88 and "Emergency Regulation for Measuring and Reporting The Diversion of Water." The new Advanced Metering Infrastructure (AMI) and Automated Meter Reading (AMR) will replace the manual readings by 2024. SEWD uses a certified pump tester to calibrate their meters. An SEWD engineer reviews and approves the pump tests.

Measurement Frequency

Meter readings are collected daily during use with the new AMI and AMR.

Method for Determining Irrigated Acres

SEWD requests that each of their agricultural customers reports on their agricultural irrigation use for the previous year. Customers are sent an *Owner's Water Use Statement for Calendar Year (the upcoming calendar year)*, and must return it to SEWD by mid-January. Customers are asked to report the following data and information:

1. crops grown,
2. method of irrigation,
3. acres fallow/not irrigated,
4. acres being irrigated with well water, and
5. acres being irrigated with surface water.

The customers are also asked to report non-agricultural irrigation use. The Owner's Water Use Statement requires acknowledgement that the information submitted is truthful under penalty of perjury. If the form is not turned in by the requested date, a 5 percent penalty is added to the customer's water bill.

Quality Control and Quality Assurance Procedures

Information provided by the customers on the *Owner's Water Use Statement for Calendar Year (the upcoming calendar year)* form sent out annually by SEWD is cross-checked by the District using water meter readings. SEWD first compares customer current water use with historical use to identify potential metering inaccuracies or errors. For any suspected inaccuracies or errors, SEWD then conducts a further investigation with the customer, including conducting a detailed meter inspection or testing.

SEWD conducts water audits for the DJWWTP. SEWD measures their diversions, the amount treated at the DJWWTP, and the amount delivered to its urban customers. Any discrepancies are immediately investigated, and repairs made as necessary.

SEWD has improved two significant water management practices. A recent field investigation conducted by SEWD, determined that five previously unmetered customer delivery are not metered, however, are inactive as of 2020. Meters will be installed if these connections become active. Secondly, it was determined that the PG&E or hour meters used for 3 customers have an accuracy well above +/- 6 percent. SEWD has begun replacing these meters, and has scheduled replacement by the end of 2021.

Since 2019, SEWD began the AMR and AMI meter replacement program and have replaced/installed a total of 67 meters. Installed meters include certificates of calibration.

Attachment Q.4. Description of Water Measurement Conversion to Volume

Description of Water Measurement Conversion to Volume

For SEWD water measurement devices that are not measuring water volume, the water measurements are obtained from flow meters by taking the gallons per minute rating of the pump and the run time reading from each pump system to calculate usage through the following formula:

(pump flow in gallons per minute) X (1 ft^3/7.481 gal) X (1 acre/43,560ft^2) X total minutes pump is operating = total acre-feet (volume)

A similar water measurement conversion to volume procedure is used for the PG&E or hour meters; however, all active pumps measured by pump test, run time or PG&E readings will be replaced over the next year (by 2021) in order to obtain more accurate volume reading measurements.

Attachment Q.5. Device Corrective Action Plan Required for Water Measurement

Device Corrective Action Plan Required for Water Measurement

A recent field investigation conducted by SEWD, determined that five previously unmetered customer delivery are not metered, however, are inactive as of 2020. The field investigation determined that all of these delivery points can be metered and meters will be installed if these connections become active.

It was also recently determined that the PG&E meters used for 3 customers have an accuracy above +/- 6 percent. SEWD has begun replacing these meters, and expects to have them replaced within the next year (by 2021).

The implementation schedule, finance plan, and budget allotment to install meters at the five remaining unmeasured delivery points if they become active, and to replace the PG&E meters are presented in Table VII.A.3.

Attachment Q.6. DWR Notice of AWMP Preparation

Public Participation

- Notification via e-mail to the County of San Joaquin and City of Stockton, of SEWD's intent to prepare an Agricultural Management Plan on March 4, 2021
- SEWD Board of Directors Agenda March 9, 2021
- Stockton Record Notice of Publication, March 15 and 22, 2021
- SEWD Board of Directors Agenda March 30, 2021
- Resolution of Adoption, March 30, 2021

- Notification via e-mail to the County of San Joaquin and City of Stockton, of SEWD's intent to prepare an Agricultural Management Plan on March 4,2021

From: Kristin Carido
Sent: Friday, March 05, 2021 8:53 AM
To: Manuel Verduzco
Subject: FW: 03/09/21 SEWD Board Meeting

Manuel,

This is the email that you'll need for the AWMP exhibit (for distribution of Notice to Prepare).

Thank you,
Kristin

From: Heather Wood <HWood@sewd.net>
Sent: Thursday, March 04, 2021 4:28 PM
To: Aaron Riojas <ARiojas@sewd.net>; Akaash Sharma <ASharma@sewd.net>; Alex Chetley (achetley@sjgov.org) <achetley@sjgov.org>; Analise Feliciano <AFeliciano@sewd.net>; Anders 'Andy' Christensen (widirrigation@gmail.com) <widirrigation@gmail.com>; Andrea Cahoon <ACahoon@sewd.net>; Andrew Watkins (watkins.andrew@verizon.net) <watkins.andrew@verizon.net>; Angelo Imbrunetti <AImbrunetti@sewd.net>; antoinette.celle@gmail.com; Barbara Zumwalt (metroeds@recordnet.com) <metroeds@recordnet.com>; Benjamin Woodland <BWoodland@sewd.net>; Brett Clark <BClark@sewd.net>; Chris Donis <CDonis@sewd.net>; Craig Anderson (cawriter.craig@gmail.com) <cawriter.craig@gmail.com>; D Tony Ivy (Leevie1989@yahoo.com) <Leevie1989@yahoo.com>; Danny Trejo <danny.trejo@stocktonca.gov>; Darrel Evensen <DEvensen@sewd.net>; David Higares <DHigares@sewd.net>; David Vilcherrez <DVilcherrez@sewd.net>; Ed Morley <EMorley@sewd.net>; Fritz Buchman (fbuchman@sjgov.org) <fbuchman@sjgov.org>; Gianna Cianfichi <GCianfichi@sewd.net>; gschwart@ebmud.com; Heather Wood <HWood@sewd.net>; Inderjit Dhatt <IDhatt@sewd.net>; Jason Colombini <jason.colombini@gmail.com>; Jason Mathews <JMathews@sewd.net>; Jeremiah Mecham <jmecham@calwater.com>; Jesse Stephens <JStephens@sewd.net>; Jim Wunderlich <JWunderlich@sewd.net>; John Vernier <JVernier@sewd.net>; Josh Barton <josh@bartonranch.com>; Juan Vega <JVega@sewd.net>; Justin Hopkins <JHopkins@sewd.net>; jzolezzi@herumcrabtree.com; Kevin Kauffman (kevin14882@comcast.net) <kevin14882@comcast.net>; Kristin Carido <KCarido@sewd.net>; Kyle Brothers <KBrothers@sewd.net>; Linden Herald (Lindenherald@gmail.com) <Lindenherald@gmail.com>; Lou Mendez <LMendez@sewd.net>; Malcolm Hearon <MHearon@sewd.net>; Manuel Verduzco <MVerduzco@sewd.net>; Mark Wellsfry <MWellsfry@sewd.net>; Max Storms (mstorms@calwater.com) <mstorms@calwater.com>; Mel Lytle (mel.lytle@stocktongov.com) <mel.lytle@stocktongov.com>; Melvin Panizza (Melpanizza@aol.com) <Melpanizza@aol.com>; Michael Selling (mselling@sjgov.org) <mselling@sjgov.org>; Mike Sutton <MSutton@sewd.net>; Paul Sanguinetti <sanguinetti_ranch@msn.com>; Phil Magana <PMagana@sewd.net>; Priya Ram <PRam@sewd.net>; Ralph Cruz <RCruz@sewd.net>; Rebecca Hitchcock <rebeccah@ccwd.org>; Reginald Gold <RGold@sewd.net>; Reid Roberts (reidwroberts@gmail.com) <reidwroberts@gmail.com>; Reyes Avalos <RAvalos@sewd.net>; Rich Atkins (riche5@hotmail.com) <riche5@hotmail.com>; Robert Heald <RHeald@sewd.net>; Ryan Welch <RWelch@sewd.net>; Sahyoun Lois (lsahyoun@sjgov.org) <lsahyoun@sjgov.org>; Scot A. Moody <SMoody@sewd.net>; Shane Romero <Sromero@calwater.com>; Shane Victor <SVictor@sewd.net>; Sheryl Morris <SMorris@sewd.net>; South San Joaquin Irrigation District (tsayler@ssjid.com) <tsayler@ssjid.com>; Steve Knell (srknell@oakdaleirrigation.com) <srknell@oakdaleirrigation.com>; Taylor Curtis <TCurtis@sewd.net>; tommcgurk@sbcglobal.net
Subject: 03/09/21 SEWD Board Meeting

Good Afternoon:

Please see the link below for the Stockton East Water District's 03/09/21 Board Meeting.

Link to the full agenda packet: **March 9, 2021**

Thank you,

Heather Wood, Administrative Clerk
Stockton East Water District
(209) 948-0333 – Phone
(209) 948-0423 – Fax
hwood@sewd.net

- Notification of SEWD's intent to prepare an Agricultural Management Plan

STOCKTON
EAST WATER
DISTRICT
PROVIDING SERVICE SINCE 1948
www.sewd.net

DIRECTORS

Richard Atkins
Vice President
Division 1

Andrew Watkins
President
Division 2

Alvin Cortopassi
Division 3

Melvin Panizza
Division 4

Paul Sanguinetti
Division 5

Loraine McGaughey
Division 6

Thomas McGurk
Division 7

STAFF

Scot A. Moody
General Manager

Justin M. Hopkins
Assistant General Manager

LEGAL COUNSEL

Jeanne M. Zolezzi
General Counsel

Phone 209-948-0333
Fax 209-948-0423

E-mail sewd@sewd.net

6767 East Main Street
Stockton, CA 95215

Post Office Box 5157
Stockton, CA 95205

Notification of Preparation
Agriculture Water Management Plan

The Agricultural Water Management Planning Act requires that the Stockton East Water District (District) prepare and adopt an Agricultural Water Management Plan (AWMP). The draft AWMP is available for public review and the District will hold a public hearing for public review and comment. The public review will begin Tuesday, March 16, 2021. The public hearing to receive comments on the AWMP will be proposed to for March 30, 2021 as part of the regular District Board meeting held at 12:30 PM, at the District office located at 6767 East Main Street, Stockton, CA 95215.

The draft AWMP is available on SEWD's website (i.e. www.sewd.net) or at the District Administrative Building for public viewing.

If you are unable to attend the public hearing, but would like to provide comments, you may send in your written comments via mail, or by e-mail prior to the public hearing to:

Manuel Verduzco
Stockton East Water District
P.O. Box 5157
Stockton, CA 95205
mverduzco@sewd.net

Should you have any questions, please call me at 209.948.0333.

Thank you,

Scot A. Moody
General Manager

- SEWD Board of Directors Agenda March 9, 2021

STOCKTON EAST WATER DISTRICT

PROVIDING SERVICE SINCE 1916

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DIRECTORS

Richard Atkins
Vice President
Division 1

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President
Division 2

Alvin Corsiglia
Division 3

Melvin Panizza
Division 4

Paul Sanguinetti
Division 5

Lorraine McGaughey
Division 6

Thomas McGurk
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STAFF

Scott A. Moody
General Manager

Justin M. Hopkins
Assistant General Manager

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6767 East Main Street
Stockton, CA 95215

Post Office Box 5157
Stockton, CA 95205

MEETING NOTICE

THE REGULAR MEETING OF THE BOARD OF DIRECTORS OF THE STOCKTON EAST WATER DISTRICT WILL BE HELD AT 12:30 P.M., TUESDAY, MARCH 9, 2021 AT THE DISTRICT OFFICE, 6767 EAST MAIN STREET STOCKTON, CALIFORNIA 95215

Assistance for the Disabled: If you are disabled in any way and need accommodation to participate in the meeting, please contact Kristin Caridio, Administrative Services Manager (209) 948-0333 at least 48-hours in advance for assistance so the necessary arrangements can be made.

DUE TO COVID-19 STOCKTON EAST WATER DISTRICT BOARD MEETINGS WILL BE AVAILABLE BY TELECONFERENCE.

Please call (425) 436-6336/Access Code: 866228# to be connected to the Regular Board Meeting, to begin at 12:30 p.m.

Agendas and minutes are located on our website at www.sewd.net.

AGENDA

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A.	**Pledge of Allegiance (Director Panizza) & Roll Call**	
B.	**Consent Calendar (None)**	
C.	**Public Comment (Non-Agenda Items)**	
D.	**Scheduled Presentations and Agenda Items**	
	1. Minutes 03/02/21 Regular Meeting	01
	2. Warrants – California Public Employees' Retirement System	05
	3. Business Consultant Agreements 04/01/21 – 03/31/22	
	a. Anthony Barkett	07
	b. Doyce Boesch	09
	4. Stockton East Water District – Shut Down Projects Update Memo	11
	5. Stockton East Water District – Rubicon SCADA – One Year Subscription Memo	15
	6. Disinfection Alternatives Study Presentation	17
	7. Stockton East Water District – Draft 2020 Agricultural Water Management Plan	31

E. Committee Reports

1. Eastern San Joaquin Groundwater Authority Ad-Hoc Technical Advisory Committee (TAC) Meeting, 03/04/21 — 35

2. San Joaquin County & Delta Water Quality Coalition Meeting, 03/08/21

F. Report of the General Manager

1. Water Supply Report as of 03/01/21 — 37

2. Information Items
   a. Material Included, but Bound Separately from Agenda Packet:
      1. New Agreement Will Conserve Threatened Steelhead And Secure Water Operations On The Calaveras River For 50 Years, CSDA News, Jan/Feb 2021

      2. COVID Drops – Says MD, The Linden Herald, 02/25/21

      3. Federal COVID-19 Relief Heads To U.S. Senate; Special District Advocacy Hits Critical Juncture, CSDA eNews, 03/01/21

3. Report on General Manager Activities
   a. Stockton East Water District Activities Update

G. Director Reports

H. Communications

I. Agenda Planning/Upcoming Events

1. Eastern San Joaquin Groundwater Authority Steering Committee Meeting, 8:30 a.m., 03/10/21
   Teleconference Only

2. ACWA State Legislative Committee Meeting, 10:00 a.m., 03/12/21

J. Report of the Counsel

1. Closed Session - Existing Litigation
   Stockton East Water District vs. City of Stockton, et al.
   Government Code 54956.9 (a)

2. Closed Session – Personnel
   Government Code 54957

K. Adjournment

Certification of Posting

I hereby certify that on March 4, 2021 I posted a copy of the foregoing agenda in the outside display case at the District Office, 6767 East Main Street, Stockton, California, said time being at least 72 hours in advance of the meeting of the Board of Directors of the Stockton East Water District (Government Code Section 54954.2).
Executed at Stockton, California on March 4, 2021.

Kristin Carido, Administrative Services Manager
Stockton East Water District

Any materials related to items on this agenda distributed to the Board of Directors of Stockton East Water District less than 72 hours before the public meeting are available for public inspection at the District's office located at the following address: 6767 East Main Street, Stockton, CA 95215. Upon request, these materials may be available in an alternative format to persons with disabilities.

Stockton Record Notice of Publication, March 15 and 22, 2021

THE RECORD
PROOF OF PUBLICATION

STATE OF CALIFORNIA
COUNTY OF SAN JOAQUIN

THE UNDERSIGNED SAYS:

I am a citizen of the United States and a resident of San Joaquin County; I am over the age of 18 years and not a part to or interested in the above-entitled matter. I am the principal clerk of the printer of THE RECORD, a newspaper of general publication, printed and published daily in the City of Stockton, County of San Joaquin by the Superior Court of the County of San Joaquin, State of California, under the date of February 26, 1952, File No. 52857, San Joaquin County Records; that the notice of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published each regular and entire issue of said newspaper and not in any supplement thereof on the following dates,
To wit,
March 15 2021,
March 22 2021

I declare under penalty of perjury that the foregoing is true and correct. Executed on March 22, 2021 In Stockton California

Delailah Little,
The Record

0000227360

NOTICE OF PUBLIC HEARING

Stockton East Water District (District) will be holding a public hearing on their 2020 Agricultural Water Management Plan (AWMP), prepared for the California State Department of Water Resources. The draft AWMP is available on SEWD's website (i.e. www.sewd.net) or at the District Administrative Building for public viewing. The public hearing to receive comments on the AWMP will be proposed for March 30, 2021 as part of the regular District Board meeting held at 12:30 p.m., at the District office located at 6767 East Main Street, Stockton, CA 95215. Please contact Manuel Verduzco at mverduzco@sewd.net or (209) 444-3131, with any questions.
#227360 3/15, 3/22, 2021

- SEWD Board of Directors Agenda March 30, 2021

STOCKTON EAST WATER DISTRICT

PROVIDING SERVICE SINCE 1968

www.sewd.net

DIRECTORS

Richard Atkins
Vice President
Division 1

Andrew Watkins
President
Division 2

Alvin Cortopassi
Division 3

Melvin Panizza
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6757 East Main Street
Stockton, CA 95215

Post Office Box 5157
Stockton, CA 95205

MEETING NOTICE

THE REGULAR MEETING OF THE BOARD OF DIRECTORS OF THE STOCKTON EAST WATER DISTRICT WILL BE HELD AT 12:30 P.M., TUESDAY, MARCH 30, 2021 AT THE DISTRICT OFFICE, 6767 EAST MAIN STREET STOCKTON, CALIFORNIA 95215

Assistance for the Disabled: If you are disabled in any way and need accommodation to participate in the meeting, please contact Kristin Caridis, Administrative Services Manager (209) 948-0333 at least 48-hours in advance for assistance so the necessary arrangements can be made.

DUE TO COVID-19 STOCKTON EAST WATER DISTRICT BOARD MEETINGS WILL BE AVAILABLE BY TELECONFERENCE.

Please call (425) 436-6336/Access Code: 866228# to be connected to the Regular Board Meeting, to begin at 12:30 p.m.

Agendas and minutes are located on our website at www.sewd.net.

AGENDA

Page No

A. Pledge of Allegiance (Director McGurk) & Roll Call

B. Consent Calendar (None)

C. Public Comment (Non-Agenda Items)

D. Scheduled Presentations and Agenda Items

1. Minutes 03/23/21 Regular Meeting 01

2. Warrants
   - a. Fund 68 – Municipal & Industrial Groundwater Fund 07
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   - c. Fund 71 – Water Supply Fund 11
   - d. Fund 91 – Vehicle Fund 13
   - e. Fund 94 – Municipal & Industrial Fund 15
   - f. Summary 17
   - g. Short Names/Acronym List 19
   - h. SEWD Vehicles & Equipment 21

3. Stockton East Water District Agricultural Water Management Plan
   - a. Public Hearing 23
   - b. Resolution No. 20-21-18 – Stockton East Water District Water Management Plan 25

E. Committee Reports

F. Report of the General Manager

1. Water Supply Report as of 03/22/21 — 27

2. Information Items
   a. Material Included, but Bound Separately from Agenda Packet:
      1. Lathrop Closer To Being Able To Discharge Treated Water In SJ River, The Manteca Bulletin, 03/17/21
      2. State Warns Of Possible Water Shortages, The Manteca Bulletin, 03/23/21
      3. Harder Requests New Funding For Flood Protection Project Impacting 165,000 People, 262 Critical Sites, Harder.house.gov, 03/19/21

3. Report on General Manager Activities
   a. Stockton East Water District Activities Update

G. Director Reports

H. Communications

1. Stockton East Water District – Stockton East Water District/ Treatment Plant Scheduling of Water Letter, 03/18/21 — 29

I. Agenda Planning/Upcoming Events

1. Eastern San Joaquin Groundwater Authority Ad-Hoc Technical Advisory Committee (TAC) Meeting, 04/01/21

J. Report of the Counsel

1. Closed Session - Potential Litigation
   Government Code 54956.9 (c) – one case

2. Closed Session - Existing Litigation
   Stockton East Water District vs. City of Stockton, et al.
   Government Code 54956.9 (a)

K. Adjournment

Certification of Posting

I hereby certify that on March 25, 2021 I posted a copy of the foregoing agenda in the outside display case at the District Office, 6767 East Main Street, Stockton, California, said time being at least 72 hours in advance of the meeting of the Board of Directors of the Stockton East Water District (Government Code Section 54954.2).
Executed at Stockton, California on March 25, 2021.

Kristin Carido, Administrative Services Manager
Stockton East Water District

Any materials related to items on this agenda distributed to the Board of Directors of Stockton East Water District less than 72 hours before the public meeting are available for public inspection at the District's office located at the following address: 6767 East Main Street, Stockton, CA 95215. Upon request, these materials may be available in an alternative format to persons with disabilities.

- Resolution of Adoption, March 30, 2021

RESOLUTION NO. 20-21-18
A RESOLUTION OF THE BOARD OF DIRECTORS OF THE
STOCKTON EAST WATER DISTRICT
2020 AGRICULTURAL WATER MANAGEMENT PLAN

The Board of Directors of Stockton East Water District does hereby resolve as follows:

WHEREAS, the Agricultural Water Management Planning Act (Act), codified in Section 10800 et seq., of the water code (CWC) requires all agricultural water suppliers to prepare and adopt an agricultural water management plan; and

WHEREAS, the Stockton East Water District is an agricultural water supplier providing water to 10,000 or more irrigated acres and is required to adopt an Agricultural Water Management Plan and submit the plan to DWR for compliance with Governor Brown's Executive Order B-29-15, signed April 1, 2015; and

WHEREAS, Stockton East Water District has therefore, prepared and circulated for public review a draft 2020 Agricultural Water Management Plan and properly noticed the public hearing regarding said Plan on March 15, 2021 and March 22, 2021; and

WHEREAS, Stockton East Water District held a Public Hearing on Tuesday, March 30, 2021 to receive comments and accept the District's Agricultural Water Management Plan; and

NOW, THEREFORE, BE IT RESOLVED by Stockton East Water District as follows:

1. The 2020 Agricultural Water Management Plan is hereby adopted;
2. The General Manager is hereby authorized and directed to file the 2020 Agricultural Water Management Plan with the California Department of Water Resources within 30 days after this date;
3. The General Manager is hereby authorized and directed to take appropriate action to implement the 2020 Agricultural Water Management Plan in accordance with the Agricultural Water Management Plan Act, codified in Section 10800 et seq., of the California Water Code and California Department of Water Resources regulations, as such may be modified from time to time.

PASSED AND ADOPTED at the regular meeting of the Board of Directors of Stockton East Water District on March 30, 2021 by the following vote:

Ayes: Atkins, Cortopassi, McGaughey, McGurk, Panizza, Sanguinetti, Watkins
Noes: None
Absent: None
Abstain: None

Andrew Watkins, President
Board of Directors

ATTEST:

Scot A. Moody
Secretary of the Board

Attachment Q.7. Efficient Water Management Practices

Efficient Water Management Practices

Table VII.A.3 summarizes the implementation status of each EWMP.

Table VII.A.3 Schedule to Implement EWMPs (Water Code §10608.56(d).

EWMP	Implementation Schedule	Finance Plan	Budget Allotment[1]	USBR 2017 Criteria
Critical				
1 – Water Measurement	All metered	NA	$190,000	Critical 1
2 - Volume-Based Pricing	Volumetric pricing	NA	staff time	Critical 4
Conditional				
1 – Alternate Land Use	No problem areas	NA	staff time	Exemptible 1
2 – Recycled Water Use	Not applicable	NA	staff time	Exemptible 2
3 – On-Farm Irrigation Capital Improvements	Surface Water Incentive Program	NA	$900	Exemptible 3
4 – Incentive Pricing Structure	Not applicable[2]	NA	staff time	Exemptible 4
5 – Infrastructure Improvements	Implemented	NA	staff time	Exemptible 5a Exemptible 5b
6 – Order/Delivery Flexibility	Implemented	NA	staff time	Exemptible 6
7 – Supplier Spill and Tailwater Systems	On-going	NA	staff time	Exemptible 7
8 – Conjunctive Use	Implemented	NA	$1,300	Exemptible 9
9 – Automated Canal Controls	On-going	NA	$197,800	Exemptible 10
10 – Customer Pump Test/Eval.	On-going	NA	$8,100	Exemptible 11
11 – Water Conservation Coordinator	On-going	NA	$3,200	Critical 2
12 – Water Management Services to Customers	On-going	NA	$7,100	Critical 3
13 – Identify Institutional Changes	On-going	NA	staff time	No equivalent
14 – Supplier Pump Improved Efficiency	On-going	NA	staff time	Critical 5
Grand Total all EWMPs				

Note: There is no equivalent USBR Conditional EWMP #13 or #14

1 Amounts are in addition to staff time.

2 SEWD's enabling legislation limits its ability to offer incentive pricing.

SEWD WATER CONSERVATION COORDINATOR

CONTACT INFORMATION

Water Conservation Coordinator: Kristin Coon

Kristin Coon Consulting
501 Pine Valley Court
Valley Springs, CA 95252
Business Phone: 209-304-1734
Business Email: **water7996@gmail.com**
SAWS WEP Email: **kcoon@sewd.net**
Online Brochure: **http://www.sewd.net/docs/SAWS-Ed-Brochure2.pdf**

POSITION DESCRIPTION

Kristin Coon is the Water Conservation Coordinator for the Stockton Area Water Suppliers (SAWS), an alliance of water providers in Stockton, California that includes the Stockton East Water District, the City of Stockton MUD, San Joaquin County, and the California Water Service Company. Ms. Coon, as Kristin Coon Consulting, is an independent contractor with the Stockton East Water District on behalf of the Stockton Area Water Suppliers. In this capacity, Ms. Coon has managed and implemented the Stockton Area Water Suppliers Water Education Program (SAWS WEP) since 2004. The SAWS WEP provides comprehensive water education outreach for Stockton area schools and the general public, offering seven standards based, grade level specific in-classroom water education presentations for K-6 in all schools in the Stockton metropolitan area, as well as after school presentations, school wide assembly programs and outreach at Stockton youth-oriented events. The contract between Kristin Coon Consulting and SEWD has been renewed annually since 2004 and is currently in effect through July 31, 2020.

EXAMPLES OF DUTIES

Kristin Coon Consulting, on behalf of the SAWS WEP, employs two water education instructors. The water education instructors are each assigned approximately nine in-class K-6 or after school presentations per week. Each presentation runs 70-120 minutes. Using informative lecture, illustrations, demonstrations and hands-on activities, each presentation ties water education, water conservation and awareness to grade level Common Core and NGSS standards. Kristin Coon's duties include comprehensive program management, including curriculum preparation, presentation scheduling, and administrative duties, as well as back up for the in-class water education presenters. In the 2018/2019 school year, the SAWS WEP reached over 25,000 Stockton area students and residents through in-class and after school presentations, school-wide assembly programs and youth-oriented events.

EMPLOYMENT STANDARDS

Kristin Coon Consulting is a sole proprietorship. All California employment standards are observed.

REQUIRED KNOWLEDGE AND ABILITIES

Kristin Coon has been employed in various capacities in the water industry since 1996, including grant writing, customer service, public relations/outreach and public information dissemination.

REQUIRED TRAINING AND EDUCATION

Kristin Coon holds a bachelor's in management from St. Mary's College of California and a Specialized Studies Certificate in Public Relations from UC Davis.

Attachment S Irrigation Training & Research Center Draft Technical Memorandum: Crop Water Use for SEWD

ITRC
moving water in new directions
IRRIGATION TRAINING & RESEARCH CENTER
California Polytechnic State University
San Luis Obispo, CA 93407-0730
Phone: (805) 756-2434 FAX: (805) 756-2433 www.itrc.org

DRAFT - TECHNICAL MEMORANDUM

Date: July 17, 2013

To: Jeanette Thomas - Stockton East Water District
Ed Morley - Stockton East Water District

From: Dr. Stuart Styles, P.E, D.WRE., ITRC Director
Darren Roan, ITRC Irrigation Technician

Subject: Crop Water Use for SWED

The Irrigation Training & Research Center (ITRC), working under a technical services agreement with the United States Bureau of Reclamation (USBR) Mid-Pacific Region, has undertaken this review of the procedure and materials used to create estimates for Irrigation Allowance Index evaluations and Crop Water Requirements for the growers in Stockton East Water District (SEWD). These values will be used to create ***a real-time irrigation scheduling tool*** for the growers as well as a simple evaluation of total water use at the end of the irrigation season.

Disclaimer

The ET and Crop Water Requirement values are best estimates based on specific information such as published ETc and ETo values, planting and harvesting dates, and precipitation. These values are not exact and are dependent on Distribution Uniformity, plant vigor, growing season and irrigation method. Canopy cover and cover crop health are important factors in ET, which is then reflected in Crop Water Requirements.

Persons involved in irrigation scheduling should use a variety of reality checks. In particular, weather-based ET estimates should always be accompanied by in-field soil moisture verifications.

Irrigation Allowance Index

The Irrigation Allowance Index (IAI) is calculated by comparing two values:

1. The estimated amount of water that should be applied to a certain crop (called the "Irrigation Allowance"), which is based on:
    a. Crop Evapotranspiration (ETc)
    b. Effective Precipitation for a typical precipitation year
    c. An assumed Distribution Uniformity (DU) of 0.80
2. How much water was actually applied

Table 1 contains a list of Irrigation Allowance values for crops in the SEWD region in AF/A for a typical year.

Table 1. Irrigation Allowance values for SEWD Crops

Irrigation Allowance Index		Typical year
ID #'s	SEWD Crop Category	Total AF/A
1	Walnuts	4.1
2	Walnuts w/ cover crop	5.1
3	Apple, Pear, Cherry, Plum, Prune, Olives	3.8
4	Apples, Plums, Cherries, etc. w/cover crop	5.4
5	Vineyards and Grapes	2.6
6	Vineyards and Grapes w/ cover crop	3.7
7	Vineyards and Grapes (Immature)	1.6
8	Tomatoes and Peppers	2.2
9	Chestnuts, Orchard, Pecans, Persimmons	3.6
10	Chestnuts, Orchard, etc. w/ cover crop	5.3
11	Barley, Grain, Hay, Oats, Wheat	1.5
12	Corn	2.7
13	Peach, Nectarine and Apricots	3.6
14	Peach, Nectarine, etc. w/ cover crop	5.2
15	Peach, Nectarine and Apricots (Immature)	2.1
16	Beans	2.3
17	Alfalfa	4.4
18	Melons, Squash, and Cucumbers	1.3
19	Lilac	3.6
20	Asparagus	1.4
21	Pumpkin, Eggplant, Carrots, Row or Field Crops	2.3
22	Onions	1.6
23	Almonds	3.9
24	Almonds w/cover crop	4.9
25	Immature Almonds	2.3
26	Strawberries, Blueberries, Berries	2.3
27	Pistachio	3.4
28	Pistachio w/ cover crop	4.7
29	Immature Pistachio	2.0
30	Citrus (no ground cover)	3.4
31	Immature Citrus	2.0
32	Potatoes, Sugar Beets, Turnip, etc.	3.2
33	Cotton	3.0
34	Avocado	3.6
35	Misc. Subtropical	3.6

These index values are compared to actual water use for each field, and a decimal value is calculated to determine the Irrigation Allowance Index (IAI) for that field. The IAI value for each field is then compared to 1.0, which is the critical point. If the IAI is greater than 1.0 then the grower is most likely over-irrigating. If the IAI is less than 1.0 then the grower is either under-irrigating or using deficit irrigation practices. Note: The index does *not* account for special exceptions to the allowance values such as water quality issues, frost control and/or the extra water necessary to overcome a Distribution Uniformity less than the assumed 0.80.

A sample Irrigation Allowance Index form that would be filled out by growers in order to determine their fields' IAI value is included in *Appendix A*.

Crop Evapotranspiration Information for SEWD

A list of crops and Crop Evapotranspiration (ETc) values was complied specifically for Stockton East Water District in order to provide SEWD growers with a resource for irrigation management. ETc data was taken from published data available from the Irrigation Training and Research Center (ITRC) of California Polytechnic State University, San Luis Obispo, California. The data is available on the ITRC website (www.itrc.org/etdata/etmain.htm). ETc data is available for specific climate "Zones" throughout California and for different precipitation years (typical, wet, and dry years), as well as for different irrigation methods (surface, sprinkler, drip/micro irrigation). The ETc data for Stockton East Water District was compiled for a typical precipitation year in Zone 12, using a list of crops grown in the Stockton East Water District. This table is included in *Appendix B*.

To determine a typical precipitation year for Stockton East Water District, a ten-year average was taken from data collected at CIMIS Station #70, Manteca. The average precipitation per year was found to be 12 inches per year. A wet year was determined to be a year with more than 15 inches of precipitation, and a dry year was a year with less than 9 inches of precipitation.

Determining the Crop Coefficient, Kc (Typical Year)

A table was created with monthly and annual Crop Coefficients (Kc). These Kc values are used to create current year ETc values. The Kc values for the listed crops were computed by using the equation below.

$$ET_c = ET_o \times Kc$$

Where, ETc is the Crop Evapotranspiration
ETo is the Grass Reference Crop Evapotranspiration
Kc is the Crop Coefficient

The ETo and ETc are provided in the published ITRC Evapotranspiration data mentioned above. A table with the Kc values for a typical year for Stockton East Water District is attached in *Appendix B*.

Crop Water Requirement (Typical Year)

The Crop Water Requirement is an estimate of how much water the crop needs to provide full yield. This estimate takes into account the ETc, the Effective Precipitation and the extra water needed to be applied to overcome Distribution Uniformity (for SEWD the DU was assumed to be 0.8).

The Effective Precipitation is the amount of precipitation that contributes to the ETc; all precipitation that is not "effective" (used by plants) is considered lost to deep percolation. For example, there may be 3 inches of total precipitation in a month, but the crop only uses 1 inch of water for ETc (Note: the ETc includes the water used by the plant for Transpiration plus the water that is lost to Evaporation). Therefore, the effective precipitation for that month would be 1 inch, while 2 inches of precipitation is lost to

deep percolation. As another example, if there is only 0.5 inches of precipitation in a month but the crop uses 3 inches for ETc, then none of the precipitation is lost, and all of the precipitation (0.5 inches) is considered "effective".

The Distribution Uniformity was assumed to be 0.8, but this could be either high or low depending on the management of the fields and the current irrigation system in place.

To determine the Crop Water Requirement, the Effective Precipitation is subtracted from the ETc and then is divided by the Distribution Uniformity. This is the amount of water that would need to be provided by the grower for the crop to produce full yield. The equation is:

$$Crop\ Water\ Requirement = \frac{ETc - Effective\ Precipitation}{Distribution\ Uniformity\ (DU)}$$

Once the Crop Water Requirement *per month* was determined, the total Crop Water Requirement for the *year* (acre-in) was calculated and then converted to acre-ft by dividing by 12 inches per foot. A table with the Crop Water Requirements for SEWD is included in *Appendix B*.

Weighted Average Crop Water Requirement

To provide an idea of how much water should be applied per acre for the Stockton East Water District, the weighted average was taken of the Crop Water Requirement and the total acres per crop in the Stockton East Water District. This factor came out to be 4.6 acre-ft of water per acre. This factor is affected heavily by the amount of walnuts with cover crops that are grown in the district, as walnuts with cover crops are almost half of the total crop acreage and use about 5.1 acre-ft of water in a typical year.

ETo (Current Year)

The ETo data for the current year is available using a new method provided by CIMIS called spatial data. Spatial data provides daily representative ETo and solar radiation values within 2 km of any position chosen in California. To check the accuracy of the spatial data, two years' worth of ETo data was compared against the two closest CIMIS stations to Stockton East Water District: Station 70 (Manteca), and Station 166 (Lodi West). The spatial data was found to be within 5% of the ETo data calculated at the stations. The data and results are listed in Table 2.

In order to provide CIMIS spatial data representative of the entire District, a central location in Stockton East Water District was chosen to use as the point for the CIMIS spatial data. The coordinates for the location chosen are 38.01°N, 121.17°W. This location is shown along with the district boundaries in Figure 1.

Table 2. CIMIS Station ETo Data vs. CIMIS Spatial ETo Data (2011-2012)

		Manteca Station		*Lodi West Station*	
Year	Month	CIMIS 70	Spatial	CIMIS 166	Spatial
2011	Jan	0.82	0.89	0.80	0.91
	Feb	2.08	1.98	2.03	2.02
	Mar	2.80	2.77	2.45	2.64
	Apr	4.69	4.59	4.69	4.62
	May	5.72	5.82	5.75	5.67
	Jun	6.66	6.75	6.53	6.58
	Jul	7.54	7.4	7.43	7.33
	Aug	6.81	6.8	6.61	6.81
	Sep	5.24	5.57	5.23	5.53
	Oct	3.29	3.24	3.18	3.19
	Nov	1.75	1.66	1.58	1.62
	Dec	1.50	1.43	1.43	1.51
Total (in)		48.9	48.9	47.7	48.4
Percent Difference		Standard	0%	Standard	2%
2012	Jan	1.61	1.47	1.48	1.48
	Feb	2.47	2.38	2.21	2.34
	Mar	2.94	2.84	2.80	2.80
	Apr	4.67	4.49	4.65	4.44
	May	7.15	7.09	7.11	6.98
	Jun	7.79	7.75	7.66	7.70
	Jul	7.71	7.76	7.53	7.78
	Aug	7.02	7.21	6.96	7.29
	Sep	5.30	5.57	5.31	5.52
	Oct	3.29	3.44	3.22	3.37
	Nov	1.91	1.57	0.67	1.51
	Dec	1.09	1.03	0.00	1.01
Total (in)		53.0	52.6	49.6	52.2
Percent Difference		Standard	-1%	Standard	5%

NOTE: The Penman-Monteith equation, which is recommended by ITRC, was used to calculate the CIMIS station data instead of the reference CIMIS equation.
Percent Difference (%) = 100% * ((Spatial - CIMIS Station)/(CIMIS Station))

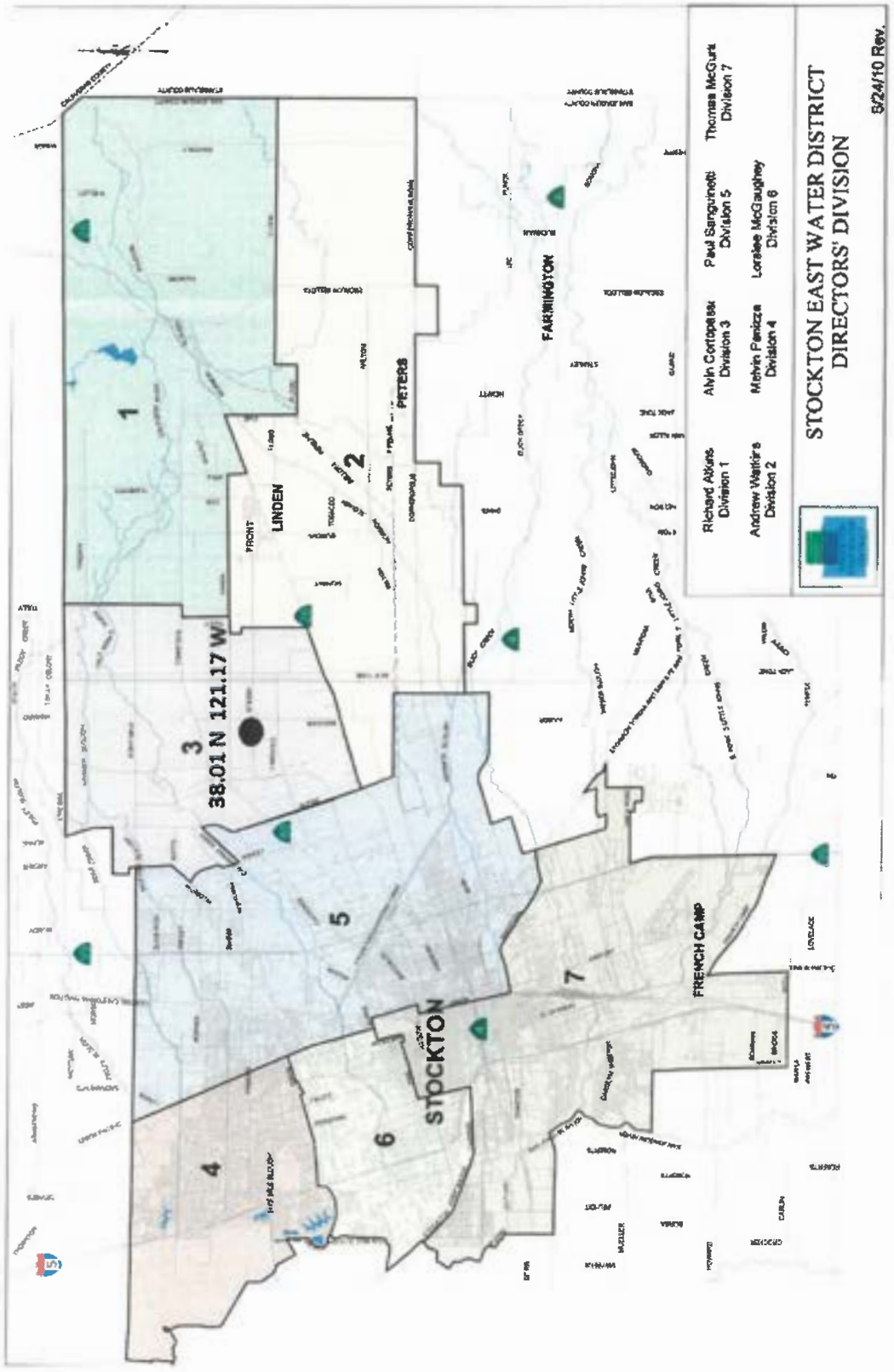


Figure 1. Central position in Stockton East Water District
38.01° N, 121.17° W

Accessing CIMIS Spatial ETo Data

1. Go to the CIMIS website (wwwcimis.water.ca.gov/cimis/myCimis.jsp) and log on. If you do not have a CIMIS account, register for an account. A username and password is required to login; it is free to create an account.
2. Select the "Spatial CIMIS" tab in the main navigational menu at the top of the window.
3. In the left-hand navigational menu, select "Map Reports".
4. Find the location on the map in either of three ways:
    a. Enter the address of the field under "Map" and click "Address Search".
    b. Enter the latitude and longitude of the field (in decimal degrees) and click "Address Search".
    c. Navigate the map using the arrows and zoom slider; place the first pin by clicking on the field.
5. Multiple coordinate points can be requested, allowing the user to request information for multiple fields.
6. Scroll down the page and select English units.
7. Set the date range that is needed.
8. Under "Reporting Method," select "CSV with Headers" if you wish to use Microsoft Excel to view and input the data or select "Web Report" to view the information in a web browser.
9. Click "Submit". Depending on the reporting method you selected, the file will either downloaded to your computer where you can view or save it, or the report will be displayed in your web browser.

Once the ETo data is collected, the monthly ETo can be calculated by adding up the total amount of ETo in each month. These monthly ETo values can be used to create monthly ETc values.

Calculating ETc (Current Year)

To determine the monthly ETc for the current year, multiply the ETo per month by the Crop Coefficient (Kc) using the equation below.

$$ETc = Kc \times ETo$$

The ETo can be taken from the typical year values or other precipitation years depending on which precipitation year the Crop Coefficient is needed for.

Accessing *Monthly* CIMIS Station Data

1. Return to the CIMIS website and log on (wwwcimis.water.ca.gov/cimis/myCimis.jsp).
2. Select the "CIMIS Data" tab.
3. Scroll down the main page until you find a list of options for sensor data reports listed in blue (e.g., Hourly, Daily, Daily ETo Variance, Monthly, etc.). Click on the blue "Monthly" link.
4. From the Station List select the station that is closest to the field, which should be either:

70 – Manteca
166 – Lodi West

5. Scroll down the page and select English units
6. Select the date range to be from January 1, of the current year to the last day of the previous month.
7. Select the appropriate reporting method, and click "Submit".

This station report will provide various data for each month such as average maximum temperature and average low temperature, but the only information needed for the Crop Water Requirement is the total precipitation, which is listed as a monthly value.

A table containing the ETo and ETc for the current year (2013) is located in *Appendix C.*

Calculated Crop Water Requirement (Current Year)

Using the ETc for the current year, the Crop Water Requirement for the current year is calculated by subtracting the Effective Precipitation from the ETc and then dividing by the Distribution Uniformity. Again, the formula is:

$$Crop\ Water\ Requirement = \frac{ETc - Effective\ Precipitation}{Distribution\ Uniformity\ (DU)}$$

This current year's Crop Water Requirement can be compared to the amount of water applied to the field to date, to gauge if the field is being over- or under-irrigated. A table with the current year's (2013) Crop Water Requirements for Stockton East Water District is located in *Appendix C.*

Real-Time Scheduling Tool

In order to provide the SEWD growers with a *real-time irrigation scheduling tool*, the Projected Weekly ETc and Crop Water Requirements are estimated and listed in the current year's tables located in *Appendix C.* With this information the SEWD growers can schedule their irrigations to meet the Projected Crop Water Requirement.

Projected Weekly ETo and Effective Precipitation

The previous calculations for ETc and Crop Water Requirements were monthly values. To properly calculate the Projected Weekly ETc and Crop Water Requirement, the Projected Weekly ETo and Effective Precipitation need to be calculated. This is achieved by summing the daily values from the previous year, for each week to be projected. The same process described above that is used to access CIMIS spatial data can be used since the CIMIS spatial data retrieved is a daily value. The process to access *Daily* Effective Precipitation values from a local CIMIS Station is listed below:

Accessing *Daily* CIMIS Station Data

1. Return to the CIMIS website and log on (wwwcimis.water.ca.gov/cimis/myCimis.jsp).
2. Select the "CIMIS Data" tab.

3. Scroll down the main page until you find a list of options for sensor data reports listed in blue (e.g., Hourly, Daily, Daily ETo Variance, Monthly, etc.). Click on the blue "Daily" link.
4. From the Station List select the station that is closest to the field, which should be either:
   70 – Manteca
   166 – Lodi West
5. Scroll down the page and select English units
6. Set the date range to the days to be projected from the previous year.
7. Select the appropriate reporting method, and click "Submit".

Projected Weekly ETc

The Projected Weekly ETc is then calculated by multiplying the Projected Weekly ETo, by the Kc factor using the equation below:

$$Projected\ Weekly\ ET_C = Projected\ Weekly\ ET_O * K_C$$

The Kc value for this calculation is the Kc value for the month that is being projected, found on the Typical Year – Kc tab of the spreadsheet.

Projected Weekly Crop Water Requirements

Using the Projected Weekly ETc the Projected Weekly Crop Water Requirement is calculated by subtracting the Projected Weekly Effective Precipitation from the Projected Weekly ETc and then dividing by the Distribution Uniformity. The equation is:

$$Projected\ Weekly\ Crop\ Water\ Requirement = \frac{Projected\ Weekly\ Etc - Projected\ Weekly\ Precipitation}{Distribution\ Uniformity}$$

Note that the Projected Weekly ETc and Crop Water Requirements are only an estimate and should be used with current weather data, along with crop and soil monitoring practices to provide accurate irrigation scheduling information.

Appendix A:
Irrigation Allowance Index Evaluation Form

Stockton East Water District
Irrigation Allowance Index

Name

Please fill out the white cells in the tables below to compute your **Irrigation Allowance Index** *value.*

WATER SOURCES

GROUNDWATER

	Groundwater Wells (List ALL State Well #'s)	Extractions (in Acre-feet) January - June		July - December		Yearly Total
1		0	+	0	=	0
2		0	+	0	=	0
3		0	+	0	=	0
4		0	+	0	=	0
5		0	+	0	=	0
				Total Volume for Wells	=	0

SEWD DELIVERIES

Deliveries from SEWD (in Acre-feet) January - June		July - December		Yearly Total
0	+	0	=	0
		Total Volume from SEWD	=	0

OTHER SOURCES (Neighbor's well, etc.)

	Source	Volume (in Acre-feet) January - June		July - December		Yearly Total
1		0	+	0	=	0
2		0	+	0	=	0
				Total Volume from Other Sources	=	0

Total Volume for All Sources	=	0

CROP WATER USE

Please see Page 2 for a list of Irrigation Allowance values by crop type.

	ID# and Crop Category (from list)		# of Acres		Irrigation Allowance per crop type
1	Please choose a crop category	x	0	=	0
2	Please choose a crop category	x	0	=	0
3	Please choose a crop category	x	0	=	0
4	Please choose a crop category	x	0	=	0
			Total Irrigation Allowance	=	0

$$\text{Irrigation Allowance Index} = \frac{\text{Total Volume from All Sources}}{\text{Total Irrigation Allowance}} = \frac{0}{0} =$$

Clear Form

Calculate!

Irrigation Allowance Index		Typical year
ID #'s	SEWD Crop Category	Total AF/A
1	Walnuts	4.1
2	Walnuts w/ cover crop	5.1
3	Apple, Pear, Cherry, Plum, Prune, Olives	3.8
4	Apples, Plums, Cherries, etc. w/cover crop	5.4
5	Vineyards and Grapes	2.6
6	Vineyards and Grapes w/ cover crop	3.7
7	Vineyards and Grapes (Immature)	1.6
8	Tomatoes and Peppers	2.2
9	Chestnuts, Orchard, Pecans, Persimmons	3.6
10	Chestnuts, Orchard, etc. w/ cover crop	5.3
11	Barley, Grain, Hay, Oats, Wheat	1.5
12	Corn	2.7
13	Peach, Nectarine and Apricots	3.6
14	Peach, Nectarine, etc. w/ cover crop	5.2
15	Peach, Nectarine and Apricots (Immature)	2.1
16	Beans	2.3
17	Alfalfa	4.4
18	Melons, Squash, and Cucumbers	1.3
19	Lilac	3.6
20	Asparagus	1.4
21	Pumpkin, Eggplant, Carrots, Row or Field Crops	2.3
22	Onions	1.6
23	Almonds	3.9
24	Almonds w/cover crop	4.9
25	Immature Almonds	2.3
26	Strawberries, Blueberries, Berries	2.3
27	Pistachio	3.4
28	Pistachio w/ cover crop	4.7
29	Immature Pistachio	2.0
30	Citrus (no ground cover)	3.4
31	Immature Citrus	2.0
32	Potatoes, Sugar Beets, Turnip, etc.	3.2
33	Cotton	3.0
34	Avocado	3.6
35	Misc. Subtropical	3.6

Appendix B:
ETc, Kc and Crop Water Requirement Tables for Typical Year

ETc Table for Irrigation Scheduling and Design

ETo Zone 12 Monthly Evapotranspiration

Typical Year

IRRIGATION TRAINING AND RESEARCH CENTER, California Polytechnic State University, San Luis Obispo (PUBLISHED DATA)

Table does not include adjustments for bare spots and reduced vigor

Total Crop Evapotranspiration for SEWD

			Typical Year Jan Inch	Feb Inch	Mar Inch	Apr Inch	May Inch	Jun Inch	Jul Inch	Aug Inch	Sep Inch	Oct Inch	Nov Inch	Dec Inch	Annual Inches	
Precipitation			6.8	0.3	1.3	0.2	0.2	0.2	0.1	0.3	0.1	0.6	4.2	2.1	16.5	
Effective Precipitation			0.7	0.3	1.3	0.2	0.2	0.2	0.1	0.3	0.1	0.6	1.1	1.0	6.2	
Grass Reference ETo			**0.7**	**2.1**	**4.0**	**5.6**	**7.3**	**7.6**	**8.0**	**6.8**	**5.4**	**3.5**	**1.1**	**1.0**	**53.0**	
ITRC Crops	SEWD Crops	Acreage														Annual (AF)
Walnuts	Walnuts	0.0	0.8	0.9	1.7	1.8	5.8	8.3	8.7	7.4	5.2	2.6	0.5	1.0	44.7	0.0
Walnuts w/ cover crop	Walnuts w/ cover crop	22,743.4	0.8	2.1	3.4	3.7	6.9	9.4	9.8	8.4	6.0	2.7	1.0	1.2	55.5	4.6
Apple, Pear, Cherry, Plum and Prune	Apple, Pear, Cherry, Plum, Prune, Olives	0.0	0.8	0.9	1.6	2.3	6.5	7.3	7.6	6.5	4.9	2.3	0.5	1.0	42.1	0.0
Apples, Plums, Cherries etc w/cover crop	Apples, Plums, Cherries etc w/cover crop	11,937.0	0.8	2.4	4.1	4.9	7.9	9.0	9.5	8.0	6.1	3.5	0.9	1.2	58.2	57.9
Grape Vines with 80% canopy	Vineyards and Grapes	0.0	0.8	0.9	1.3	1.1	3.5	6.0	6.4	5.1	2.8	0.6	0.5	1.0	30.0	0.0
Grape Vines with cover crop (80% canopy)	Vineyards and Grapes w/ cover crop	4,242.6	0.9	2.0	3.2	3.1	5.2	6.8	7.2	5.8	3.4	2.1	0.7	1.2	41.5	14.7
Immature Grapes Vines with 50% canopy	Vineyards and Grapes (Immature)	0.0	0.9	0.9	1.2	0.8	2.3	3.7	3.9	3.2	1.7	0.6	0.5	1.0	20.7	0.0
Tomatoes and Peppers	Tomatoes and Peppers	2,270.0	0.9	0.9	1.7	0.8	3.7	8.0	7.3	1.2	0.1	0.6	0.5	1.0	26.4	59.9
Misc. Deciduous	Chestnuts, Orchard, Pecans, Persimmons	0.0	0.8	0.9	1.6	2.3	6.2	6.8	7.2	6.3	4.7	2.2	0.5	1.0	40.4	0.0
Misc. Deciduous w/ cover crop	Chestnuts, Orchard, etc. w/ cover crop	1,494.0	0.8	2.4	4.1	4.8	7.6	8.6	9.1	7.8	6.0	3.3	0.9	1.2	56.5	84.4
Grain and Grain Hay*	Barley, Grain, Hay, Oats, Wheat	1,253.3	0.9	2.3	4.4	6.1	3.9	0.2	0.2	0.3	0.1	0.6	0.5	1.0	20.5	25.7
Corn and Grain Sorghum*	Corn	921.8	0.9	0.9	2.2	1.4	2.6	7.0	8.1	5.5	0.5	0.6	0.5	1.0	31.0	28.6
Peach, Nectarine and Apricots	Peach, Nectarine and Apricots	0.0	0.8	0.9	1.6	2.2	6.0	6.8	7.2	6.2	4.6	2.2	0.5	1.0	40.1	0.0
Peach, Nectarine, etc. w/ cover crop	Peach, Nectarine, etc. w/ cover crop	784.2	0.8	2.4	4.1	4.7	7.4	8.6	9.1	7.8	5.9	3.3	0.9	1.2	56.1	44.0
Immature Peaches, Nectarines, etc	Peach, Nectarine and Apricots (Immature)	0.0	0.8	0.9	1.3	1.2	3.5	4.0	4.2	3.7	2.6	1.6	0.5	1.0	25.3	0.0
Beans **	Beans	767.5	0.9	0.9	2.2	1.2	2.6	7.1	7.7	3.0	0.1	0.6	0.5	1.0	27.7	21.3
Alfalfa Hay and Clover*	Alfalfa	619.2	0.9	2.3	4.2	5.2	6.7	7.0	7.2	6.0	4.9	2.2	0.9	1.2	48.5	30.0
Melons, Squash, and Cucumbers	Melons, Squash, and Cucumbers	550.4	0.9	0.9	1.1	0.2	1.0	1.0	4.2	4.9	1.5	0.6	0.5	1.0	17.8	9.8
Flowers, Nursery and Christmas Tree	Lilac	373.0	0.8	0.9	1.6	2.3	6.2	6.8	7.2	6.3	4.7	2.2	0.5	1.0	40.4	15.1
Small Vegetables	Asparagus	345.7	0.9	1.5	3.6	5.5	1.6	0.2	0.2	1.4	1.3	1.3	0.8	1.2	19.5	6.7
Misc. field crops	Pumpkin, Eggplant, Carrots, Row or Field crops	332.1	0.9	0.9	2.2	1.4	2.6	7.1	7.7	3.1	0.1	0.6	0.5	1.0	28.0	9.3
Onions and Garlic	Onions	234.8	0.9	2.1	3.7	4.8	5.2	1.3	0.2	0.3	0.1	0.6	1.0	1.0	21.2	4.9
Almonds	Almonds	0.0	0.8	1.0	1.8	3.0	6.5	7.0	7.3	6.2	4.7	3.1	0.5	1.0	42.7	0.0
Almonds w/cover crop	Almonds w/cover crop	197.3	0.8	2.1	3.5	4.9	7.6	8.1	8.4	7.3	5.5	3.2	0.9	1.2	53.5	10.6
Immature Almonds	Immature Almonds	0.0	0.8	1.0	1.6	2.0	4.0	4.2	4.3	3.9	2.8	2.0	0.5	1.0	27.9	0.0
Strawberries	Strawberries, Blueberries, Berries	71.2	0.9	0.9	2.2	1.4	2.6	7.1	7.7	3.1	0.1	0.6	0.5	1.0	28.0	1.7
Pistachio	Pistachio	0.0	0.8	0.9	1.1	1.1	2.7	6.0	8.5	7.4	5.4	2.8	0.5	1.0	38.2	0.0
Pistachio w/ cover crop	Pistachio w/ cover crop	17.0	0.8	2.1	3.4	3.7	5.3	7.3	9.0	7.7	5.9	3.6	0.9	1.2	50.8	0.7
Immature Pistachio	Immature Pistachio	0.0	0.8	0.9	1.1	0.7	1.5	3.7	5.1	4.6	3.3	1.8	0.5	1.0	25.0	0.0
Citrus (no ground cover)	Citrus (no ground cover)	0.0	0.8	2.2	3.5	3.9	4.8	5.1	5.2	4.6	3.5	2.8	0.9	1.2	38.4	0.0
Immature Citrus	Immature Citrus	0.0	0.9	1.6	2.5	2.2	3.0	3.1	3.2	2.9	2.1	1.9	0.7	1.1	25.1	0.0
Potatoes, Sugar beets, Turnip etc..	Potatoes, Sugar beets, Turnip etc..	0.0	0.9	1.2	2.6	5.6	7.8	8.1	7.2	0.4	0.1	0.6	0.5	1.0	35.9	0.0
Cotton	Cotton	0.0	0.9	0.9	1.1	1.0	1.7	4.7	8.4	7.4	5.0	1.4	0.5	1.0	33.9	0.0
Avocado	Avocado	0.0	0.8	0.9	1.6	2.3	6.2	6.8	7.2	6.3	4.7	2.2	0.5	1.0	40.4	0.0
Misc Subtropical	Misc Subtropical	0.0	0.8	0.9	1.6	2.3	6.2	6.8	7.2	6.3	4.7	2.2	0.5	1.0	40.4	0.0
	Total Acreage	49,154.3								Weighted Average ETc per acre					50.6	4.2

* ETc data from Surface Irrigation Calculation

** ETc data from Sprinkler Irrigation Calculation

kc Table for Irrigation Scheduling and Design
Zone 12 Monthly Evapotranspiration
Typical Year
IRRIGATION TRAINING AND RESEARCH CENTER, California Polytechnic State University, San Luis Obispo (PUBLISHED DATA)
Table does not include adjustments for bare spots and reduced vigor

Kc- Crop Coefficient for SEWD

			Typical Year Jan Inch	Feb Inch	Mar Inch	Apr Inch	May Inch	Jun Inch	Jul Inch	Aug Inch	Sep Inch	Oct Inch	Nov Inch	Dec Inch	Annual Inches
Precipitation			6.8	0.3	1.3	0.2	0.2	0.2	0.1	0.3	0.1	0.6	4.2	2.1	16.5
Effective Precipitation			0.7	0.3	1.3	0.2	0.2	0.2	0.1	0.3	0.1	0.6	1.1	1.0	6.2
Grass Reference ETo			**0.7**	**2.1**	**4.0**	**5.6**	**7.3**	**7.6**	**8.0**	**6.8**	**5.4**	**3.5**	**1.1**	**1.0**	**53.0**
ITRC Crops	SEWD Crops	Acreage													
Walnuts	Walnuts	0.0	1.1	0.4	0.4	0.3	0.8	1.1	1.1	1.1	1.0	0.8	0.5	1.0	0.8
Walnuts w/ cover crop	Walnuts w/ cover crop	22,743.4	1.1	1.0	0.9	0.7	0.9	1.2	1.2	1.2	1.1	0.8	0.9	1.2	1.0
Apple, Pear, Cherry, Plum and Prune	Apple, Pear, Cherry, Plum, Prune, Olives	0.0	1.2	0.4	0.4	0.4	0.9	1.0	1.0	1.0	0.9	0.7	0.4	1.0	0.8
Apples, Plums, Cherries etc w/cover crop	Apples, Plums, Cherries etc w/cover crop	11,937.0	1.2	1.1	1.0	0.9	1.1	1.2	1.2	1.2	1.1	1.0	0.8	1.2	1.1
Grape Vines with 80% canopy	Vineyards and Grapes	0.0	1.2	0.4	0.3	0.2	0.5	0.8	0.8	0.8	0.5	0.2	0.4	1.0	0.6
Grape Vines with cover crop (80% canopy)	Vineyards and Grapes w/ cover crop	4,242.6	1.2	0.9	0.8	0.6	0.7	0.9	0.9	0.9	0.6	0.6	0.6	1.2	0.8
Immature Grapes Vines with 50% canopy	Vineyards and Grapes (immature)	0.0	1.2	0.4	0.3	0.1	0.3	0.5	0.5	0.5	0.3	0.2	0.4	1.0	0.4
Tomatoes and Peppers	Tomatoes and Peppers	2,270.0	1.2	0.4	0.4	0.1	0.5	1.1	0.9	0.2	0.0	0.2	0.5	1.0	0.5
Misc. Deciduous	Chestnuts, Orchard, Pecans, Persimmons	0.0	1.2	0.4	0.4	0.4	0.9	0.9	0.9	0.9	0.9	0.6	0.4	1.0	0.8
Misc. Deciduous w/ cover crop	Chestnuts, Orchard, etc. w/ cover crop	1,494.0	1.2	1.1	1.0	0.9	1.0	1.1	1.1	1.2	1.1	1.0	0.8	1.2	1.1
Grain and Grain Hay*	Barley, Grain, Hay, Oats, Wheat	1,253.3	1.2	1.1	1.1	1.1	0.5	0.0	0.0	0.1	0.0	0.2	0.5	1.0	0.4
Corn and Grain Sorghum*	Corn	921.8	1.2	0.4	0.5	0.3	0.4	0.9	1.0	0.8	0.1	0.2	0.5	1.0	0.6
Peach, Nectarine and Apricots	Peach, Nectarine and Apricots	0.0	1.2	0.4	0.4	0.4	0.8	0.9	0.9	0.9	0.9	0.6	0.4	1.0	0.8
Peach, Nectarine, etc. w/ cover crop	Peach, Nectarine, etc. w/ cover crop	784.2	1.2	1.1	1.0	0.8	1.0	1.1	1.1	1.1	1.1	1.0	0.8	1.2	1.1
Immature Peaches, Nectarines, etc	Peach, Nectarine and Apricots (immature)	0.0	1.2	0.4	0.3	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.4	1.0	0.5
Beans **	Beans	767.5	1.2	0.4	0.5	0.2	0.4	0.9	1.0	0.4	0.0	0.2	0.5	1.0	0.5
Alfalfa Hay and Clover*	Alfalfa	619.2	1.2	1.1	1.1	0.9	0.9	0.9	0.9	0.9	0.9	0.6	0.8	1.2	0.9
Melons, Squash, and Cucumbers	Melons, Squash, and Cucumbers	550.4	1.2	0.4	0.3	0.0	0.1	0.1	0.5	0.7	0.3	0.2	0.5	1.0	0.3
Flowers, Nursery and Christmas Tree	Lilac	373.0	1.2	0.4	0.4	0.4	0.9	0.9	0.9	0.9	0.9	0.6	0.4	1.0	0.8
Small Vegetables	Asparagus	345.7	1.2	0.7	0.9	1.0	0.2	0.0	0.0	0.2	0.2	0.4	0.7	1.2	0.4
Misc. field crops	Pumpkin, Eggplant, Carrots, Row or Field crops	332.1	1.2	0.4	0.5	0.2	0.4	0.9	1.0	0.5	0.0	0.2	0.5	1.0	0.5
Onions and Garlic	Onions	234.8	1.2	1.0	0.9	0.9	0.7	0.2	0.0	0.1	0.0	0.2	1.0	1.0	0.4
Almonds	Almonds	0.0	1.2	0.5	0.5	0.5	0.9	0.9	0.9	0.9	0.9	0.9	0.5	1.0	0.8
Almonds w/cover crop	Almonds w/cover crop	197.3	1.2	1.0	0.9	0.9	1.0	1.1	1.1	1.1	1.0	0.9	0.9	1.2	1.0
Immature Almonds	Immature Almonds	0.0	1.2	0.5	0.4	0.4	0.5	0.5	0.5	0.6	0.5	0.6	0.5	1.0	0.5
Strawberries	Strawberries, Blueberries, Berries	71.2	1.2	0.4	0.5	0.2	0.4	0.9	1.0	0.5	0.0	0.2	0.5	1.0	0.5
Pistachio	Pistachio	0.0	1.2	0.4	0.3	0.2	0.4	0.8	1.1	1.1	1.0	0.8	0.5	1.0	0.7
Pistachio w/ cover crop	Pistachio w/ cover crop	17.0	1.2	1.0	0.8	0.7	0.7	1.0	1.1	1.1	1.1	1.0	0.8	1.2	1.0
Immature Pistachio	Immature Pistachio	0.0	1.2	0.4	0.3	0.1	0.2	0.5	0.6	0.7	0.6	0.5	0.5	1.0	0.5
Citrus (no ground cover)	Citrus (no ground cover)	0.0	1.2	1.0	0.9	0.7	0.7	0.7	0.6	0.7	0.6	0.8	0.8	1.2	0.7
Immature Citrus	Immature Citrus	0.0	1.2	0.7	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.7	1.1	0.5
Potatoes, Sugar beets, Turnips etc..	Potatoes, Sugar beets, Turnips etc..	0.0	1.2	0.6	0.6	1.0	1.1	1.1	0.9	0.1	0.0	0.2	0.5	1.0	0.7
Cotton	Cotton	0.0	1.2	0.4	0.3	0.2	0.2	0.6	1.1	1.1	0.9	0.4	0.5	1.0	0.6
Avocado	Avocado	0.0	1.2	0.4	0.4	0.4	0.9	0.9	0.9	0.9	0.9	0.6	0.4	1.0	0.8
Misc Subtropical	Misc Subtropical	0.0	1.2	0.4	0.4	0.4	0.9	0.9	0.9	0.9	0.9	0.6	0.4	1.0	0.8
	Total Acreage	49,154.3													

* ETc data from Surface Irrigation Calculation
** ETc data from Sprinkler Irrigation Calculation

Formula: Kc = ETc/ETo

Estimated Applied Water Table for Irrigation Scheduling and Design
ETo Zone 12 Monthly Evapotranspiration
Typical Year

Estimated Total Crop Water Requirement for SEWD (for Typical year)

IRRIGATION TRAINING AND RESEARCH CENTER, California Polytechnic State University, San Luis Obispo (PUBLISHED DATA)
Table does not include adjustments for bare spots and reduced vigor

			Typical Year Jan Inch	Feb Inch	Mar Inch	Apr Inch	May Inch	Jun Inch	Jul Inch	Aug Inch	Sep Inch	Oct Inch	Nov Inch	Dec Inch	Annual Inches	
Precipitation			6.8	0.3	1.3	0.2	0.2	0.2	0.1	0.3	0.1	0.6	4.2	2.1	18.5	
Effective Precipitation			0.7	0.3	1.3	0.2	0.2	0.2	0.1	0.3	0.1	0.6	1.1	1.0	6.2	
Grass Reference ETo			0.7	2.1	4.0	5.6	7.3	7.6	8.0	6.8	5.4	3.5	1.1	1.0	53.0	
ITRC Crops	SEWD Crops	Acreage														Annual (AF)
Walnuts	Walnuts	0.0	0.1	0.8	0.5	2.0	7.0	10.1	10.7	8.8	6.4	2.5	0.0	0.0	48.8	
Walnuts w/ cover crop	Walnuts w/ cover crop	22,743.4	0.1	2.3	2.6	4.3	8.4	11.6	12.1	10.1	7.4	2.6	0.0	0.2	61.7	
Apple, Pear, Cherry, Plum and Prune	Apple, Pear, Cherry, Plum, Prune, Olives	0.0	0.1	0.8	0.3	2.7	7.9	8.8	9.4	7.7	6.0	2.1	0.0	0.0	45.7	
Apples, Plums, Cherries etc w/cover crop	Apples, Plums, Cherries etc w/cover crop	11,937.0	0.1	2.6	3.4	5.8	9.6	11.0	11.7	9.6	7.6	3.5	0.0	0.3	65.2	
Grape Vines with 80% canopy	Vineyards and Grapes	0.0	0.1	0.8	0.0	1.2	4.1	7.3	7.8	5.9	3.4	0.0	0.0	0.0	30.7	
Grape Vines with cover crop (80% canopy)	Vineyards and Grapes w/ cover crop	4,242.6	0.2	2.1	2.3	3.6	6.3	8.3	8.8	6.9	4.2	1.8	0.0	0.2	44.6	
Immature Grapes Vines with 50% canopy	Vineyards and Grapes (immature)	0.0	0.2	0.8	0.0	0.8	2.6	4.4	4.8	3.6	2.0	0.0	0.0	0.0	19.1	
Tomatoes and Peppers	Tomatoes and Peppers	2,270.0	0.2	0.8	0.4	0.7	4.4	9.7	8.9	1.0	0.0	0.0	0.0	0.0	26.0	
Misc. Deciduous	Chestnuts, Orchard, Pecans, Persimmons	0.0	0.1	0.8	0.3	2.6	7.5	8.3	8.9	7.4	5.8	2.0	0.0	0.0	43.6	
Misc. Deciduous w/ cover crop	Chestnuts, Orchard, etc. w/ cover crop	1,494.0	0.1	2.6	3.4	5.7	9.2	10.5	11.2	9.3	7.4	3.4	0.0	0.3	63.1	
Grain and Grain Hay*	Barley, Grain, Hay, Oats, Wheat	1,253.3	0.2	2.5	3.9	7.4	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.1	18.6	
Corn and Grain Sorghum*	Corn	921.8	0.2	0.8	1.0	1.5	3.0	8.5	10.0	6.5	0.5	0.0	0.0	0.0	31.8	
Peach, Nectarine and Apricots	Peach, Nectarine and Apricots	0.0	0.1	0.8	0.3	2.4	7.3	8.3	8.9	7.4	5.7	2.0	0.0	0.0	43.1	
Peach, Nectarine, etc. w/ cover crop	Peach, Nectarine, etc. w/ cover crop	784.2	0.1	2.6	3.4	5.6	9.0	10.5	11.2	9.3	7.3	3.3	0.0	0.3	62.6	
Immature Peaches, Nectarines, etc	Peach, Nectarine and Apricots (immature)	0.0	0.1	0.8	0.0	1.3	4.1	4.8	5.1	4.1	3.2	1.2	0.0	0.0	24.6	
Beans **	Beans	767.5	0.2	0.8	1.0	1.2	3.0	8.7	9.4	3.4	0.0	0.0	0.0	0.0	27.6	
Alfalfa Hay and Clover*	Alfalfa	619.2	0.2	2.5	3.6	6.2	8.1	8.5	8.8	7.0	6.1	1.9	0.0	0.2	53.1	
Melons, Squash, and Cucumbers	Melons, Squash, and Cucumbers	550.4	0.2	0.8	0.0	0.0	1.0	1.0	5.0	5.7	1.8	0.0	0.0	0.0	15.5	
Flowers, Nursery and Christmas Tree	Lilac	373.0	0.1	0.8	0.3	2.6	7.5	8.3	8.9	7.4	5.8	2.0	0.0	0.0	43.6	
Small Vegetables	Asparagus	345.7	0.2	1.5	2.9	6.7	1.8	0.0	0.0	1.4	1.6	0.8	0.0	0.2	16.9	
Misc. field crops	Pumpkin, Eggplant, Carrots, Row or Field crops	332.1	0.2	0.8	1.0	1.5	3.0	8.6	9.5	3.4	0.0	0.0	0.0	0.0	28.0	
Onions and Garlic	Onions	234.8	0.2	2.2	2.9	5.7	6.2	1.4	0.0	0.0	0.0	0.0	0.0	0.1	18.8	
Almonds	Almonds	0.0	0.1	0.9	0.6	3.5	7.8	8.4	8.9	7.3	5.8	3.0	0.0	0.0	46.4	
Almonds w/cover crop	Almonds w/cover crop	197.3	0.1	2.3	2.7	5.8	9.3	9.9	10.3	8.6	6.7	3.2	0.0	0.2	59.3	
Immature Almonds	Immature Almonds	0.0	0.1	0.9	0.3	2.2	4.7	5.0	5.3	4.5	3.4	1.7	0.0	0.0	27.9	
Strawberries	Strawberries, Blueberries, Berries	71.2	0.2	0.8	1.0	1.5	3.0	8.6	9.5	3.4	0.0	0.0	0.0	0.0	28.0	
Pistachio	Pistachio	0.0	0.1	0.8	0.0	1.2	3.1	7.3	10.5	8.8	6.7	2.7	0.0	0.0	41.0	
Pistachio w/ cover crop	Pistachio w/ cover crop	17.0	0.1	2.3	2.5	4.4	6.3	8.9	11.1	9.2	7.3	3.7	0.0	0.2	56.0	
Immature Pistachio	Immature Pistachio	0.0	0.1	0.8	0.0	0.6	1.7	4.4	6.2	5.4	4.0	1.4	0.0	0.0	24.6	
Citrus (no ground cover)	Citrus (no ground cover)	0.0	0.1	2.4	2.8	4.6	5.8	6.1	6.3	5.3	4.3	2.7	0.0	0.2	40.6	
Immature Citrus	Immature Citrus	0.0	0.2	1.6	1.5	2.5	3.5	3.6	3.8	3.2	2.5	1.6	0.0	0.1	24.0	
Potatoes, Sugar beets, Turnip etc.,	Potatoes, Sugar beets, Turnip etc.,	0.0	0.2	1.2	1.6	6.7	9.5	9.9	8.8	0.1	0.0	0.0	0.0	0.0	37.8	
Cotton	Cotton	0.0	0.2	0.8	0.0	1.0	1.9	5.6	10.4	8.8	6.2	0.9	0.0	0.0	35.7	
Avocado	Avocado	0.0	0.1	0.8	0.3	2.6	7.5	8.3	8.9	7.4	5.8	2.0	0.0	0.0	43.6	
Misc Subtropical	Misc Subtropical	0.0	0.1	0.8	0.3	2.6	7.5	8.3	8.9	7.4	5.8	2.0	0.0	0.0	43.6	
	Total Acreage	49,154.3											Weighted Average Crop Water Requirement per acre		55.7	4.6

Note: Assumes 0.8 Distribution Uniformity
These values do not take into account extra water required for salinity or frost protection.
* ETc data from Surface Irrigation Calculation
** ETc data from Sprinkler Irrigation Calculation

Formula: Crop Water Required = (ETc - Effective Precipitation) / DU

Appendix C:
Current Year ETc and Crop Water Requirement for Real-Time Irrigation Scheduling

ETo Zone 12 Monthly Evapotranspiration
Current Year
IRRIGATION TRAINING AND RESEARCH CENTER, California Polytechnic State University, San Luis Obispo (PUBLISHED DATA)
Table does not include adjustments for bare spots and reduced vigor

			Current Year (August 2015)							
			Jan inch	Feb inch	Mar inch	Apr inch	May inch	Jun inch	Jul inch	Aug inch
Precipitation			1.1	0.2	1.4	0.4	0.0	0.1	0.0	0.0
Effective Precipitation			1.1	0.2	1.4	0.4	0.0	0.1	0.0	0.0
Grass Reference ETo			1.5	2.2	3.6	5.9	7.0	7.8	8.4	7.24
[illegible]C Crops	[illegible] Crops	Acreage								
Walnuts	Walnuts	0	0.3	0.8	0.2	1.5	5.5	8.4	9.2	7.9
Walnuts w/ cover crop	Walnuts w/ cover crop	743.	0.3	2.0	1.7	3.5	6.6	9.6	10.4	9.0
Apple, Pear, Cherry, Plum and Prune	Apple, Pear, Cherry, Plum, Prune, Olives	0	0.3	0.8	0.1	2.1	6.2	7.4	8.1	6.9
Apples, Plums, Cherries etc w/ cover crop	Apples, Plums, Cherries etc w/ cover crop	1,937.	0.3	2.3	2.3	4.8	7.5	9.2	10.1	8.6
Grape Vines with 80% canopy	Vineyards and Grapes	0	0.3	0.8	0.0	0.8	3.3	6.1	6.8	5.5
Grape Vines with cover crop (80% canopy)	Vineyards and Grapes w/ cover crop	242.	0.4	1.9	1.5	2.9	5.0	6.9	7.6	6.2
Immature Grape Vines with 50% canopy	Vineyards and Grapes (Immature)	0	0.4	0.8	0.0	0.5	2.2	3.7	4.2	3.4
Tomatoes and Peppers	Tomatoes and Peppers	270.	0.4	0.8	0.2	0.4	3.5	8.1	7.7	1.7
Misc. Deciduous	Chestnuts, Orchard, Persians, Persimmons	0	0.3	0.8	0.1	2.0	5.9	6.9	7.5	6.7
Misc. Deciduous w/ cover crop	Chestnuts, Orchard, etc. w/ cover crop	494	0.3	2.3	2.3	4.7	7.2	8.7	9.6	8.4
Grain and Grain Hay*	Barley, Grain, Hay, Oats, Wheat	253.	0.4	2.2	2.7	6.1	3.7	0.2	0.2	0.4
Corn and Grain Sorghum*	Corn	921.	0.4	0.8	0.6	1.1	2.4	7.1	8.6	5.9
Peach, Nectarine and Apricots	Peach, Nectarine and Apricots	0	0.3	0.8	0.1	1.9	5.7	6.9	7.6	6.7
Peach, Nectarine, etc. w/ cover crop	Peach, Nectarine, etc. w/ cover crop	784.2	0.3	2.3	2.3	4.6	7.0	8.7	9.6	8.3
Immature Peaches, Nectarines, etc	Peach, Nectarine and Apricots (Immature)	0	0.3	0.8	0.0	0.9	3.3	4.1	4.4	3.9
Beans **	Beans	767.	0.4	0.8	0.6	0.9	2.5	7.2	8.1	3.3
Alfalfa Hay and Clover*	Alfalfa	619.	0.4	2.2	2.5	5.1	6.3	7.1	7.6	6.4
Melons, Squash, and Cucumbers	Melons, Squash, and Cucumbers	560.	0.4	0.8	0.0	0.0	0.9	1.0	4.4	5.2
Flowers, Nursery and Christmas Tree	Misc	373.	0.3	0.8	0.1	2.0	5.9	6.9	7.6	6.7
Small Vegetables	Asparagus	345.	0.4	1.4	1.9	5.5	1.5	0.2	0.2	1.5
Misc. Field crops	Pumpkin, Eggplant, Carrots, Row or Field crops	332.	0.4	0.8	0.6	1.1	2.5	7.2	8.1	3.3
Onions and Garlic	Onions	234.	0.4	2.0	2.0	4.7	4.9	1.3	0.2	0.4
Almonds	Almonds	0	0.3	0.8	0.3	2.8	6.2	7.0	7.7	6.6
Almonds w/ cover crop	Almonds w/ cover crop	197.	0.3	2.1	1.8	4.6	7.2	8.2	8.9	7.8
Immature Almonds	Immature Almonds	0	0.3	0.8	0.1	1.7	3.8	4.2	4.6	4.1
Strawberries	Strawberries, Blueberries, Berries	71.	0.4	0.8	0.6	1.1	2.5	7.2	8.1	3.3
Pistachios	Pistachios	0	0.3	0.8	0.0	0.8	2.5	6.1	7.0	7.9
Pistachio w/ cover crop	Pistachio w/ cover crop	17	0.3	2.1	1.7	3.5	5.0	7.4	9.5	8.3
Immature Pistachio	Immature Pistachio	0	0.3	0.8	0.0	0.4	1.4	3.7	5.4	4.9
Citrus (no ground cover)	Citrus (no ground cover)	0	0.3	2.1	1.9	3.8	4.6	5.2	5.5	4.9
Immature Citrus	Immature Citrus	0	0.4	1.5	0.9	2.0	2.8	3.1	3.4	3.1
Potatoes, Sugar beets, Tomato etc.	Potatoes, Sugar beets, Tomato etc.	0	0.4	1.1	1.0	5.6	7.4	8.2	7.6	0.5
Cotton	Cotton	0	0.4	0.8	0.0	0.7	1.6	4.7	8.9	7.9
Avocado	Avocado	0	0.3	0.8	0.1	2.0	5.9	6.9	7.6	6.7
Misc Subtropical	Misc Subtropical	0	0.3	0.8	0.1	2.0	5.9	6.9	7.6	6.7
	Total Acreage	49 154.								

Note: Assumes 0.8 Distribution Uniformity
These values do not take into account extra water required for salinity or frost protection.
* ETc data from Surface Irrigation Calculation
** ETc data from Sprinkler Irrigation Calculation
*** To Date does not include Projected Values

Formula: Crop Water Required = [ETc - Effective Precipitation] / DU

Projected Crop Water Requirement for September****			
Week 1 Sun 9/1-Sat 9/7 inch	Week 2 Sun 9/8-Sat 9/14 inch	Week 3 Sun 9/15-Sat 9/21 inch	Week 4 Sun 9/22-Sat 9/27 inch
0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0
1.4	1.5	1.6	1.2
1.7	1.8	1.8	1.4
1.9	2.1	1.9	1.6
1.6	1.7	1.5	1.3
2.0	2.1	1.9	1.7
0.9	1.0	0.9	0.8
1.1	1.2	1.1	0.9
0.5	0.6	0.5	0.5
0.0	0.0	0.0	0.0
1.5	1.6	1.5	1.3
1.9	2.1	1.9	1.6
0.0	0.0	0.0	0.0
0.2	0.2	0.2	0.1
1.5	1.6	1.4	1.3
1.9	2.0	1.9	1.6
0.9	0.9	0.8	0.7
0.0	0.0	0.0	0.0
1.6	1.7	1.5	1.4
0.5	0.5	0.5	0.4
1.5	1.6	1.5	1.3
0.4	0.5	0.4	0.4
0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0
1.5	1.6	1.5	1.3
1.8	1.9	1.7	1.5
0.9	1.0	0.9	0.8
0.0	0.0	0.0	0.0
1.8	1.9	1.7	1.5
1.9	2.0	1.8	1.6
1.1	1.1	1.0	0.9
1.1	1.2	1.1	1.0
0.7	0.7	0.7	0.6
0.0	0.0	0.0	0.0
1.6	1.7	1.6	1.4
1.5	1.6	1.5	1.3
1.5	1.6	1.5	1.3

Oct inch	Nov inch	Dec inch	To Date*** Inches	To Date(AS)***
			3.1	
			3.1	
			48.9	
			53.9	5.0
			43.2	5.8
			31.8	5.0
			45.0	5.8
			23.6	3.8
			32.4	5.0
			15.1	2.5
			22.2	3.8
			30.4	5.1
			43.6	5.8
			15.7	2.7
			26.8	5.0
			30.1	5.0
			43.3	5.8
			37.7	5.8
			23.7	3.8
			37.6	5.8
			12.7	2.3
			30.4	5.0
			12.6	2.0
			24.0	5.0
			15.8	2.3
			31.8	5.0
			41.2	5.4
			19.7	3.0
			24.0	3.8
			27.5	3.5
			37.8	5.0
			17.0	2.8
			28.2	3.9
			17.1	2.6
			31.6	5.0
			25.0	3.7
			30.4	5.0
			30.4	5.0

****Projected Crop Water Requirement is an Estimate and should be checked against the actual conditions in the field

Formula: Projected Weekly Crop Water Required = [Projected Weekly ETc - Projected Weekly Effective Precipitation] / DU

ETc Table for Irrigation Scheduling and Design
Zone 12 Monthly Evapotranspiration

Current Year

IRRIGATION TRAINING AND RESEARCH CENTER, California Polytechnic State University, San Luis Obispo (PUBLISHED DATA)
Table does not include adjustments for bare spots and reduced vigor

Current Crop Evapotranspiration for SEWD

			Current Year (June)							
			Jan Inch	Feb Inch	Mar Inch	Apr Inch	May Inch	Jun Inch	Jul Inch	Aug Inch
Precipitation			1.1	0.2	1.4	0.4	0.0	0.1	0.0	0.0
Effective Precipitation			1.1	0.2	1.4	0.4	0.0	0.1	0.0	0.0
Grass Reference ETo			1.8	2.2	3.8	5.8	7.0	7.8	8.0	7.2
ITRC Crops	SEWD Crops	Acreage								
Walnuts	Walnuts	0	1.4	2.0	2.5	3.9	5.5	8.5	9.2	7.9
Walnuts w/ cover crop	Walnuts w/ cover crop	11,743	1.4	2.2	3.1	3.9	6.6	9.7	10.4	9.0
Apples, Pear, Cherry, Plum and Prune	Apples, Pear, Cherry, Plum, Prune, Olives	0	1.4	2.0	2.4	2.5	6.2	7.8	8.1	6.9
Apples, Plums, Cherries etc w/ cover crop	Apples, Plums, Cherries etc w/ cover crop	1,937	1.4	2.5	3.7	5.2	7.5	9.2	10.1	8.6
Grape Vines with 80% canopy	Vineyards and Grapes	0	1.4	2.0	2.1	3.1	3.8	6.1	6.8	5.5
Grape Vines with cover crop - 80% canopy	Vineyards and Grapes w/ cover crop	4,242	1.5	2.1	2.9	3.5	5.0	7.0	7.8	6.2
Immature Grape Vines with 50% canopy	Vineyards and Grapes (Immature)	0	1.5	2.0	2.1	2.9	3.2	3.8	4.1	3.6
Tomatoes and Peppers	Tomatoes and Peppers	1,270	1.5	1.0	1.5	0.8	3.5	6.1	7.7	2.2
Misc. Deciduous	Chestnuts, Orchard, Pecans, Persimmon	0	1.4	2.0	2.4	2.4	5.9	7.0	7.8	6.7
Misc. Deciduous w/ cover crop	Chestnuts, Orchard, etc. w/ cover crop	1,444	1.4	2.5	3.7	5.1	7.2	8.8	9.6	8.4
Grain and Grain Hay*	Barley, Grain, Hay, Oats, Wheat	1,153.3	1.5	2.4	4.0	6.5	3.7	0.2	0.2	0.4
Corn and Grain Sorghum*	Corn	922	1.5	2.0	3.9	1.5	2.5	7.1	8.6	5.9
Peach, Nectarine and Apricots	Peach, Nectarine and Apricots	0	1.4	2.0	2.4	2.3	5.8	7.0	7.8	6.7
Peach, Nectarine, etc. w/ cover crop	Peach, Nectarine, etc. w/ cover crop	784.2	1.4	2.5	3.7	5.0	7.0	8.8	9.6	8.3
Immature Peaches, Nectarines, etc	Peach, Nectarine and Apricots (Immature)	0	1.4	2.0	2.2	2.3	3.3	4.1	4.4	3.9
Beans**	Beans	767.5	1.5	2.0	2.9	1.3	2.5	7.3	8.1	3.2
Alfalfa Hay and Clover*	Alfalfa	639.2	1.5	2.4	3.9	3.5	6.4	7.1	7.6	6.4
Melons, Squash, and Cucumbers	Melons, Squash, and Cucumbers	550.4	1.5	2.0	2.0	0.2	2.0	1.0	4.4	3.2
Flowers, Nursery and Christmas Tree	Lilies	373	1.4	2.0	2.4	2.4	5.9	7.0	7.6	6.7
Small Vegetables	Asparagus	345.7	1.5	1.5	3.3	5.9	2.5	0.2	0.2	1.5
Misc. Field Crops	Pumpkin, Eggplant, Carrots, Row or Field crops	193.1	1.5	2.0	2.9	1.5	2.5	7.3	8.1	3.3
Onions and Garlic	Onions	238.6	1.5	2.2	3.3	5.2	4.9	1.4	0.2	0.4
Almonds	Almonds	0	1.4	2.0	2.6	3.2	5.2	7.1	7.7	6.6
Almonds w/ cover crop	Almonds w/ cover crop	197.3	1.4	2.3	3.2	5.2	7.3	8.3	8.9	7.8
Immature Almonds	Immature Almonds	0.0	1.4	2.0	1.4	2.1	3.8	6.3	6.8	6.2
Strawberries	Strawberries, Blueberries, Berries	71.2	1.5	2.0	1.9	1.5	2.5	7.3	8.1	3.3
Pistachio	Pistachio	0	1.4	2.0	2.0	1.2	2.5	6.2	9.0	7.9
Pistachio w/ cover crop	Pistachio w/ cover crop	17	1.4	2.3	3.0	3.9	5.0	7.5	9.5	8.3
Immature Pistachio	Immature Pistachio	0.0	1.4	2.0	2.0	0.7	1.5	3.8	5.4	4.9
Citrus (ground cover)	Citrus (ground cover)	0	1.4	2.3	3.2	4.1	4.6	5.2	5.5	4.9
Immature Citrus	Immature Citrus	0.0	1.5	1.6	2.3	2.4	2.9	3.1	3.4	3.1
Potatoes, Sugar beets, Yuma etc.,	Potatoes, Sugar beets, Yuma etc.,	0	1.5	1.9	2.3	5.9	7.4	8.3	7.6	0.5
Cotton	Cotton	0	1.5	2.0	2.0	2.1	1.6	4.8	8.9	7.9
Avocado	Avocado	0	1.4	2.0	1.4	2.4	5.9	7.0	7.8	6.7
Misc Subtropical	Misc Subtropical	0	1.4	2.0	1.4	2.4	5.9	7.0	7.8	6.7
	Total Acreage	49,154.3								

Projected Crop Water Requirement for September			
Week 1 Sun 9/1-Sat 9/7 Inch	Week 2 Sun 9/8-Sat 9/14 Inch	Week 3 Sun 9/15-Sat 9/21 Inch	Week 4 Sun 9/22-Sat 9/27 Inch
0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0
1.8	1.8	1.4	1.2
1.3	1.4	1.3	1.1
2.5	2.6	2.5	2.2
1.3	1.3	1.2	1.1
1.6	1.5	1.1	1.4
0.7	0.8	0.7	0.6
0.8	0.9	0.9	0.8
0.4	0.3	0.6	1.1
0.0	0.0	0.0	0.0
1.1	1.0	0.9	1.1
1.9	1.6	1.9	1.3
0.6	0.3	0.8	1.2
0.1	0.1	0.1	0.1
1.1	1.3	1.2	1.0
1.3	1.6	1.5	1.3
0.7	0.7	0.7	0.6
0.0	0.0	0.0	0.0
1.3	1.4	1.3	1.1
0.4	0.4	0.4	0.3
1.2	1.3	1.2	1.0
0.3	0.4	0.3	0.3
0.0	0.0	0.0	0.0
1.2	1.3	1.2	1.0
1.4	1.5	1.4	1.2
0.7	0.8	0.7	0.6
0.0	0.0	0.0	0.0
1.4	1.5	1.4	1.2
1.5	1.6	1.5	1.3
0.8	0.9	0.8	0.7
0.9	1.0	0.9	0.8
0.5	0.6	0.5	0.5
0.0	0.0	0.0	0.0
1.3	1.4	1.3	1.1
1.7	1.3	2.2	3.0
1.0	1.3	2.1	1.0

Oct Inch	Nov Inch	Dec Inch	To Date*** inches	To Date*** (AF)
			3.1	
			3.3	
			48.8	
			37.0	
			46.3	
			35.0	
			48.1	
			26.5	
			35.5	
			18.0	
			29.3	
			46.7	
			18.8	
			29.5	
			33.2	
			46.4	
			20.7	
			26.8	
			15.3	
			15.7	
			28.9	
			44.3	
			27.1	
			30.2	
			40.9	
			19.7	
			32.3	
			20.2	
			34.8	
			33.5	

Note: ETo for Cimis Spatial Data taken at 38.01 N 121.17 W. Precipitation data taken from CIMIS Station 70, Manteca, CA
* ETc data from Surface Irrigation Calculation
** ETc data from Sprinkler Irrigation Calculation
*** To Date does not include Projected Values

Projected Weekly ETc = (ETo from the selected dates of the previous year * Kc for Specific Month)

Attachment T District Pump Efficiency Test Results, 2023

Power Services, Inc.

6301 Bearden Lane
Modesto, CA 95357
209.527.2908 / 800.808.9283
209.527.2921 fax
www.powerhydrodynamics.com

Saturday, June 13, 2020

Kuldip Hundal
Kuldip Hundal Farms
2068 Snowbird Dr.
Lodi, CA 95242

Dear Kuldip Hundal:

Enclosed are the results of your pump test. The results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.

Some of the factors, which influence pump performance, are:

- Changes in discharge pressures
- Changes in water table level and well yield
- Pump wear
- Proper pump design for application

We offer the following services to help our customers save time and money. Pump testing, irrigation system analysis, irrigation water management, and electric rate management. Visit our website at www.powerhydrodynamics.com for more information or to use our water cost calculator.

Please feel free to call 209-527-2908 if you have questions about this test or on the other services that Power Services has to offer.

Regards,

William Thomas Power, III

Enclosures

Power Services, Inc.

6301 Bearden Lane
Modesto, CA 95357
209.527.2908 / 800.808.9283
209.527.2921 fax
www.powerhydrodynamics.com

CONFIDENTIAL/PROPRIETARY INFORMATION

Kuldip Hundal
Kuldip Hundal Farms
2068 Snowbird Dr.
Lodi, CA 95242

Saturday, June 13, 2020

SUBJECT: PUMPING COST ANALYSIS
HP: 10.00 Plant: Clark Rd. Ranch
PUMP TEST REFERENCE NUMBER: PT-23935
PUMP TEST RUN: Run 1

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the pump test performed Jun 9th 2020 and information provided by you during the pump test.

It is recommended and assumed that:

1. **Overall plant efficiency can be improved to: 58%**
2. **Water requirements will be the same as for the past year.**
3. **All operating conditions (annual hours of operation, discharge head, and water pumping level) will remain the same as they were at the time of the pump test.**

	EXISTING PLANT EFFICIENCY	IMPROVED PLANT EFFICIENCY	SAVINGS
kWh/AF	476.7	253.2	223.5
Estimated Total kWh	9,040	4,802	4,238
Average Cost per kWh	$0.30	$0.30	
Average Cost per hour	$2.70	$3.32	*
Cost Per Acre Ft.	$142.58	$75.74	$66.84
Estimated Acre Ft. Per Year	18.97	18.97	
Run Hours	1,000.00	1,000.00	
Overall Plant Efficiency	30.8%	58%	
Estimated Total Annual Cost	$2,704.12	$1,436.43	$1,267.69

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued.
If you have any questions, please contact Bill Power at (209) 527-2908.

Regards,

William Thomas Power, III

Enclosures

Power Services, Inc.

6301 Bearden Lane
Modesto, CA 95357
209.527.2908 / 800.808.9283
209.527.2921 fax
www.powerhydrodynamics.com

Report ID: PT-23935

Agricultural and Domestic Pump Test Report
Kuldip Hundal Farms - Clark Rd. Ranch - Run 1

Latitude: 37.91969W | Longitude: -121.21526N | Elevation: 35 ft
Test Date: Jun 9th 2020 | Tester: Bill Power | Nameplate HP: 10.00 hp

Customer Information

Kuldip Hundal Farms

2068 Snowbird Dr.
Lodi, CA 95242

Contact: Kuldip Hundal
Cell: 209-598-5939

Power Company Data

PG&E

Meter #: 1009964015
Rate Schedule: AG4A
Average Cost: $0.30

Equipment Data

Motor Make: No Name Plate
Volts/Amps: 230V/28.4A
Serial#:
Pump Make: No Name Plate
Pump Type: Submersible
Drive Type: Electric Motor
Gearhead Make:

Hydraulic Data

Standing Water Level (SWL): 57.60 ft
Recovered Water Level (RWL): 59.00 ft
Pumping Water Level (PWL): 65.00 ft
Drawdown: 7.4 ft
Discharge Pressure: 34.00 lb/sqft
Discharge Level: 78.54 ft
Total Lift: 143.54 ft
Well Yield: 13.92 gpm/ft
Water Source: Well

Flow Data

Run Number: 1 of 1
Measured Flow: 103 gpm
Customer Flow: 127 gpm
Flow Velocity: 3.43 ft/sec
Acre Feet per 24 Hr: 0.46
Cubic Feet Per Second (CFS): 0.23 ft
Discharge Pressure: 34 psi

Power Data

Horsepower Input to Motor: 12.12 hp
Brake Horsepower: 8.97 hp
Kilowatt Input to Motor: 9.04 kW
Energy Cost: $2.7/hr
Name Plate RPM: 3450 rpm

Percent of Rated Motor Load: 90%
Kilowatt Hours per Acre Foot: 476.66
Cost to Pump an Acre Foot: $142.58
Overall Plant Efficiency: 30.81%
Water Horsepower: 3.73 hp
Run Hours: 1000

Remarks

All results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.

Overall efficiency of this plant is considered to be very low assuming this run represents plant's normal operating condition.

Recovered water level based on 5 minutes recovery, well could still be recovering.

Pump started for test, pumping water level could still be drawing down.

This pump has an adequate test section.

This pump had a magnetic flow meter.

HPI measured with direct read KWI.

Based on information obtained at the time the test was performed, this test represents the pumps standard operating conditions.

Cost Analysis page is based on 1000 run time hours. Your savings may differ based on pumps actual usage.

Run 1 observations: This pump had a bad snifter valve that is leaking water in the well just below well seal.

Stockton East Water District
Mobile Lab Cover Page

GPS Coordinates

Latitude 37 **North** 91968 **Longitude** -121 **West** 21527

Grower

Address:

Kuldip Hundal Farms
2068 Snowbird Dr.
Lodi, CA 95242

Contact: Kuldip Hundal

Location:

Clark Rd.

, CA

Test Date: 6/9/2020

Summary

Test Number:	SEWDHUNDAL
Planting Date:	1/1/2014
Crop:	Almonds
System Type:	Drip
Total Acres Farmed:	10
Total Acres of System Type:	10
Acres Tested:	6.5
Distribution Uniformity:	86.0%
Irrigation Efficiency:	115.3%
Gross Water Applied:	2.521 FT.
Gross Water Needed:	2.907 FT.

Observations

The Gross Water Applied number is based on information provided by grower.

The Irrigation Eifficiency equation is designed to show under or over irrigation. Over 100% indicates under irrigation and under 100% indicates over irrigation.

Pages 1-7 are Evaluation Data, Pages 1-4 following are Evaluation Results

This schedule seems to under irrigate most of this crop assuming the DU is the same with all irrigations.

The Distribution Uniformity is average for this type of irrigation system.

Report and Data Prepared By Power Hydrodynamics

FIELD IDENTIFICATION

Name.....: Kuldip Hundal Farms
Field ID.....: Clark Rd.
Address.....: 2068 Snowbird Dr
Lodi, CA 95242
Phone.....: 209 598-5939

JOB IDENTIFICATION

Evaluator.....: Bill Power
Date.....: 06/09/2020
File drive:\path\name.....: C:\IE\SEWDHUN.MDU

EMITTER

Manufacturer	Netafim
Model	620-045
Units of nominal flow rate (1 - 2) (1 = gph, 2 = lph)	gph (1)
Nominal flow per emitter (gph or lph)	0.40
Emitter path type (1 - 8)	(5)

1 = Long, smooth path; 2 = Pressure compensating
3 = Vortex; 4 = Orifice
5 = Tortuous path; 6 = Mult. flexible orifice
7 = Spinning micro-sprinkler; 8 = Non-rotating micro-sprayer

EMITTER SPACING

If there is only one spacing, only fill out one column:

AREA NUMBER:	#1	#2	#3
Area with this combination (acres)	6.5	N/A	N/A
Area per plant (sq ft)	240.0	N/A	N/A
Number of emitters per plant	6.00	N/A	N/A
Units of flow rate (1 - 2) (1 = gph, 2 = lph)	gph (1)	N/A	N/A
Average flow per emitter (gph or lph)	0.36	N/A	N/A
Wetted area per emitter (sq ft)	6.0	N/A	N/A
Root zone available water holding capacity (in)	9.1	N/A	N/A
Set duration during peak ET (hrs)	18.0	N/A	N/A
Irrigation frequency at peak ET (days)	2.0	N/A	N/A
Crop ET during peak ET period (in/day)	0.26	N/A	N/A

VALVING

Number of automatic pressure control valves near the filter and pump (0 for none)	0
Is there a throttled manual valve at the pump?	No
Are manifold pressures regulated individually?	No
Are hose pressures regulated individually?	No
Is there a flow meter?	Yes

PUMP STATION MEASUREMENTS

Pump discharge pressure (psi)	32.0
Pressure downstream of filters and control valves (psi)	26.0
Optional pressure values:	
Total filter loss (psi)	4.0
Total pump control valve loss (psi)	0.0
Loss from throttled manual valves (psi)	0.0

FILTRATION

Automatic flush on the primary filter?	No
Type of filter (select all that apply):	
Tubular screen?	No
Overflow screen?	No
Media filter?	No
Sand (centrifugal) separator?	No
Disc filter?	No
"Vacuum cleaned" tubular screen?	Yes

CHEMICAL INJECTION SYSTEM

Location of injector with respect to filter (1 - 3)	(3)
1 = No injection system, 2 = Downstream, 3 = Upstream	
If no injection system, skip the next two (2) questions.	
Does the injection system use a throttling valve on the main line?:	Yes
Is injection possible at a constant flow rate?	Yes
Frequency of chlorine, acid, etc. injection (1 - 4)	(2)
Frequency of hose lateral flushing (1 - 4)	(3)

1 = Never 2 = Annually 3 = Monthly
4 = Weekly or more

UNEQUAL DRAINAGE

Time some emitters run after most emitters stop (min)	0.5
Percentage of emitters that do this (%)	10

CONTAMINANTS AND PLUGGING/LEAKS

Flushing time to get clear water from the lowest, most distant hose end (sec)	5

Use the following scale for the next questions:
1 = None, 2 = Slight, 3 = Medium, 4 = Major

Rate the amount of material caught in nylon sock when flushing hoses.

Sand	None (1)
Clay	None (1)
Bacteria/algae	None (1)

Rate the following causes of emitter plugging. (For this question, remove five emitters at distant hose ends. Take them apart to inspect for clogging.)

Sand	None (1)
Precipitate (bubbles with acid drop)	Slight (2)
Bacteria	None (1)
Insects	None (1)
Plastic parts	None (1)

Rate the visible signs of abnormal emitter flow, due to cracked hoses, barb leaks, etc: None (1)

SYSTEM DESCRIPTION

Age of the system (years)	5
Is there a water penetration problem?	No
Is there undulating topography?	No
Percentage of applied water which runs off the field (%)	0
Number of models or emitter designs used in the system	2
Type of water source (1 - 3)	(1)

1 = Well, 2 = Surface, 3 = Both

EMITTER FLOW MEASUREMENTS (all values are in milliliters)

Test # 1. Location - Middle of one of the closest hoses (hydraulically) to the pump.

Collection time (min)	5.00
Average emitter pressure (psi)	15.0

#1..:	136	#5..:	134	#9..:	136	#13 :	132
#2..:	130	#6..:	133	#10 :	136	#14 :	136
#3..:	132	#7..:	130	#11 :	134	#15 :	135
#4..:	134	#8..:	131	#12 :	132	#16 :	130

Test # 2. Location - Same emitters as Test #1, but adjust hose pressure so that the average emitter pressure is 25% lower or greater than for Test #1.

Collection time (min)	5.00
Average emitter pressure (psi)	11.0

#1..:	115	#5..:	115	#9..:	115	#13 :	114
#2..:	110	#6..:	114	#10 :	116	#14 :	115
#3..:	114	#7..:	110	#11 :	110	#15 :	115
#4..:	114	#8..:	111	#12 :	112	#16 :	110

Test # 3. Location - Middle of an average hose on an average submain.

Collection time (min)	5.00
Average emitter pressure (psi)	10.5

#1..:	105	#5..:	106	#9..:	105	#13 :	106
#2..:	100	#6..:	108	#10 :	107	#14 :	110
#3..:	110	#7..:	110	#11 :	110	#15 :	100
#4..:	110	#8..:	105	#12 :	108	#16 :	105

Test # 4. Location - From end of the hose most distant from the pump.

Collection time (min)	5.00
Average emitter pressure (psi)	7.0

#1..:	92	#8..:	93	#15 :	95	#22 :	93
#2..:	94	#9..:	94	#16 :	93	#23 :	95
#3..:	92	#10 :	94	#17 :	91	#24 :	94
#4..:	94	#11 :	92	#18 :	90	#25 :	92
#5..:	95	#12 :	90	#19 :	92	#26 :	93
#6..:	90	#13 :	91	#20 :	94	#27 :	94
#7..:	92	#14 :	94	#21 :	92	#28 :	92

FIELD PRESSURE MEASUREMENTS - Water must be flowing through the hoses when the measurements are made.

Location # 1 - Submain or regulated manifold closest to the pump.

Closest hose to the inlet of the submain (or regulated manifold).	
Hose inlet pressure (psi)	15.0
Downstream end pressure uphill (psi)	14.0
Middle pressure uphill (psi)	14.0
Downstream end pressure downhill (psi)	10.0
Middle pressure downhill (psi)	12.0
Most distant hose from the inlet of the submain (or regulated manifold).	
Hose inlet pressure (psi)	13.5
Downstream end pressure uphill (psi)	10.0
Middle pressure uphill (psi)	12.0
Downstream end pressure downhill (psi)	8.5
Middle pressure downhill (psi)	11.0

Location # 2 - Submain or regulated manifold most distant from the pump, or where the pressure is the lowest.

Closest hose to the inlet of the submain (or regulated manifold).	
Hose inlet pressure (psi)	13.0
Downstream end pressure uphill (psi)	7.0
Middle pressure uphill (psi)	10.0
Downstream end pressure downhill (psi)	10.0
Middle pressure downhill (psi)	12.0
Most distant hose from the inlet of the submain (or regulated manifold).	
Hose inlet pressure (psi)	13.0
Downstream end pressure uphill (psi)	7.0
Middle pressure uphill (psi)	10.0
Downstream end pressure downhill (psi)	10.0
Middle pressure downhill (psi)	12.0

Location # 3 - Intermediate submain or regulated manifold.

Closest hose to the inlet of the submain (or regulated manifold).	
Hose inlet pressure (psi)	13.5
Downstream end pressure uphill (psi)	10.0
Middle pressure uphill (psi)	12.0
Downstream end pressure downhill (psi)	10.0
Middle pressure downhill (psi)	12.0
Most distant hose from the inlet of the submain (or regulated manifold).	
Hose inlet pressure (psi)	13.5
Downstream end pressure uphill (psi)	8.5
Middle pressure uphill (psi)	11.0
Downstream end pressure downhill (psi)	8.5
Middle pressure downhill (psi)	11.0

FIELD PRESSURE MEASUREMENTS - The measurements at locations 4 - 6 are optional on small systems but are recommended on larger systems.

Location # 4 - Intermediate location near the pump.

Closest hose to the inlet of the submain (or regulated manifold).

Hose inlet pressure (psi):	0.0
Downstream end pressure uphill (psi):	0.0
Middle pressure uphill (psi):	0.0
Downstream end pressure downhill (psi):	0.0
Middle pressure downhill (psi):	0.0

Most distant hose from the inlet of the submain (or regulated manifold).

Hose inlet pressure (psi):	0.0
Downstream end pressure uphill (psi):	0.0
Middle pressure uphill (psi):	0.0
Downstream end pressure downhill (psi):	0.0
Middle pressure downhill (psi):	0.0

Location # 5 - Intermediate location distant from the pump.

Closest hose to the inlet of the submain (or regulated manifold).

Hose inlet pressure (psi):	0.0
Downstream end pressure uphill (psi):	0.0
Middle pressure uphill (psi):	0.0
Downstream end pressure downhill (psi):	0.0
Middle pressure downhill (psi):	0.0

Most distant hose from the inlet of the submain (or regulated manifold).

Hose inlet pressure (psi):	0.0
Downstream end pressure uphill (psi):	0.0
Middle pressure uphill (psi):	0.0
Downstream end pressure downhill (psi):	0.0
Middle pressure downhill (psi):	0.0

Location # 6 - Intermediate location.

Closest hose to the inlet of the submain (or regulated manifold).

Hose inlet pressure (psi):	0.0
Downstream end pressure uphill (psi):	0.0
Middle pressure uphill (psi):	0.0
Downstream end pressure downhill (psi):	0.0
Middle pressure downhill (psi):	0.0

Most distant hose from the inlet of the submain (or regulated manifold).

Hose inlet pressure (psi):	0.0
Downstream end pressure uphill (psi):	0.0
Middle pressure uphill (psi):	0.0
Downstream end pressure downhill (psi):	0.0
Middle pressure downhill (psi):	0.0

Average pressure loss across hose entrance screens in the field (psi):	0.0

FIELD IDENTIFICATION

Name.....: Kuldip Hundal Farms
Field ID.....: Clark Rd.
Address.....: 2068 Snowbird Dr
Lodi, CA 95242
Phone.....: 209 598-5939

JOB IDENTIFICATION

Evaluator.....: Bill Power
Date.....: 06/09/2020
File drive:\path\name.....: C:\IE\SEWDHUN.MDU

GLOBAL SYSTEM DU(LQ)
("LQ Minimum" Infiltrated / Ave. Infiltrated).....: 0.86

DISTRIBUTION UNIFORMITY PROBLEMS - PERCENT OF TOTAL NON-UNIFORMITY DUE TO EACH PROBLEM

Pressure differences.....: 92
- Difference between hose inlet pressures = 2 psi
- Maximum pressure difference within a hose = 6 psi

Other causes of flow variation.....: 8
- Minor plugging problems
- Possible causes of plugging are:
  - Infrequent chemical injection for bacterial controls
  - Insufficient removal of bicarbonates and carbonates from water with acid
  - No automatic flush on filter

ESTIMATE OF EXCESS PRESSURE (psi).....: 0.0

ESTIMATE OF RUNOFF (percent of applied water).....: 0

OTHER PROBLEMS NOTED
- Chemical injection system design
*** More than one type of emitter makes evaluation results tentative ***

ESTIMATE OF MAXIMUM DURATION OF IRRIGATION SETS

NOTES

This is based upon the input data of flow rates, soils, and evapotranspiration. Calculations of net application rate assume that any non-uniformity due to "spacing and timing" has been eliminated. However, they do include other non-uniformities and runoff losses.

BASIC DATA

AREA NUMBER:	#1	#2	#3
Available Water Holding Capacity (AWHC, inches):	9.10		
AWHC adjusted for percent wetted area (inches) :	1.37		
Gross Application Rate (in/hr).....:	0.014		
Net Application Rate (in/hr).....:	0.012		

MANAGEMENT INFORMATION

AREA NUMBER:	#1	#2	#3
Gross hours of irrigation required at a point to fill up 50 % of the wetted soil reservoir (hours).....:	54.9		
Hours needed for plant to deplete 50 % of the wetted soil reservoir during the peak water use period. This assumes the emitters are not operating right then at that location (hours).....:	63.0		

INJECTOR PRESSURE DIFFERENTIAL

If your injector requires a pressure drop to operate, make sure that you do not temporarily restrict a valve every time you inject chemicals. If that is done, the pressure (and flow) uniformities in the field will usually drop to an unacceptable level, and the fertilizer and water will not be distributed evenly across the field.

It is often possible to connect an injector using the pressure differential of a device which is always needed (e.g., sand separators, pump control valves).

INJECTION TO PREVENT PLUGGING

Chlorine is typically used to inhibit bacterial plugging of drip systems. Recommended dosages vary from 0.5 to 10 ppm. Timing of injections usually range from continuous injection to once per week. The dosage and timing will depend upon the water quality. Chlorine activity is enhanced by reducing the water pH (ie, making the water more acid).

Plugging problems due to bacteria growth often do not show up the first year or two of drip system operation, and then may reach suddenly catastrophic proportions unless chemicals are injected on a routine basis.

During the last irrigation of the season, the lines should be thoroughly cleaned. Sometimes this is also necessary during the first irrigation.

Chemical precipitation (usually calcium deposits) can plug emitters. This only occurs with certain waters, and can be treated by injection with an acid. SO2 gas, sulfuric acid, and some special fertilizer compounds are designed to prevent this problem. If sulfuric acid is used, extreme caution must be used to prevent human and equipment damage.

WETTED SOIL VOLUME

Based upon very limited measurements, it appears that less than 35% of the soil volume is wet by the microirrigation system. There are varying opinions about the importance of a large wetted volume upon crop yield. However, some mature tree crops such as avocados seem to produce best with a large wetted soil volume (greater than 60%).

The benefits of wetting a large percentage of the soil volume are:

(1) Increased insurance against crop damage due to system breakdown. There will be a larger "soil moisture reservoir" to supply water.

(2) Improved availability of nutrients.

(3) Improved mechanical stability of the crop.

Of course, it often costs a lot more to increase the percentage of the wetted area on the initial design. Changing the wetted volume after installation is quite difficult, and a professional designer should be consulted before any modifications are made, because of effects upon friction, pump capacity, etc.

AUTO FLUSH

It is usually recommended to install an automatic flushing capability on your filters, unless the water is very clean. This prevents overloading the filters, and protects the microirrigation system.

MORE THAN ONE EMITTER TYPE USED

The presence of more than one type of emitter in a system is usually indicative of one of the following:

(1) The original emitters malfunctioned due to material defects.

(2) Plugging is a serious problem

New emitters are often placed onto hoses as old emitters plug. This is very labor intensive, and is usually considered a "band-aid" rather than a "cure". Uniformity of water distribution is generally low with this condition. If you have this problem, look into a strong program of preventive maintenance, including more chemical injection and flushing.


Hundal Clark Rd.
SEWD Irrigation Test
Legend
Field Pressure
Pump
Clark Dr
Pump
Google Earth
500 ft
N

Power Services, Inc.

6301 Bearden Lane
Modesto, CA 95357
209.527.2908 / 800.808.9283
209.527.2921 fax
www.powerhydrodynamics.com

Friday, August 21, 2020

Steve Lagamarsino
Steve Lagamarsino Inc..
5610 E Main
Stockton, CA 95215

Dear Steve Lagamarsino:

Enclosed are the results of your pump test. The results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.

Some of the factors, which influence pump performance, are:

- Changes in discharge pressures
- Changes in water table level and well yield
- Pump wear
- Proper pump design for application

We offer the following services to help our customers save time and money. Pump testing, irrigation system analysis, irrigation water management, and electric rate management. Visit our website at www.powerhydrodynamics.com for more information or to use our water cost calculator.

Please feel free to call 209-527-2908 if you have questions about this test or on the other services that Power Services has to offer.

Regards,

William Thomas Power, III

Enclosures

Power Services, Inc.

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Modesto, CA 95357
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www.powerhydrodynamics.com

CONFIDENTIAL/PROPRIETARY INFORMATION

Steve Lagamarsino
Steve Lagamarsino Inc..
5610 E Main
Stockton, CA 95215

Friday, August 21, 2020

SUBJECT: PUMPING COST ANALYSIS
HP: 30.00 Plant: Ag Well
PUMP TEST REFERENCE NUMBER: PT-24225
PUMP TEST RUN: Run 1

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the pump test performed Aug 20th 2020 and information provided by you during the pump test.

It is recommended and assumed that:

1. **Overall plant efficiency can be improved to: 61%**
2. **Water requirements will be the same as for the past year.**
3. **All operating conditions (annual hours of operation, discharge head, and water pumping level) will remain the same as they were at the time of the pump test.**

	EXISTING PLANT EFFICIENCY	IMPROVED PLANT EFFICIENCY	SAVINGS
kWh/AF	343.3	267.4	75.9
Estimated Total kWh	22,441	17,476	4,965
Average Cost per kWh	$0.23	$0.23	
Average Cost per hour	$5.18	$6.17	*
Cost Per Acre Ft.	$79.2	$61.68	$17.52
Estimated Acre Ft. Per Year	65.37	65.37	
Run Hours	1,000.00	1,000.00	
Overall Plant Efficiency	47.5%	61%	
Estimated Total Annual Cost	$5,177.05	$4,031.72	$1,145.33

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued.
If you have any questions, please contact Bill Power at (209) 527-2908.

Regards,

William Thomas Power, III

Enclosures

Power Services, Inc.

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Modesto, CA 95357
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209 527 2921 fax
www powerhydrodynamics com

Report ID: PT-24225

Agricultural and Domestic Pump Test Report
Steve Lagamarsino Inc.. - Ag Well - Run 1

Latitude: 37.95707W | Longitude: -121.21534N | Elevation: 37 ft
Test Date: Aug 20th 2020 | Tester: Bill Power | Nameplate HP: 30.00 hp

Customer Information

Steve Lagamarsino Inc..

5610 E Main
Stockton, CA 95215

Contact: Steve Lagamarsino
Cell: 209-479-3086

Power Company Data

PG&E

Meter #: 1005442147
Rate Schedule: AG5A
Average Cost: $0.23

Equipment Data

Motor Make: General Electric
Volts/Amps: 460V/92.4A
Serial#: 43017368
Pump Make: Superior
Pump Type: Turbine
Drive Type: Electric Motor
Gearhead Make:

Hydraulic Data

Standing Water Level (SWL): 56.00 ft
Recovered Water Level (RWL): 0.00 ft
Pumping Water Level (PWL): 67.00 ft
Drawdown: 11 ft
Discharge Pressure: 40.00 lb/sqft
Discharge Level: 92.4 ft
Total Lift: 159.4 ft
Well Yield: 32.27 gpm/ft
Water Source: Well

Flow Data

Run Number: 1 of 1
Measured Flow: 355 gpm
Customer Flow: 0 gpm
Flow Velocity: 3.3 ft/sec
Acre Feet per 24 Hr: 1.57
Cubic Feet Per Second (CFS): 0.79 ft
Discharge Pressure: 40 psi

Power Data

Horsepower Input to Motor: 30.08 hp
Brake Horsepower: 27.67 hp
Kilowatt Input to Motor: 22.44 kW
Energy Cost: $5.18/hr
Name Plate RPM: 1755 rpm

Percent of Rated Motor Load: 92%
Kilowatt Hours per Acre Foot: 343.3
Cost to Pump an Acre Foot: $79.2
Overall Plant Efficiency: 47.5%
Water Horsepower: 14.29 hp
Run Hours: 1000

Remarks

All results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.

Overall efficiency of this plant is considered to be low assuming this run represents plant's normal operating condition.

Recovered water level based on 5 minutes recovery, well could still be recovering.

Pump started for test, pumping water level could still be drawing down.

This pump has an adequate test section.

This pump did not have a flow meter.

HPI measured with direct read KWI.

Cost Analysis page is based on 1000 run time hours. Your savings may differ based on pumps actual usage.

Based on information obtained at the time the test was performed, this test represents the pumps standard operating conditions.

Power Services, Inc.

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209.527.2921 fax
www.powerhydrodynamics.com

Monday, July 22, 2019

Tom McGurk
Tom McGurk Farming
PO Box 83
Stockton, CA 95201

Dear Tom McGurk:

Enclosed are the results of your pump test. The results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.

Some of the factors, which influence pump performance, are:

- Changes in discharge pressures
- Changes in water table level and well yield
- Pump wear
- Proper pump design for application

We offer the following services to help our customers save time and money. Pump testing, irrigation system analysis, irrigation water management, and electric rate management. Visit our website at www.powerhydrodynamics.com for more information or to use our water cost calculator.

Please feel free to call 209-527-2908 if you have questions about this test or on the other services that Power Services has to offer.

Regards,

William Thomas Power, III

Enclosures

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www.powerhydrodynamics.com

CONFIDENTIAL/PROPRIETARY INFORMATION

Tom McGurk
Tom McGurk Farming
PO Box 83
Stockton, CA 95201

Monday, July 22, 2019

SUBJECT: PUMPING COST ANALYSIS
HP: 75.00 Plant: Ranch River Booster
PUMP TEST REFERENCE NUMBER: PT-23045
PUMP TEST RUN: Run 1

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the pump test performed Jul 19th 2019 and information provided by you during the pump test.

It is recommended and assumed that:

1. **Overall plant efficiency can be improved to: 77.3%**
2. **Water requirements will be the same as for the past year.**
3. **All operating conditions (annual hours of operation, discharge head, and water pumping level) will remain the same as they were at the time of the pump test.**

	EXISTING PLANT EFFICIENCY	IMPROVED PLANT EFFICIENCY	SAVINGS
kWh/AF	208.3	208.3	*
Estimated Total kWh	62,702	62,701	*
Average Cost per kWh	$0.18	$0.18	
Average Cost per hour	$11.58	$12.09	*
Cost Per Acre Ft.	$38.45	$38.45	*
Estimated Acre Ft. Per Year	301.06	301.06	
Run Hours	1,000.00	1,000.00	
Overall Plant Efficiency	77.3%	77.3%	
Estimated Total Annual Cost	$11,575.99	$11,575.85	$0.14

* Savings for increased efficiency would be achieved by running the pump fewer hours to pump the same volume.

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued.
If you have any questions, please contact Bill Power at (209) 527-2908.

Regards,

William Thomas Power, III

Enclosures

Power Services, Inc.
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Modesto, CA 95357
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209.527.2921 fax
www.powerhydrodynamics.com

Report ID: PT-23045

Agricultural and Domestic Pump Test Report
Tom McGurk Farming - Ranch River Booster - Run 1

Latitude: 38.6360W | Longitude: -120.99001N | Elevation: 118 ft
Test Date: Jul 19th 2019 | Tester: Devin Power | Nameplate HP: 75.00 hp

Customer Information

Tom McGurk Farming

PO Box 83
Stockton, CA 95201

Contact: Tom McGurk
Phone: 209-471-0159
Cell: 209-471-0159

Power Company Data

PG&E

Meter #: 1010408248
Rate Schedule: AG5B
Average Cost: $0.18

Equipment Data

Motor Make: Baldor
Volts/Amps: 460V/88A
Serial#: Z0801110631
Pump Make: Berkeley
Pump Type: Centrifugal
Drive Type: Electric Motor
Gearhead Make:

Hydraulic Data

Standing Water Level (SWL): 0.00 ft
Recovered Water Level (RWL): 0.00 ft
Pumping Water Level (PWL): 10.00 ft
Drawdown: 0 ft
Discharge Pressure: 63.79 lb/sqft
Discharge Level: 147.3549 ft
Total Lift: 157.3549 ft
Well Yield: 0 gpm/ft
Water Source: River

Flow Data

Run Number: 1 of 1
Measured Flow: 1635 gpm
Customer Flow: 1700 gpm
Flow Velocity: 4.09 ft/sec
Acre Feet per 24 Hr: 7.23
Cubic Feet Per Second (CFS): 3.64 ft
Discharge Pressure: 63.79 psi

Power Data

Horsepower Input to Motor: 84.05 hp
Brake Horsepower: 79.01 hp
Kilowatt Input to Motor: 62.7 kW
Energy Cost: $11.58/hr
Name Plate RPM: 1770 rpm

Percent of Rated Motor Load: 105%
Kilowatt Hours per Acre Foot: 208.27
Cost to Pump an Acre Foot: $38.45
Overall Plant Efficiency: 77.3%
Water Horsepower: 64.97 hp
Run Hours: 1000

Remarks

Overall efficiency of this plant is considered to be very good assuming this run represents plant's normal operating condition.

This pump has an adequate test section.

This pump had a propeller type flow meter.

HPI measured with direct read KWI.

Based on information obtained at the time the test was performed, this test represents the pumps standard operating conditions.

All results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.

Power Services, Inc.

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CONFIDENTIAL/PROPRIETARY INFORMATION

Tom McGurk
Tom McGurk Farming
PO Box 83
Stockton, CA 95201

Monday, July 22, 2019

SUBJECT: PUMPING COST ANALYSIS
HP: 10.00 Plant: Ranch River Lift Pump
PUMP TEST REFERENCE NUMBER: PT-23046
PUMP TEST RUN: Run 1

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the pump test performed Jul 19th 2019 and information provided by you during the pump test.

It is recommended and assumed that:

1. **Overall plant efficiency can be improved to: 58%**
2. **Water requirements will be the same as for the past year.**
3. **All operating conditions (annual hours of operation, discharge head, and water pumping level) will remain the same as they were at the time of the pump test.**

	EXISTING PLANT EFFICIENCY	IMPROVED PLANT EFFICIENCY	SAVINGS
kWh/AF	58	33.9	24.1
Estimated Total kWh	8,230	4,812	3,418
Average Cost per kWh	$0.18	$0.18	
Average Cost per hour	$1.52	$1.76	*
Cost Per Acre Ft.	$10.72	$6.27	$4.45
Estimated Acre Ft. Per Year	141.78	141.78	
Run Hours	1,000.00	1,000.00	
Overall Plant Efficiency	33.9%	58%	
Estimated Total Annual Cost	$1,519.46	$888.39	$631.08

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued.
If you have any questions, please contact Bill Power at (209) 527-2908.

Regards,

William Thomas Power, III

Enclosures

Power Services, Inc.

6301 Bearden Lane
Modesto, CA 95357
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209.527.2921 fax
www.powerhydrodynamics.com

Report ID: PT-23046

Agricultural and Domestic Pump Test Report
Tom McGurk Farming - Ranch River Lift Pump - Run 1

Latitude: 38.6544W | Longitude: -120.98683N | Elevation: 136 ft
Test Date: Jul 19th 2019 | Tester: Devin Power | Nameplate HP: 10.00 hp

Customer Information

Tom McGurk Farming

PO Box 83
Stockton, CA 95201

Contact: Tom McGurk
Phone: 209-471-0159
Cell: 209-471-0159

Power Company Data

PG&E

Meter #: 1006881776
Rate Schedule: AG5B
Average Cost: $0.18

Equipment Data

Motor Make: U.S.
Volts/Amps: 460V/13.5A
Serial#: J146A07A136R317F
Pump Make: Floway
Pump Type: Propeller
Drive Type: Electric Motor
Gearhead Make:

Hydraulic Data

Standing Water Level (SWL): 0.00 ft
Recovered Water Level (RWL): 0.00 ft
Pumping Water Level (PWL): 10.00 ft
Drawdown: 0 ft
Discharge Pressure: 4.00 lb/sqft
Discharge Level: 9.24 ft
Total Lift: 19.24 ft
Well Yield: 0 gpm/ft
Water Source: River

Flow Data

Run Number: 1 of 1
Measured Flow: 770 gpm
Customer Flow: 720 gpm
Flow Velocity: 3.11 ft/sec
Acre Feet per 24 Hr: 3.41
Cubic Feet Per Second (CFS): 1.71 ft
Discharge Pressure: 4 psi

Power Data

Horsepower Input to Motor: 11.03 hp
Brake Horsepower: 9.49 hp
Kilowatt Input to Motor: 8.23 kW
Energy Cost: $1.52/hr
Name Plate RPM: 1740 rpm

Percent of Rated Motor Load: 95%
Kilowatt Hours per Acre Foot: 58.05
Cost to Pump an Acre Foot: $10.72
Overall Plant Efficiency: 33.91%
Water Horsepower: 3.74 hp
Run Hours: 1000

Remarks

All results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.

Overall efficiency of this plant is considered to be very low assuming this run represents plant's normal operating condition.

This pump has an adequate test section.

This pump had a propeller type flow meter.

HPI measured with direct read KWI.

Based on information obtained at the time the test was performed, this test represents the pumps standard operating conditions.

Cost Analysis page is based on 1000 run time hours. Your savings may differ based on pumps actual usage.

Power Services, Inc.
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www.powerhydrodynamics.com

Report ID: PT-23044

Agricultural and Domestic Pump Test Report
Tom McGurk Farming - Ranch Deepwell - Run 1

Latitude: 38.6402W | Longitude: -120.99114N | Elevation: 136 ft
Test Date: Jul 19th 2019 | Tester: Devin Power | Nameplate HP: 125.00 hp

Customer Information

Tom McGurk Farming

PO Box 83
Stockton, CA 95201

Contact: Tom McGurk
Phone: 209-471-0159
Cell: 209-471-0159

Power Company Data

PG&E

Meter #: 1010408248
Rate Schedule: AG5B
Average Cost:

Equipment Data

Motor Make: U.S.
Volts/Amps: 460V/91.7A
Serial#: V0875992430010R0004
Pump Make: Gould
Pump Type: Turbine
Drive Type: Electric Motor
Gearhead Make:

Hydraulic Data

Standing Water Level (SWL): 0.00 ft
Recovered Water Level (RWL): 0.00 ft
Pumping Water Level (PWL): 0.00 ft
Drawdown: 0 ft
Discharge Pressure: 48.00 lb/sqft
Discharge Level: 110.88 ft
Total Lift: 110.88 ft
Well Yield: 0 gpm/ft
Water Source: Well

Flow Data

Run Number: 1 of 1
Measured Flow: 1294 gpm
Customer Flow: 0 gpm
Flow Velocity: 4.53 ft/sec
Acre Feet per 24 Hr: 5.73
Cubic Feet Per Second (CFS): 2.88 ft
Discharge Pressure: 48 psi

Power Data

Horsepower Input to Motor: 145.87 hp
Brake Horsepower: 134.2 hp
Kilowatt Input to Motor: 108.82 kW
Energy Cost: $20.09/hr
Name Plate RPM: 1780 rpm

Percent of Rated Motor Load: 107%
Kilowatt Hours per Acre Foot: 456.72
Cost to Pump an Acre Foot: $84.32

Water Horsepower: 36.23 hp
Run Hours: 1000

Remarks

All results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.

Overall efficiency unknown due to inability to measure Pumping Water Level.

No entrance in well. Unable to measure water levels.

This pump has an adequate test section.

This pump did not have a flow meter.

HPI measured with direct read KWI.

Based on information obtained at the time the test was performed, this test represents the pumps standard operating conditions.

Power Services, Inc.

6301 Bearden Lane
Modesto, CA 95357
209.527.2908 / 800.808.9283
209.527.2921 fax
www.powerhydrodynamics.com

Tuesday, June 25, 2019

Justin Hopkins
Stockton East Water District
PO Box 5157
Stockton, CA 952055157

Dear Justin Hopkins:

Enclosed are the results of your pump test. The results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.

Some of the factors, which influence pump performance, are:

- Changes in discharge pressures
- Changes in water table level and well yield
- Pump wear
- Proper pump design for application

We offer the following services to help our customers save time and money. Pump testing, irrigation system analysis, irrigation water management, and electric rate management. Visit our website at www.powerhydrodynamics.com for more information or to use our water cost calculator.

Please feel free to call 209-527-2908 if you have questions about this test or on the other services that Power Services has to offer.

Regards,

William Thomas Power, III

Enclosures

Power Services, Inc.

6301 Bearden Lane
Modesto, CA 95357
209.527.2908 / 800.808.9283
209.527.2921 fax
www.powerhydrodynamics.com

CONFIDENTIAL/PROPRIETARY INFORMATION

Justin Hopkins
Stockton East Water District
PO Box 5157
Stockton, CA 952055157

Tuesday, June 25, 2019

SUBJECT: PUMPING COST ANALYSIS
HP: 30.00 Plant: 4000 Lift Pump
PUMP TEST REFERENCE NUMBER: PT-22922
PUMP TEST RUN: Run 1

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the pump test performed Jun 24th 2019 and information provided by you during the pump test.

It is recommended and assumed that:

1. **Overall plant efficiency can be improved to: 61%**
2. **Water requirements will be the same as for the past year.**
3. **All operating conditions (annual hours of operation, discharge head, and water pumping level) will remain the same as they were at the time of the pump test.**

	EXISTING PLANT EFFICIENCY	IMPROVED PLANT EFFICIENCY	SAVINGS
kWh/AF	35.1	26.8	8.3
Estimated Total kWh	26,411	20,159	6,252
Average Cost per kWh	$0.18	$0.18	
Average Cost per hour	$4.88	$5.05	*
Cost Per Acre Ft.	$6.48	$4.95	$1.53
Estimated Acre Ft. Per Year	752.37	752.37	
Run Hours	1,000.00	1,000.00	
Overall Plant Efficiency	46.6%	61%	
Estimated Total Annual Cost	$4,875.95	$3,721.72	$1,154.23

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued.
If you have any questions, please contact Bill Power at (209) 527-2908.

Regards,

William Thomas Power, III

Enclosures

Power Services, Inc.

6301 Bearden Lane
Modesto, CA 95357
209.527.2908 / 800.808.9283
209.527.2921 fax
www.powerhydrodynamics.com

Report ID: PT-22922

Agricultural and Domestic Pump Test Report
Stockton East Water District - 4000 Lift Pump - Run 1

Latitude: 38.4079W | Longitude: -121.2780N | Elevation: 101 ft
Test Date: Jun 24th 2019 | Tester: Bill Power | Nameplate HP: 30.00 hp

Customer Information

Stockton East Water District

PO Box 5157
Stockton, CA 952055157

Contact: Justin Hopkins
Phone: 209-948-0333
Cell: 209-444-3150

Power Company Data

PG&E

Meter #: 1010088982
Rate Schedule: AG5B
Average Cost: $0.18

Equipment Data

Motor Make: General Electric
Volts/Amps: 460V/39.5A
Serial#: AJJ151484
Pump Make: Johnston
Pump Type: Propeller
Drive Type: Electric Motor
Gearhead Make:

Hydraulic Data

Standing Water Level (SWL): 0.00 ft
Recovered Water Level (RWL): 0.00 ft
Pumping Water Level (PWL): 10.20 ft
Drawdown: 0 ft
Discharge Pressure: 2.50 lb/sqft
Discharge Level: 5.775 ft
Total Lift: 15.975 ft
Well Yield: 0 gpm/ft
Water Source: River

Flow Data

Run Number: 1 of 1
Measured Flow: 4086 gpm
Customer Flow: 0 gpm
Flow Velocity: 8.75 ft/sec
Acre Feet per 24 Hr: 18.08
Cubic Feet Per Second (CFS): 9.1 ft
Discharge Pressure: 2.5 psi

Power Data

Horsepower Input to Motor: 35.4 hp
Brake Horsepower: 31.86 hp
Kilowatt Input to Motor: 26.41 kW
Energy Cost: $4.88/hr
Name Plate RPM: 1170 rpm

Percent of Rated Motor Load: 106%
Kilowatt Hours per Acre Foot: 35.1
Cost to Pump an Acre Foot: $6.48
Overall Plant Efficiency: 46.56%
Water Horsepower: 16.48 hp
Run Hours: 1000

Remarks

All results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.

Overall efficiency of this plant is considered to be low assuming this run represents plant's normal operating condition.

This pump has an adequate test section.

This pump did not have a flow meter.

HPI measured with direct read KWI.

Based on information obtained at the time the test was performed, this test represents the pumps standard operating conditions.

Vibration Analysis was performed on this pump.

Vibration Analysis

Power Services, Inc.

Customer Name: Stockton East Water District

Location: 4000 Lift Pump

Date: 6/24/2019

Run Number	PSI	GPM	RPM	Hertz	VFD	Highest Vibration level	Measurement Location
1	2.5	4086	1170	60	No	0.1125	Motor Top Horizontal

Notes:

1. This pump is in the OK stage of the vibration standards set forth in HI 9.6.4
2. This Pump Passed the Vibration Test

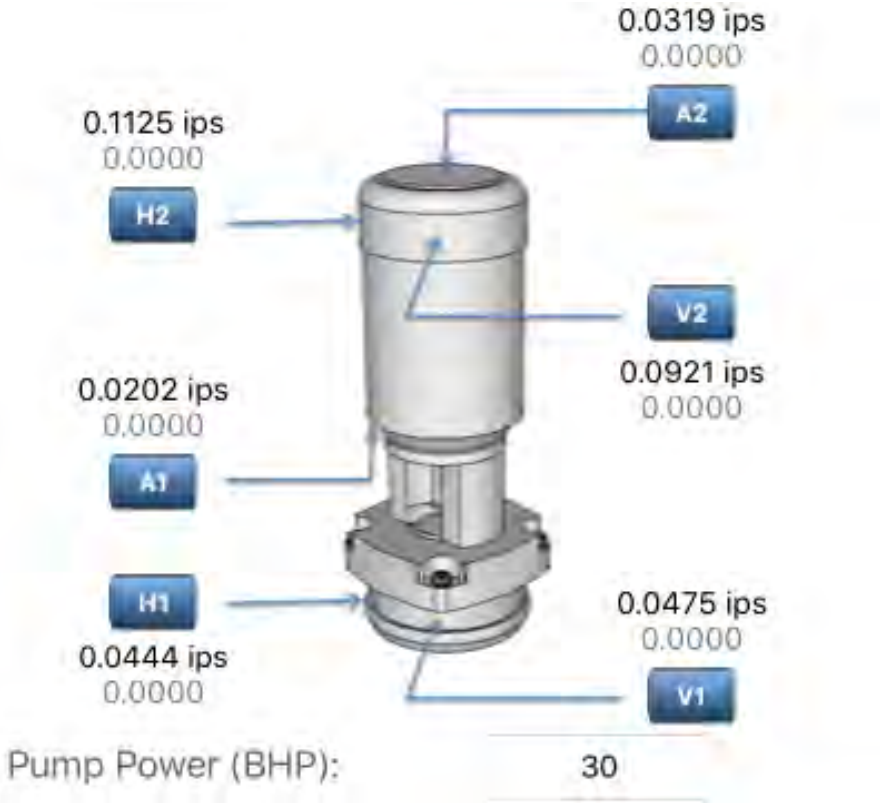
Horizontal = inline with discharge
Vertical = 90° off discharge
Axial = Down shaft

HI 9.6.4	> .129	in/s rms	OK
For Design Point	0.13	in/s rms	Warning
	0.2	in/s rms	Alert
	0.3	in/s rms	Danger

Power Services, Inc.

Overall Vibration Report

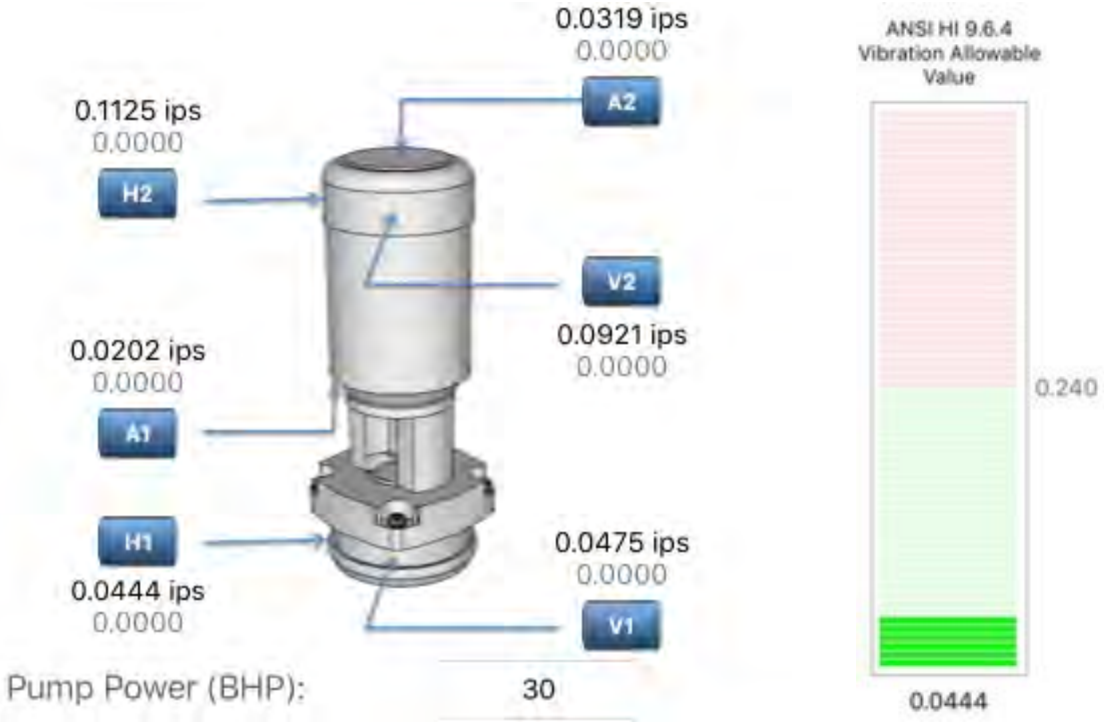
Date / Time: Jun 24, 2019 14:59:59 PM
Staff Name: Bill Power
Location: SEWD
Machine ID: 4000
Vibration units in: ips

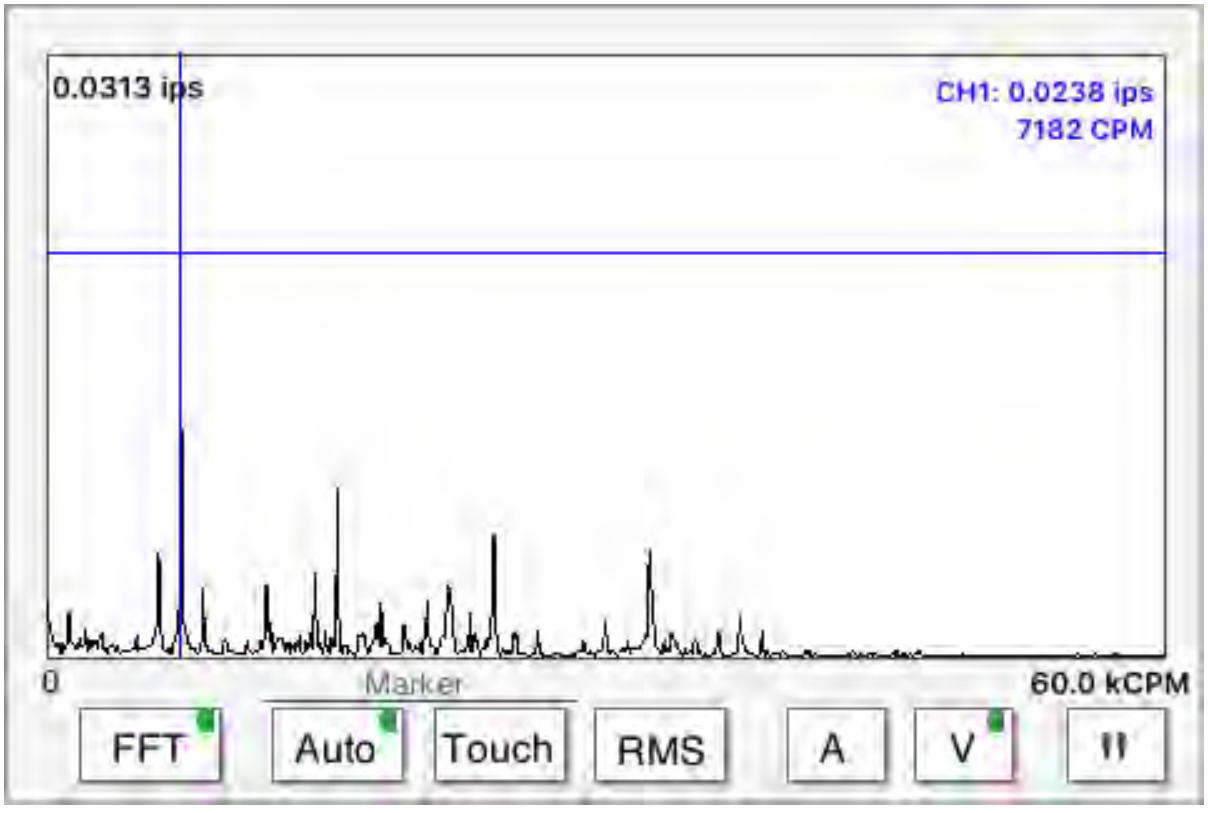


Pump Power (BHP): 30

Notes

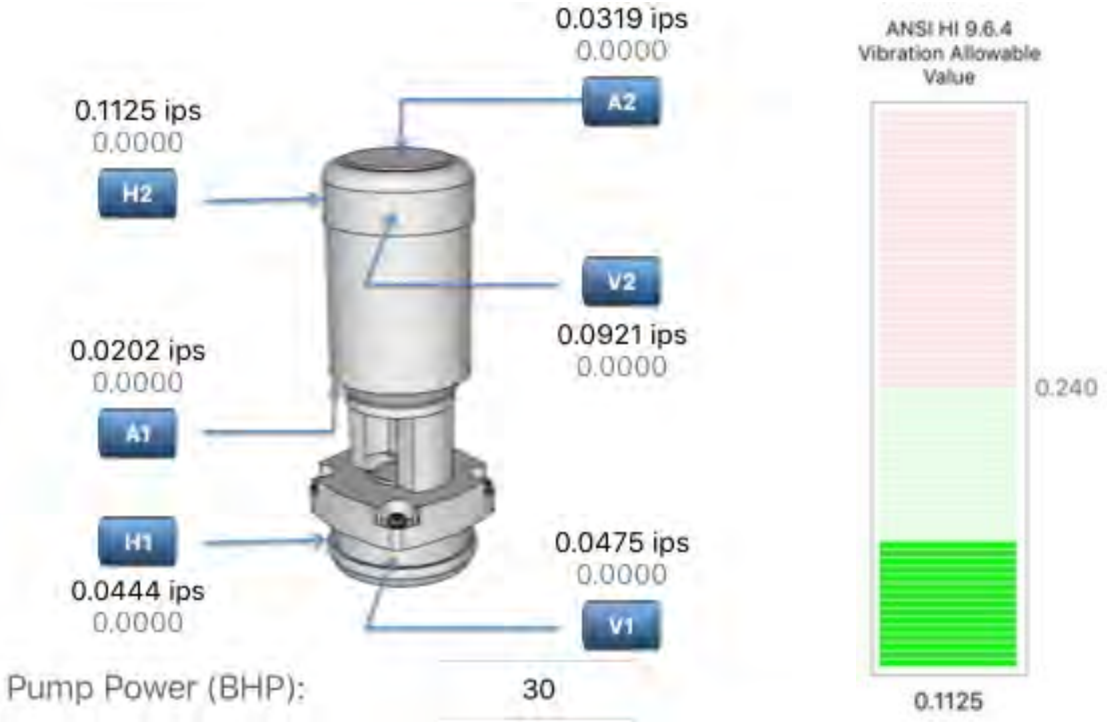
Point H1

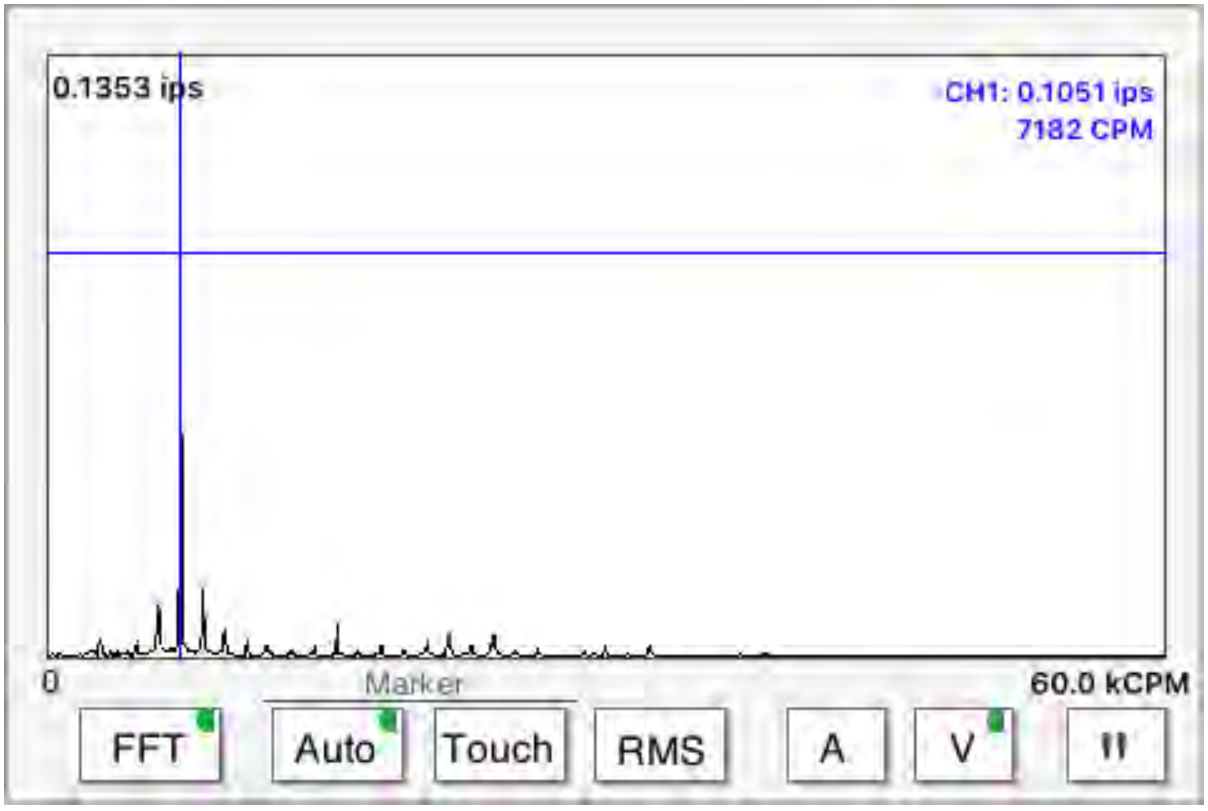




Vibration Spectrum/Time-Waveform for point H1

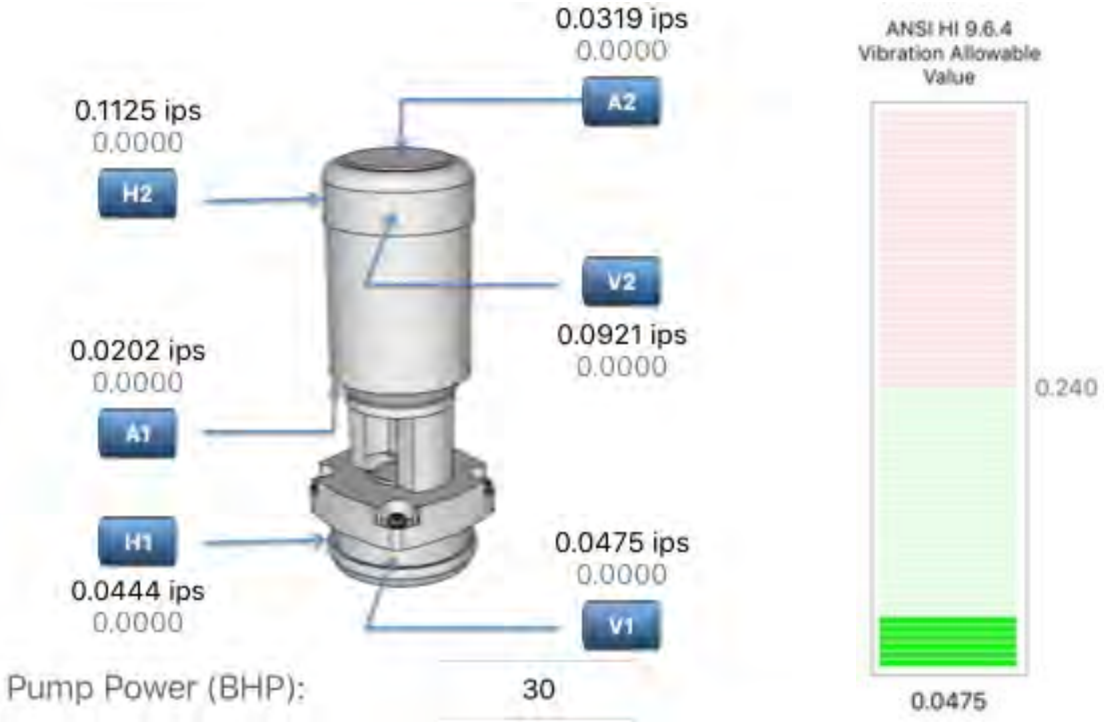
Point H2

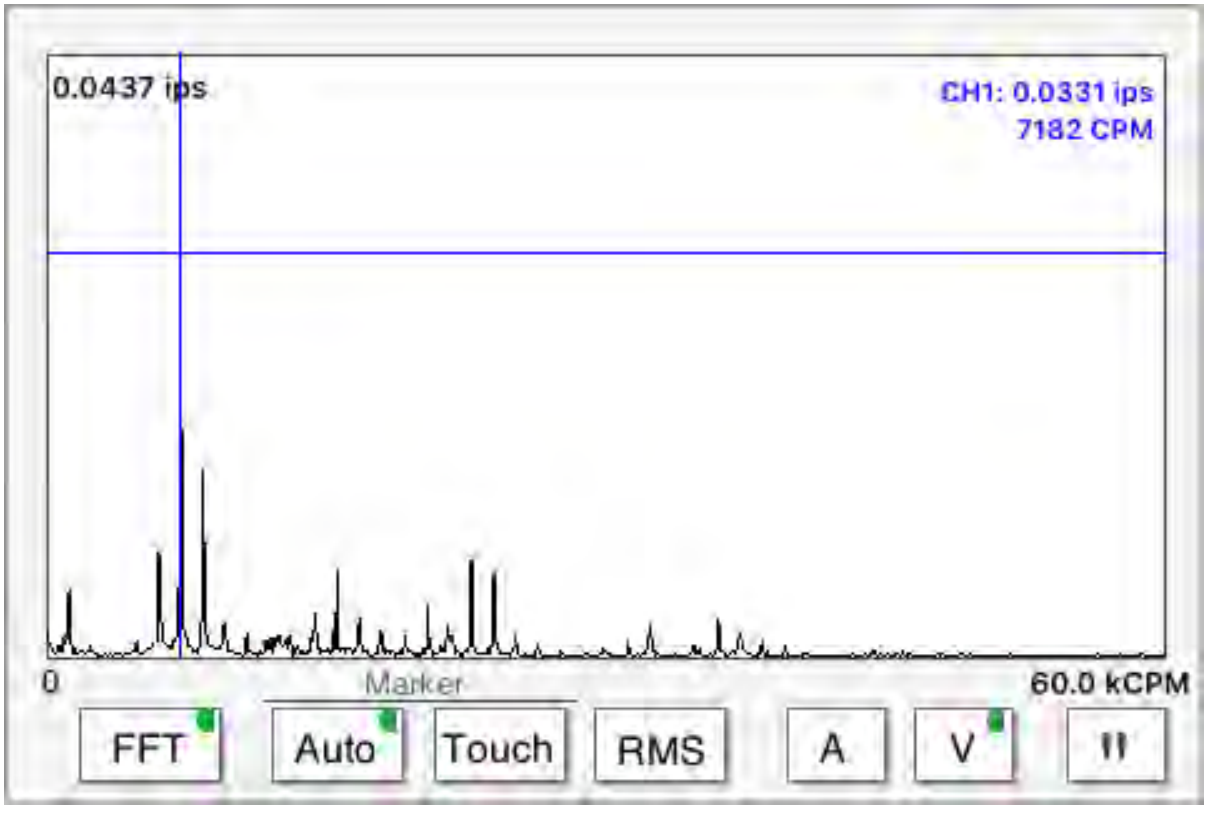




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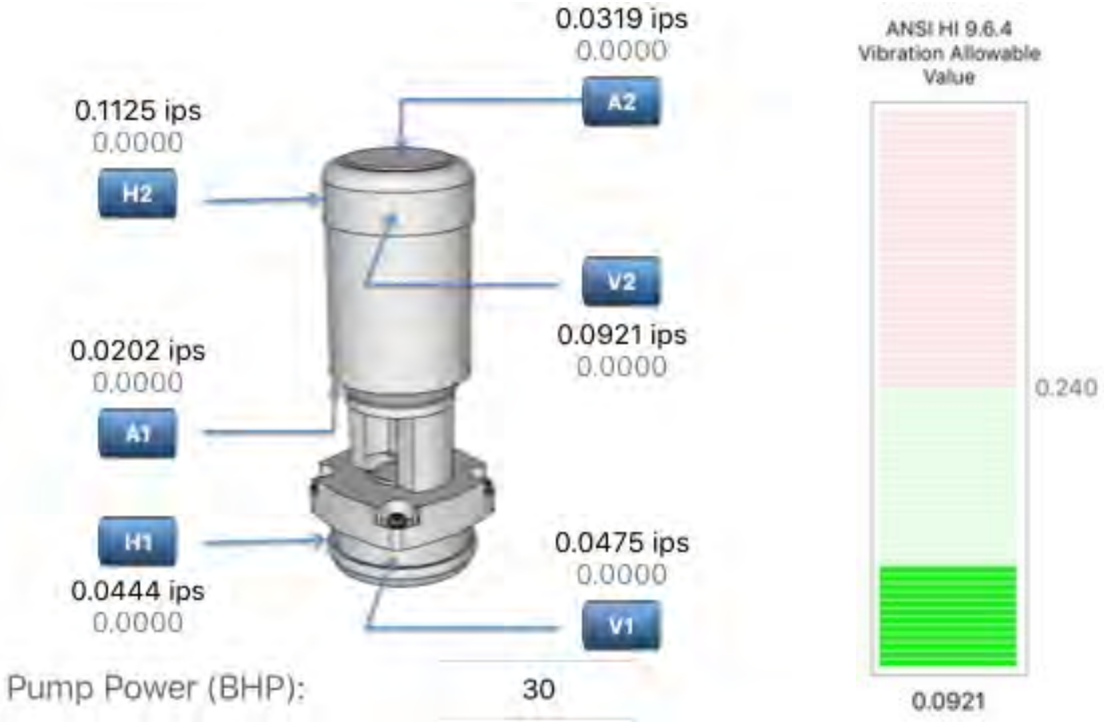
Point V1

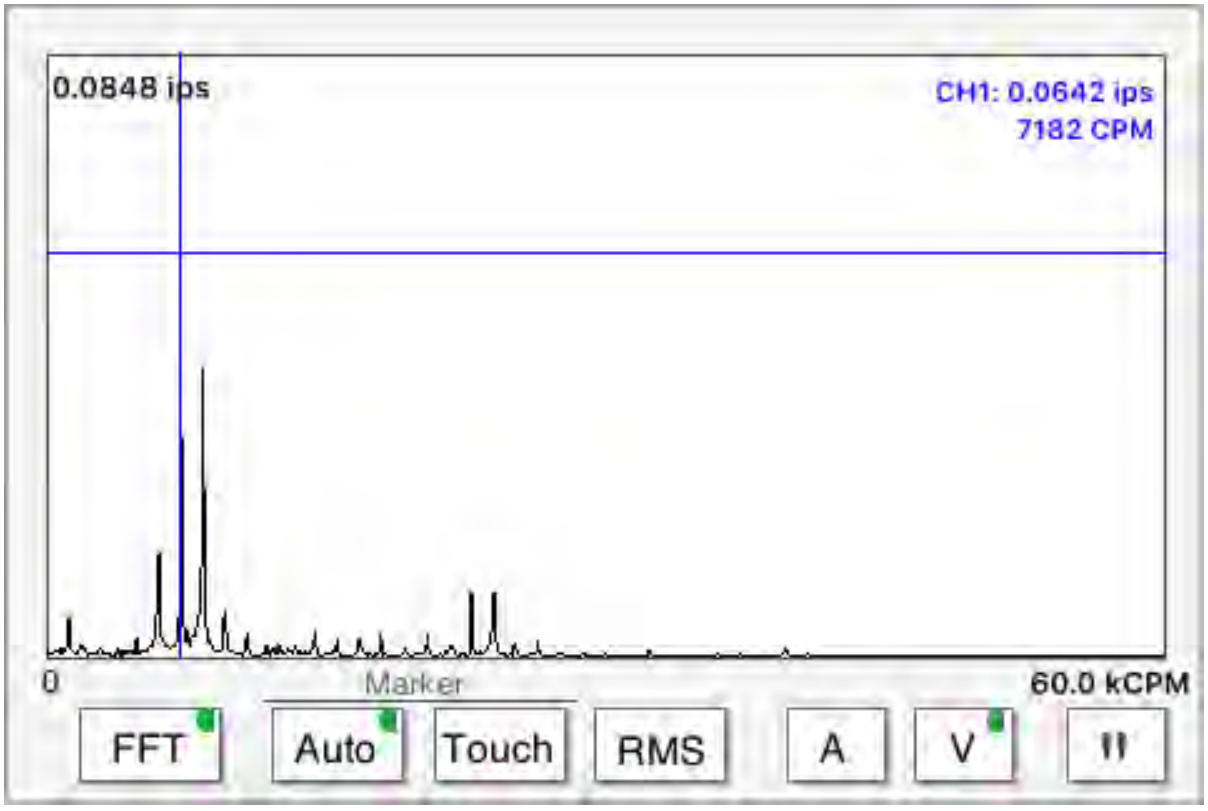




Vibration Spectrum/Time-Waveform for point V1

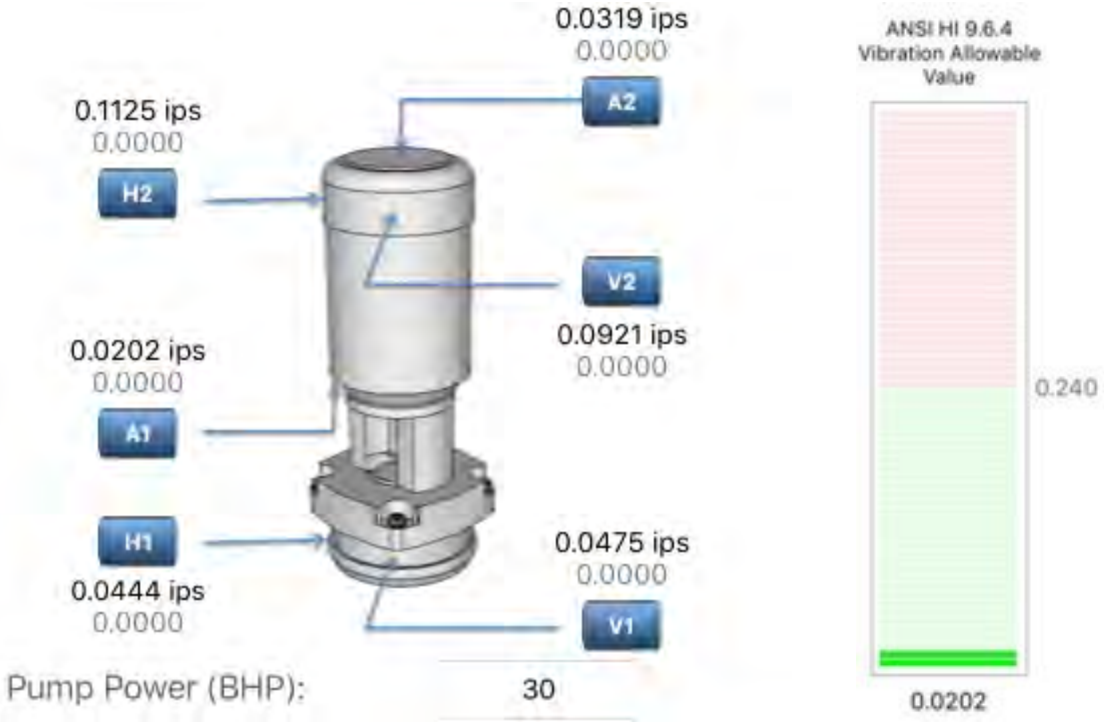
Point V2

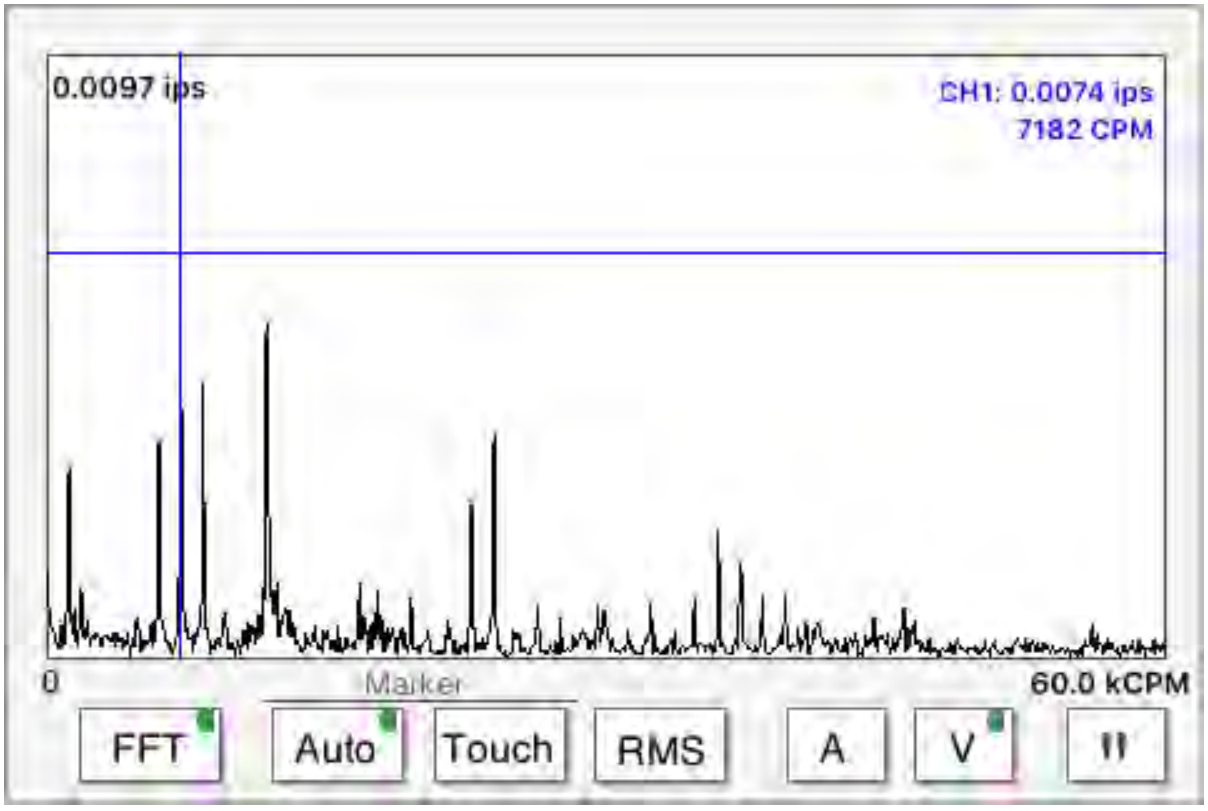




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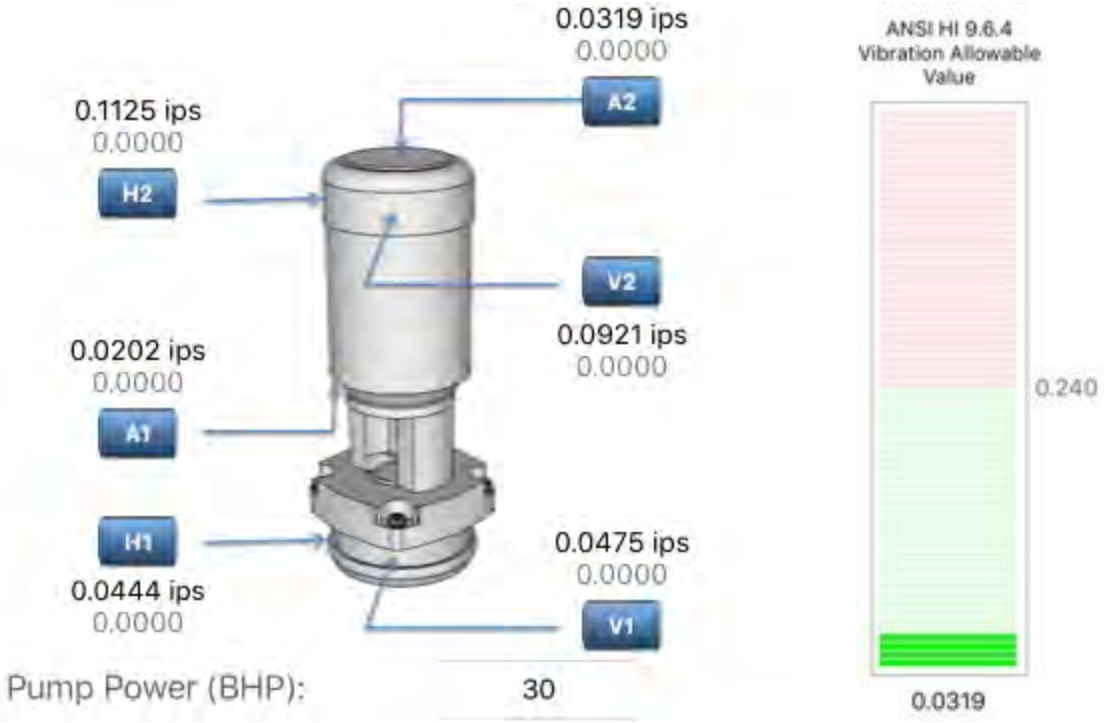
Point A1

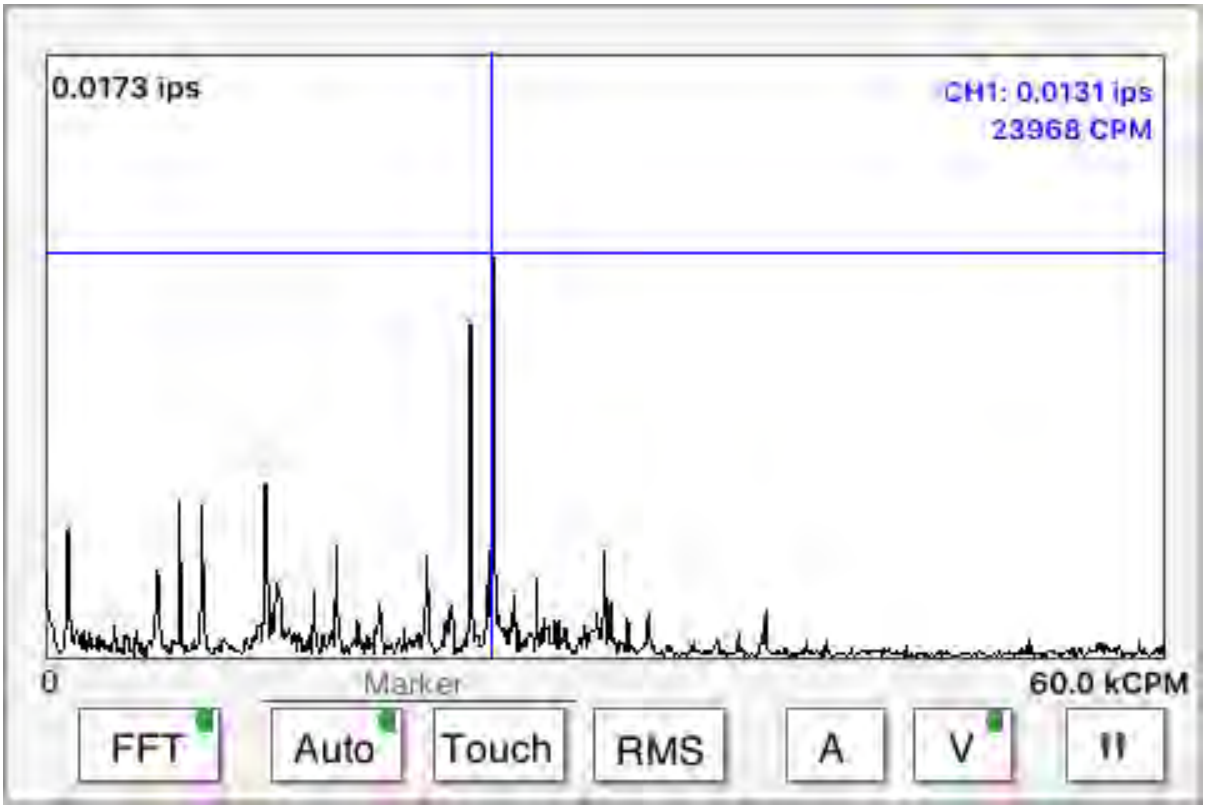




Vibration Spectrum/Time-Waveform for point A1

Point A2





Vibration Spectrum/Time-Waveform for point A2

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Power Services, Inc.

6301 Bearden Lane
Modesto, CA 95357
209.527.2908 / 800.808.9283
209.527.2921 fax
www.powerhydrodynamics.com

CONFIDENTIAL/PROPRIETARY INFORMATION

Justin Hopkins
Stockton East Water District
PO Box 5157
Stockton, CA 952055157

Tuesday, June 25, 2019

SUBJECT: PUMPING COST ANALYSIS
HP: 60.00 Plant: 8000 Lift Pump
PUMP TEST REFERENCE NUMBER: PT-22923
PUMP TEST RUN: Run 1

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the pump test performed Jun 24th 2019 and information provided by you during the pump test.

It is recommended and assumed that:

1. **Overall plant efficiency can be improved to: 64%**
2. **Water requirements will be the same as for the past year.**
3. **All operating conditions (annual hours of operation, discharge head, and water pumping level) will remain the same as they were at the time of the pump test.**

	EXISTING PLANT EFFICIENCY	IMPROVED PLANT EFFICIENCY	SAVINGS
kWh/AF	26.3	25.8	0.5
Estimated Total kWh	43,231	42,419	812
Average Cost per kWh	$0.18	$0.18	
Average Cost per hour	$7.98	$9.99	*
Cost Per Acre Ft.	$4.86	$4.77	$0.09
Estimated Acre Ft. Per Year	1,643.02	1,643.02	
Run Hours	1,000.00	1,000.00	
Overall Plant Efficiency	62.8%	64%	
Estimated Total Annual Cost	$7,981.34	$7,831.37	$149.97

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued.
If you have any questions, please contact Bill Power at (209) 527-2908.

Regards,

William Thomas Power, III

Enclosures

Power Services, Inc.
6301 Bearden Lane
Modesto, CA 95357
209.527.2908 / 800.808.9283
209.527.2921 fax
www.powerhydrodynamics.com

Report ID: PT-22923

Agricultural and Domestic Pump Test Report
Stockton East Water District - 8000 Lift Pump - Run 1

Latitude: 38.4088W | Longitude: -121.2758N | Elevation: 106 ft
Test Date: Jun 24th 2019 | Tester: Bill Power | Nameplate HP: 60.00 hp

Customer Information

Stockton East Water District

PO Box 5157
Stockton, CA 952055157

Contact: Justin Hopkins
Phone: 209-948-0333
Cell: 209-444-3150

Power Company Data

PG&E

Meter #: 1010088982
Rate Schedule: AG5B
Average Cost: $0.18

Equipment Data

Motor Make: U.S.
Volts/Amps: 460V/69A
Serial#:
Pump Make: Johnston
Pump Type: Propeller
Drive Type: Electric Motor
Gearhead Make:

Hydraulic Data

Standing Water Level (SWL): 0.00 ft
Recovered Water Level (RWL): 0.00 ft
Pumping Water Level (PWL): 4.60 ft
Drawdown: 0 ft
Discharge Pressure: 5.00 lb/sqft
Discharge Level: 11.55 ft
Total Lift: 16.15 ft
Well Yield: 0 gpm/ft
Water Source: River

Flow Data

Run Number: 1 of 1
Measured Flow: 8923 gpm
Customer Flow: 0 gpm
Flow Velocity: 9.52 ft/sec
Acre Feet per 24 Hr: 39.48
Cubic Feet Per Second (CFS): 19.87 ft
Discharge Pressure: 5 psi

Power Data

Horsepower Input to Motor: 57.95 hp
Brake Horsepower: 52.73 hp
Kilowatt Input to Motor: 43.23 kW
Energy Cost: $7.98/hr
Name Plate RPM: 880 rpm
Measured RPM: 886 rpm

Percent of Rated Motor Load: 88%
Kilowatt Hours per Acre Foot: 26.31
Cost to Pump an Acre Foot: $4.86
Overall Plant Efficiency: 62.8%
Water Horsepower: 36.39 hp
Run Hours: 1000

Remarks

All results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.

Overall efficiency of this plant is considered to be good assuming this run represents plant's normal operating condition.

This pump has an adequate test section.

This pump did not have a flow meter.

HPI measured with direct read KWI.

Cost Analysis page is based on 1000 run time hours. Your savings may differ based on pumps actual usage.

Based on information obtained at the time the test was performed, this test represents the pumps standard operating conditions.

Vibration Analysis was performed on this pump.

Vibration Analysis

Power Services, Inc.

Customer Name: Stockton East Water District

Location: 8000 Lift Pump

Date: 6/24/2019

Run Number	PSI	GPM	RPM	Hertz	VFD	Highest Vibration level	Measurement Location
1	4.6	8923	880	60	No	0.1455	Motor Top Axial

Notes:

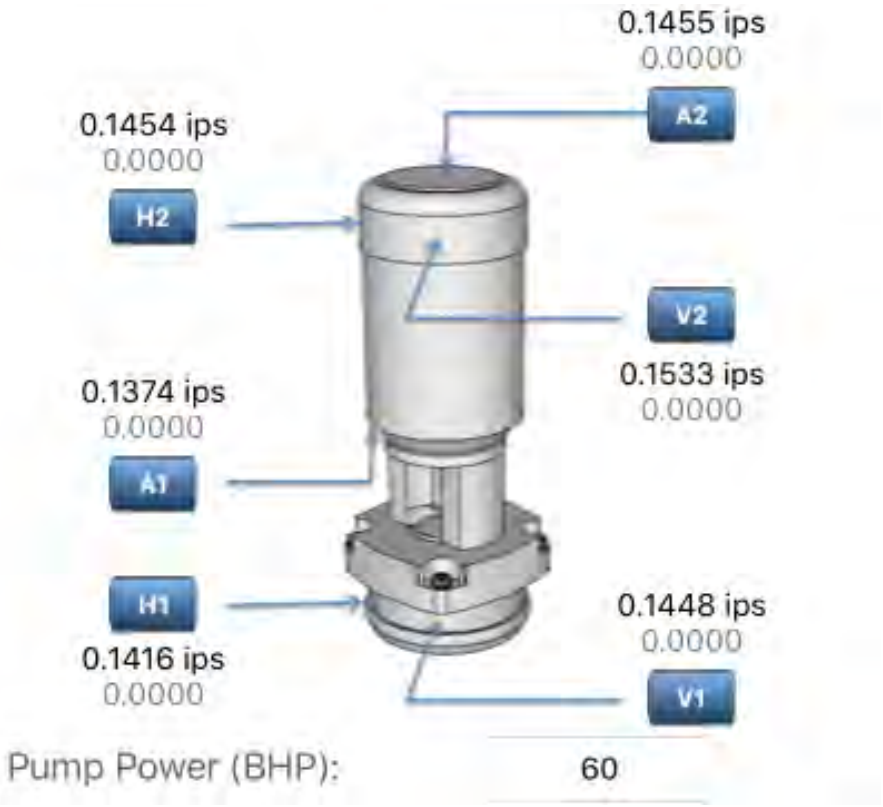
1. This pump is in the Warning stage of the vibration standards set forth in HI 9.6.4
2. This Pump Failed the Vibration Test

Horizontal = inline with discharge
Vertical = 90° off discharge
Axial = Down shaft

HI 9.6.4	> .129	in/s rms	OK
For Design Point	0.13	in/s rms	Warning
	0.2	in/s rms	Alert
	0.3	in/s rms	Danger

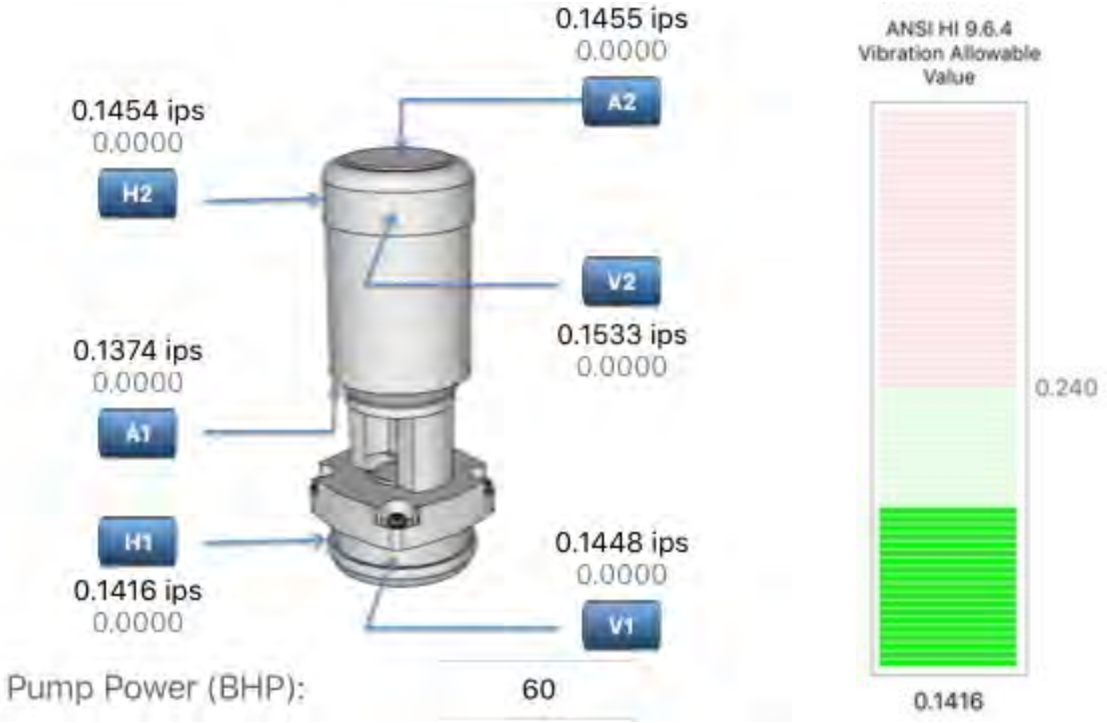
Overall Vibration Report

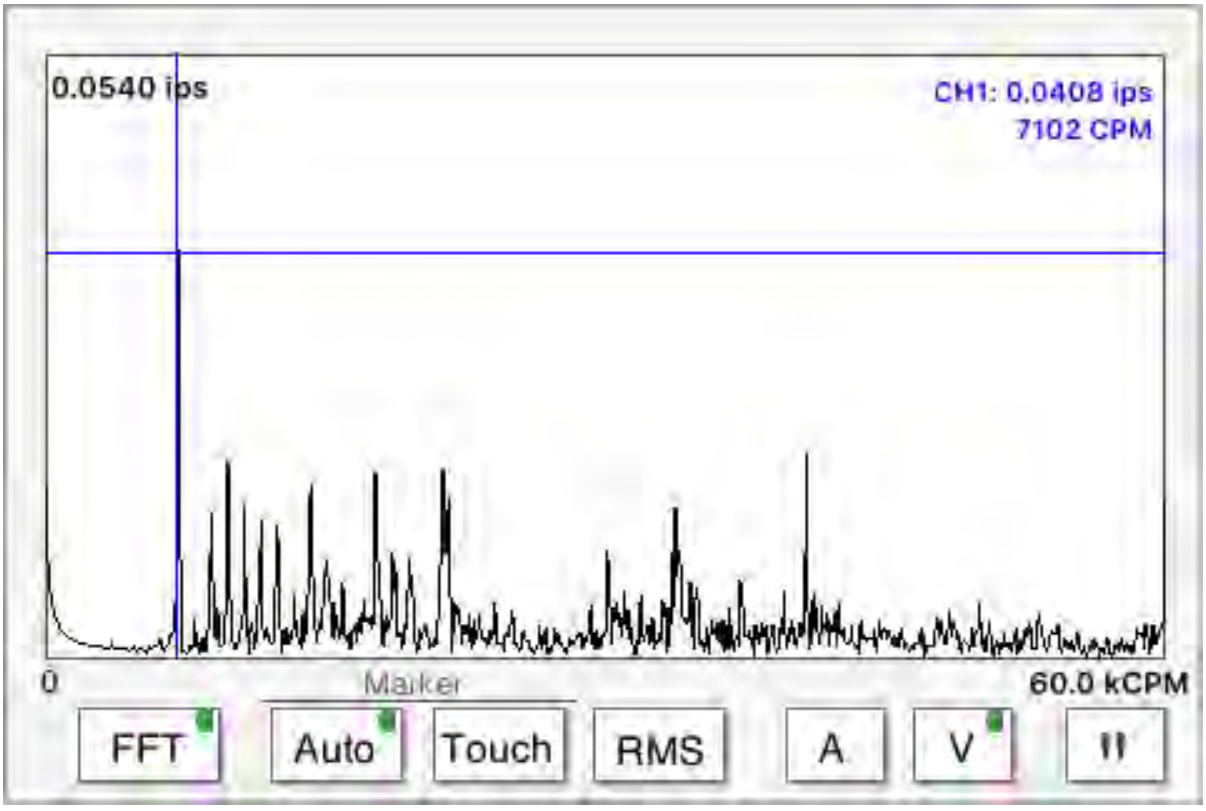
Date / Time: Jun 24, 2019 15:29:58 PM
Staff Name: Bill Power
Location: SEWD
Machine ID: 8000 LIFT
Vibration units in: ips



Notes

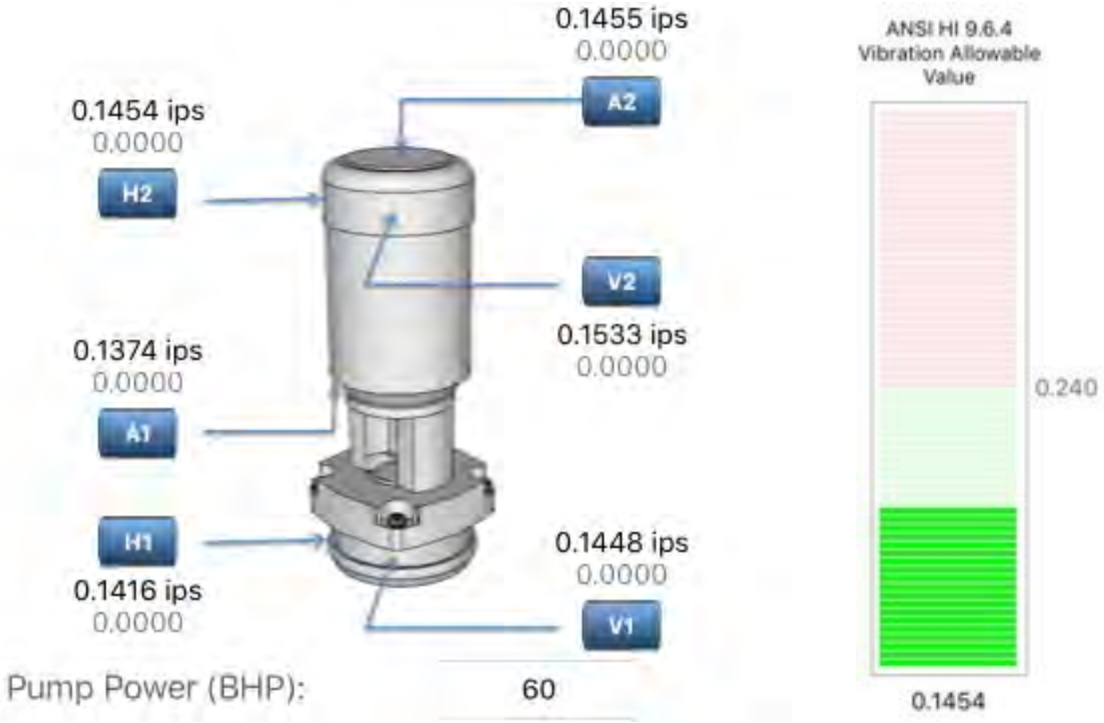
Point H1

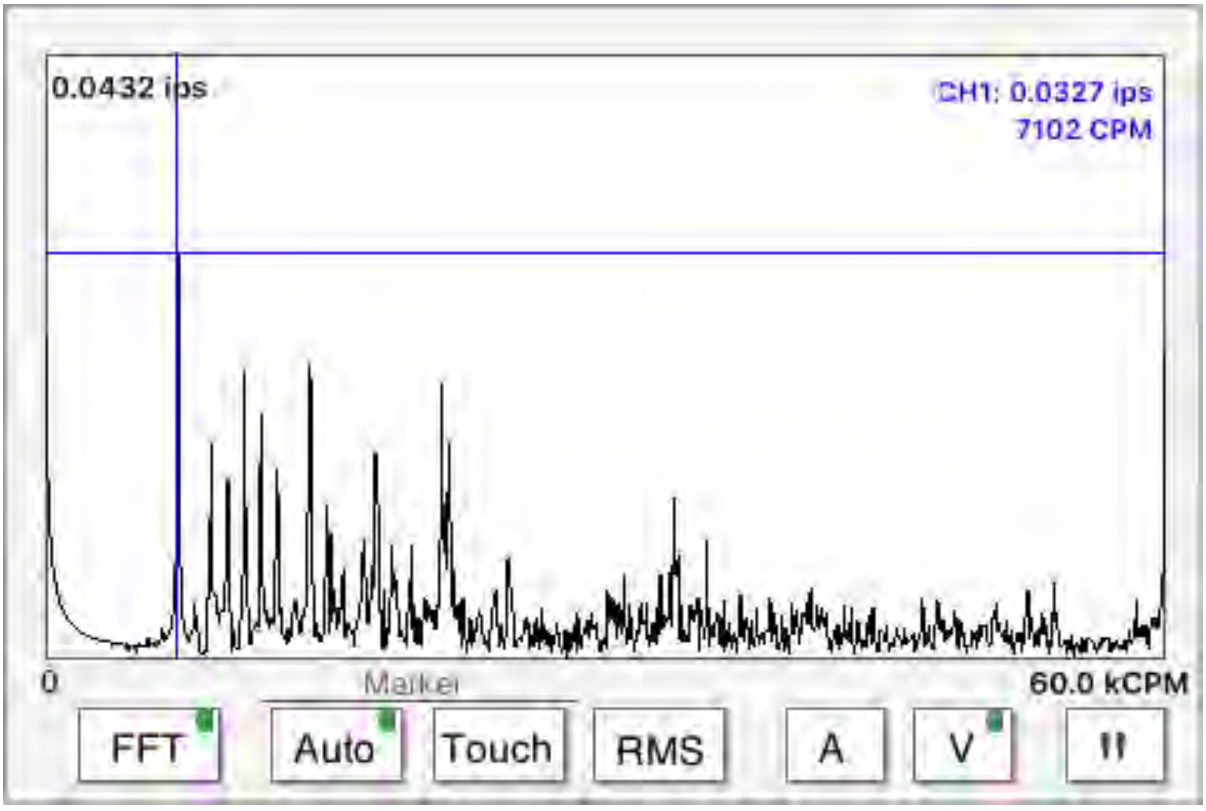




Vibration Spectrum/Time-Waveform for point H1

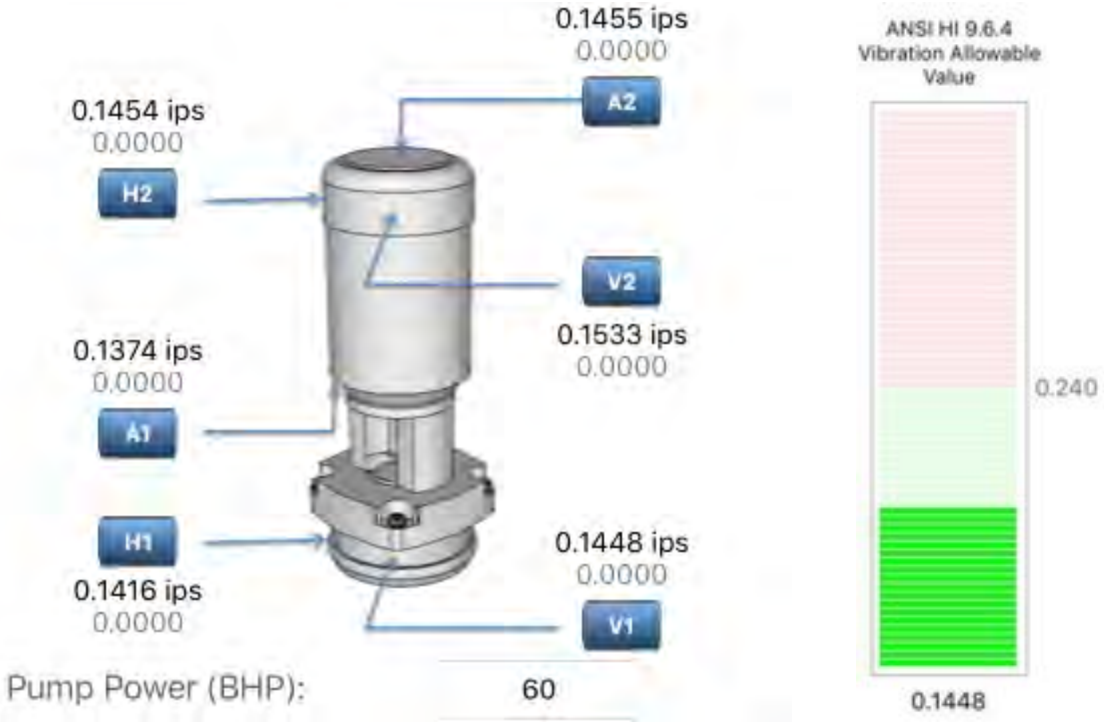
Point H2

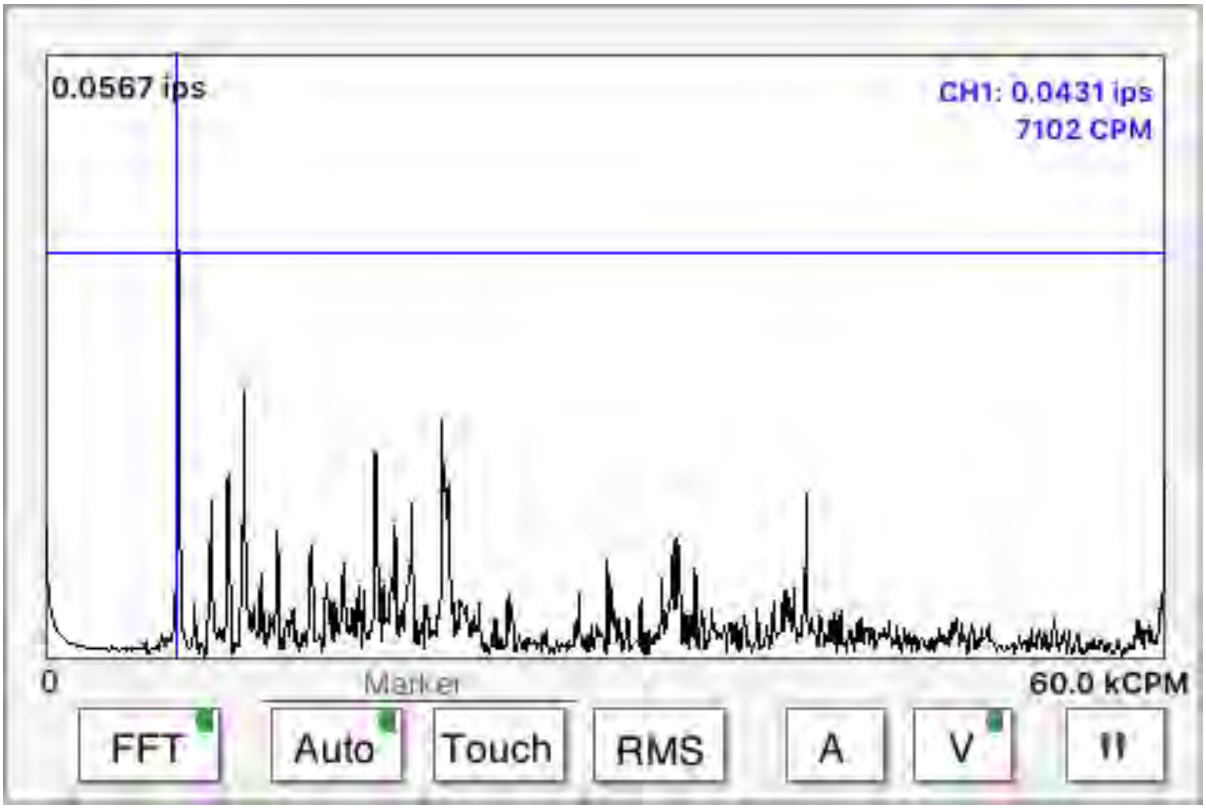




Vibration Spectrum/Time-Waveform for point H2

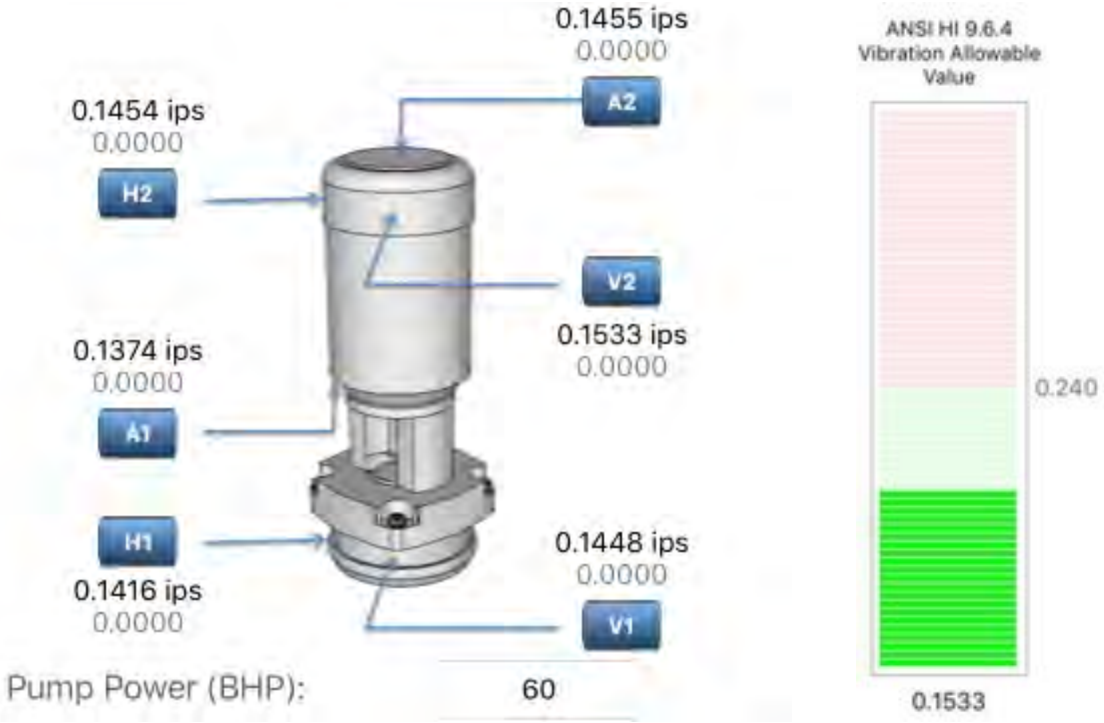
Point V1

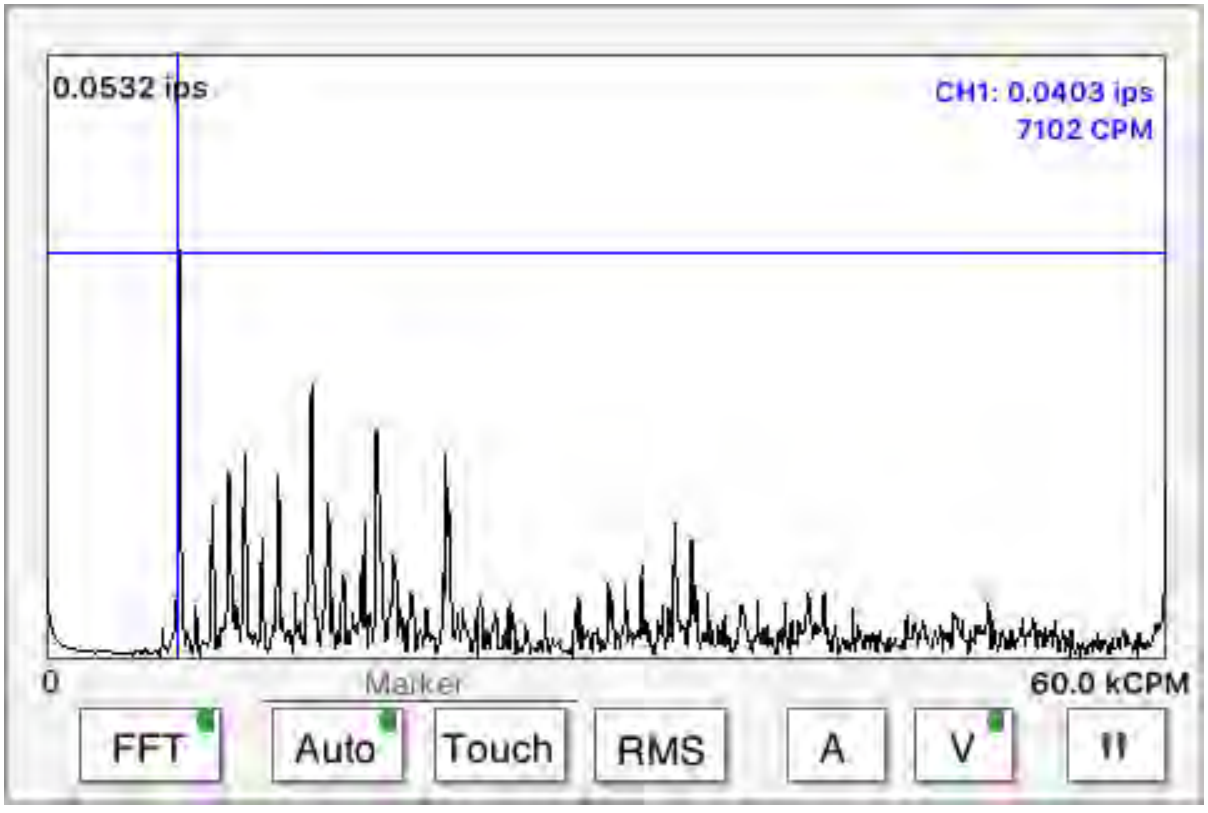




Vibration Spectrum/Time-Waveform for point V1

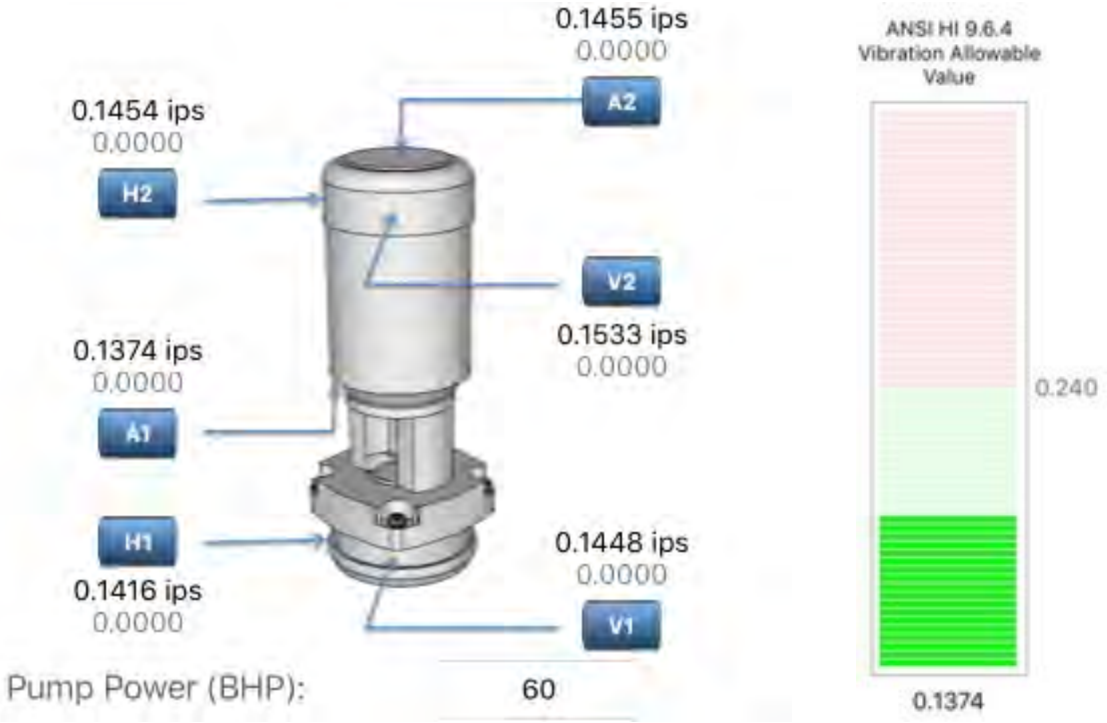
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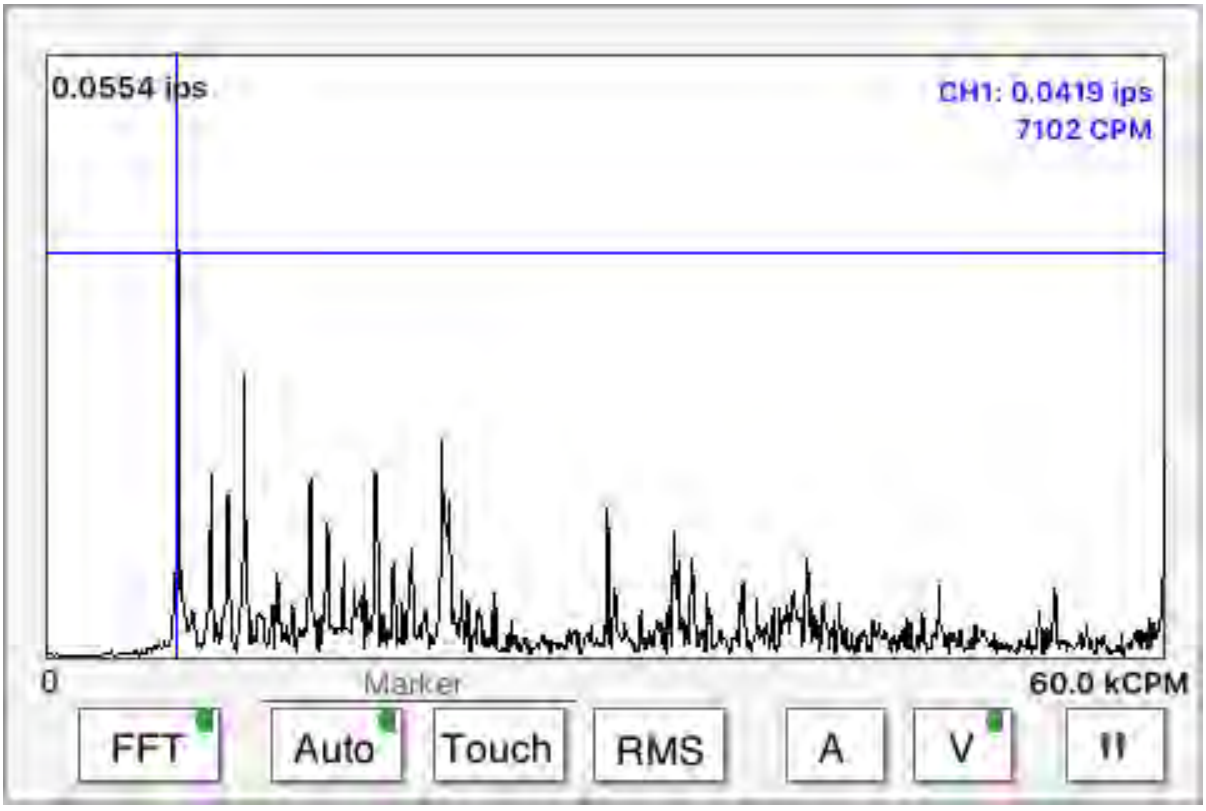




Vibration Spectrum/Time-Waveform for point V2

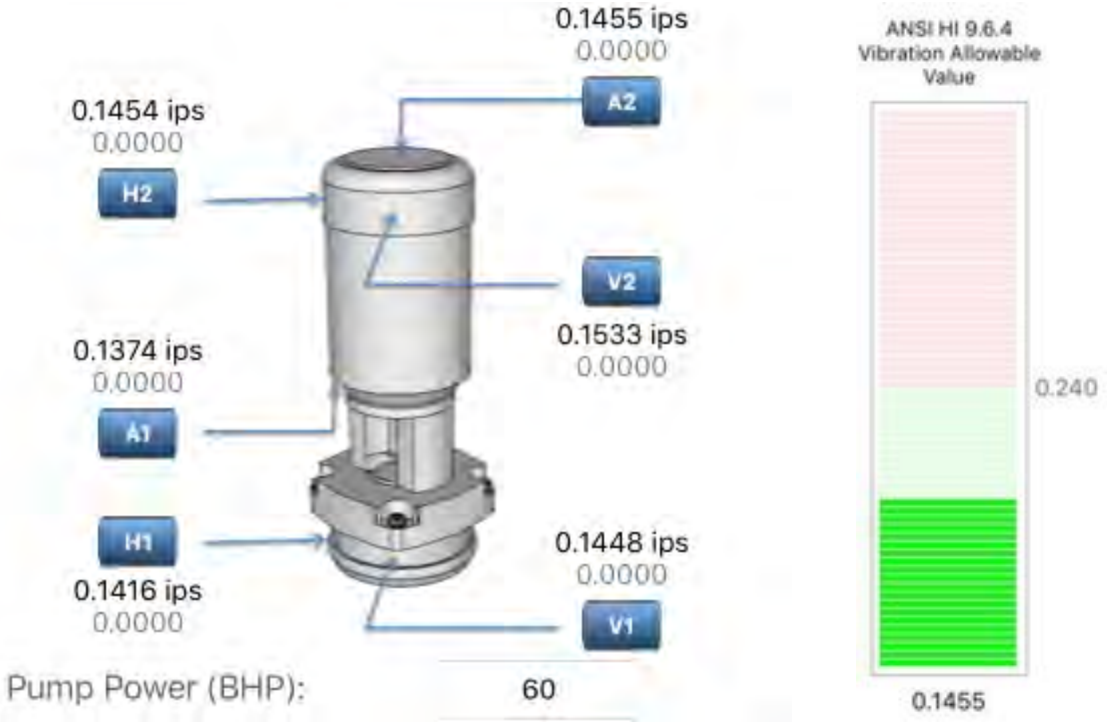
Point A1

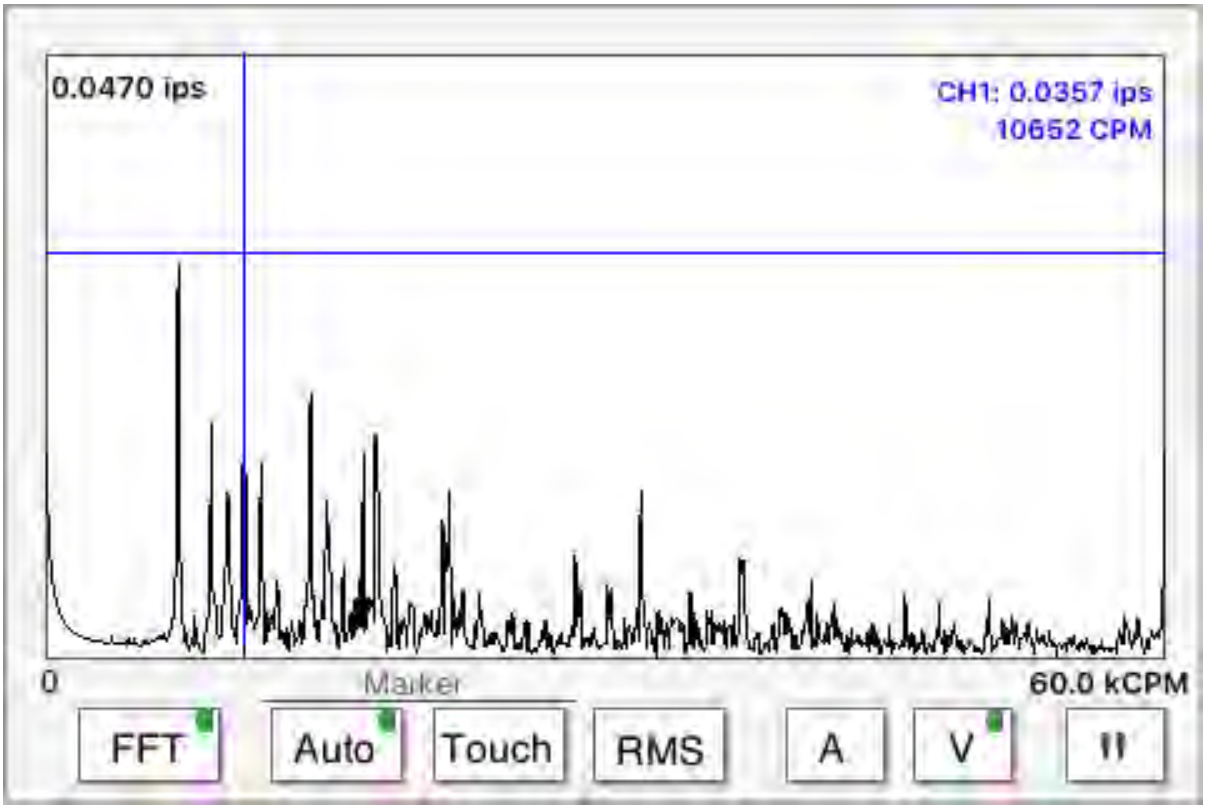




Vibration Spectrum/Time-Waveform for point A1

Point A2





Vibration Spectrum/Time-Waveform for point A2

Attachment U Efficient Water Management Practices (EWMPs) Report

Efficient Water Management Practices (EWMPs) Report

As part of the preparation of the USBR Water Management Plan and the DWR Agricultural Water Management Plan, SEWD has improved two significant water management practices. In 2012, SEWD investigated seven customer delivery points that had previously been determined to be unmeasurable due to physical limitations of the turnouts. This recent field investigation determined that all of these delivery points can be metered, and two meters have already been installed. It was also determined that the PG&E hour meters used for 18 customers have an accuracy above +/- 6 percent. SEWD has begun replacing these meters, and plans to replace all of them by 2015. See Table E-1 in DWR Attachment E for the implementation schedule for meter installation, replacement, and testing.

Table 1 below lists the non-implemented EWMP, Supplier Spill and Tailwater Systems. This EWMP is not locally cost effective, as documented in the cost-benefit analysis provided in Table 2. The assumptions used in the cost-benefit analysis are provided in Table 3.

Table 1. (DWR Table VII.B) Non-Implemented EWMP Documentation

EWMP #	Description	Technically Infeasible	Non Locally Cost-Effective	Justification/Documentation
7	Supplier Spill and Tailwater Systems		X	See Table 2

Table 2. Economic Analysis Worksheet
Stockton East Water District
EWMP 7: Supplier Spill and Tailwater Systems

Calendar Year	Annual Water Savings (ac-ft/yr)	Avoided Costs	Total Undiscounted Benefits	Total Discounted Benefits	Costs ($)				Net Present Value ($)
					Capital Costs	Operating Expenses	Total Undiscounted Costs	Total Discounted Costs	
2011	3000	1,200,000	1,200,000	1,153,846	26,030,308	749,375	26,779,684	25,749,696	-24,595,850
2012	3000	1,200,000	1,200,000	1,109,467		749,375	749,375	692,840	416,628
2013	3000	1,200,000	1,200,000	1,066,796		749,375	749,375	666,192	400,604
2014	3000	1,200,000	1,200,000	1,025,765		749,375	749,375	640,569	385,196
2015	3000	1,200,000	1,200,000	986,313		749,375	749,375	615,932	370,381
2016	3000	1,200,000	1,200,000	948,377		749,375	749,375	592,242	356,135
2017	3000	1,200,000	1,200,000	911,901		749,375	749,375	569,464	342,438
2018	3000	1,200,000	1,200,000	876,828		749,375	749,375	547,561	329,267
2019	3000	1,200,000	1,200,000	843,104		749,375	749,375	526,501	316,603
2020	3000	1,200,000	1,200,000	810,677		749,375	749,375	506,251	304,426
2021	3000	1,200,000	1,200,000	779,497		749,375	749,375	486,780	292,717
2022	3000	1,200,000	1,200,000	749,516		749,375	749,375	468,058	281,459
2023	3000	1,200,000	1,200,000	720,689		749,375	749,375	450,055	270,633
2024	3000	1,200,000	1,200,000	692,970		749,375	749,375	432,746	260,224
2025	3000	1,200,000	1,200,000	666,317		749,375	749,375	416,102	250,216
2026	3000	1,200,000	1,200,000	640,690		749,375	749,375	400,098	240,592
2027	3000	1,200,000	1,200,000	616,048		749,375	749,375	384,709	231,339
2028	3000	1,200,000	1,200,000	592,354		749,375	749,375	369,913	222,441
2029	3000	1,200,000	1,200,000	569,571		749,375	749,375	355,685	213,886
2030	3000	1,200,000	1,200,000	547,664		749,375	749,375	342,005	205,659
Totals:	60000	24,000,000	24,000,000	16,308,392	26,030,308	14,987,509	41,017,817	35,213,399	-18,905,008

Assumptions		Cost Effectiveness Summary	
Value of conserved water ($/AF) =	400	Total Costs	$35,213,399
Discount rate (real) =	4.00%	Total Benefits	$16,308,392
		B/C ratio	0.5
		Cost of Saved Water ($ per AF)	$684
		Water Savings (AFY)	3,000

Table 3. Economic Analysis Assumptions
Stockton East Water District
EWMP 7: Spill Supplier Spill and Tailwater Systems

Assumptions			
Annual volume of pump back	3,000	ac-ft	
Pumping duration	6	months	
Change in elevation (pump station to head of system)	135	feet	
Pipeline length (pump station to head of system)	137,280	feet	
Pumping efficiency	70	%	
Electricty Cost	0.20	$/kWh	
New pipeline cost	10	$/in-dia/ft	
New pump station cost	350	$/gpm	
O&M labor rate	80	$/hour	
Annual interest rate	4	%	
System life	20	years	
Conversions			
Average flow rate	3,771	gpm	(3,000 ac-ft pumped over 6 months)
Annual operaton time	4,320	hours	
Calculations			
Pipeline size	18	inches	4-feet headloss/1000-feet of pipeline
Pipeline headloss	496	feet	Hazen-williams (C=140)
Total dynamic head (TDH)	631	feet	Headloss + elevation change
Required pump Hp	858	hp	(gpm*TDH)/(3960*efficiency)
Annual Energy usage	3,708,477	kWh	(746 W/Hp * hours of operation)
Capital Costs			
Pipeline	$24,710,400		
Pump station	$1,319,908		
Total	**$26,030,308**		
O&M Costs			
Electricity	$741,695		
Labor	$7,680	16 hours/month for 6-months	
Total	**$749,375**		

Attachment V USBR Exemption Letter

United States Department of the Interior

BUREAU OF RECLAMATION
Central California Area Office
7794 Folsom Dam Road
Folsom, California 95630-1799

IN REPLY REFER TO:
CC-414
RES-3.10

JUN 05 1997

Mr. John W. Stovall
Neumiller & Beardslee
PO Box 20
Stockton, California 95201-3020

Subject: Stockton East Water District's Request for Exemptions for Best Management Practices--New Melones Dam and Power Plant--Central Valley Project, California

Dear Mr. Stovall:

After review by our Regional Solicitor of the information you provided, we concluded that the Stockton East Water District (District) is exempt from requiring the California Water Service Company, the City of Stockton, the Lincoln Village Maintenance District, and the Colonial Heights Maintenance District to implement certain municipal and industrial Best Management Practices (BMPs). A list of the exempted and non-exempt municipal and industrial BMPs is enclosed. This exemption is in place as long as the existing contract among the parties is not amended or renegotiated. In addition, if any other legal issue that is tied to this contract is executed, the District will be required to implement all exempted BMPs.

Although the District is not required to implement these BMPs with their contractors at this time, the District is encouraged to continue assisting their contractors with implementation. The District's Resolution 95-96-08 committed the District to implementing all the urban BMPs by either requiring the retailers to implement or by implementing regionally. Reclamation's Water Conservation Field Service Program is available to assist the District and its contractors in implementing these BMPs and promoting the best management of water.

If you have any questions, please contact Mr. Pete Vonich (Water Conservation Specialist) at (916) 989-7265 (TDD 989-7285).

Sincerely,

Thomas J. Aiken
Area Manager

Enclosure

Exempted BMPs 1993 Criteria

B-3 Tiered block or similar water pricing

Exempted BMPs 1996 Criteria

A- 1 Distribution system water audits, leak detection and repair

A-2 Metering with commodity rates for all new and existing conditions

A-3 Landscape efficiency requirements for new/existing commercial, industrial, institutional governmental and multi-residential developments

A-5 School education

A-7 Conservation pricing - water and sewer

A-8 Water waste prohibition

B-1 Interior and exterior water audits and incentive programs for single family residential, multi family residential and governmental/institutional customers

B-2 Plumbing, new and retrofit

B-3 Large landscape audits and incentives

B-4 Commercial, industrial and institutional conservation

B-5 Landscape water conservation for new and existing single family homes

B-6 Ultra low flush toilet installation

Non-exempted BMPs 1996 Criteria

A-4 Public Information

A-6 New commercial, industrial and institutional water use review

A-9 Demand management staff

A-10 Financial incentives

Attachment W Urban Water Management Plans, City of Stockton and California Water Service Company

Attachment W.1. California Water Company Urban Water Management Plan: Demand Management Measures

Chapter 9
Demand Management Measures

☑ ***CWC § 10631 (e)***

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

(1) (A) For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. 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.

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

(i) Water waste prevention ordinances.

(ii) Metering.

(iii) Conservation pricing.

(iv) Public education and outreach.

(v) Programs to assess and manage distribution system real loss.

(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.

This chapter provides a summary of past and planned demand management measure (DMM) implementation in the Stockton District (also referred to herein as the "District"), as well as an overview of the expected water savings.

This chapter contains the following sections:

9.1 Demand Management Measures for Wholesale Agencies

9.2 Demand Management Measures for Retail Suppliers

9.3 Implementation over the Past Five Years

9.4 Implementation to Achieve Water Use Targets

9.5 Water Use Objectives

9.1 Demand Management Measures for Wholesale Agencies

Because the District is a retail water supplier, this section does not apply.

9.2 Demand Management Measures for Retail Suppliers

California Water Service Company (Cal Water) centrally administers its conservation programs for all the districts it operates. For purposes of this section, these programs have been grouped in accordance with the DMM categories in CWC §10631(e). These categories are:

(i) Water waste prevention ordinances
(ii) Metering
(iii) Conservation pricing
(iv) Public education and outreach
(v) Programs to assess and manage distribution system real loss
(vi) Water conservation program coordination and staffing support, and
(vii) Other demand management measures

Following are descriptions of the conservation programs Cal Water operates within each of these DMM categories. The District's Conservation Master Plan, provided in Appendix I, contains additional information on Cal Water's conservation programs.

9.2.1 Water Waste Prevention Ordinances

Cal Water's enforcement of water waste prevention and water use restrictions is authorized and overseen by the California Public Utilities Commission via Rule 14.1 or Schedule 14.1. Local government in districts operated by Cal Water may also adopt ordinances regulating water use. Cal Water coordinates its efforts to prevent water waste with the appropriate local governmental entities.

Rule 14.1 defines the District's Water Shortage Contingency Plan (WSCP, Appendix H), including its prohibitions on water waste and restrictions on water use. Prohibitions include:

- Use of potable water through a broken or defective plumbing fixture or irrigation system when Cal Water has notified the customer in writing to repair the broken or defective plumbing fixture or irrigation system, and the customer has failed to effect such repairs within seven (7) business days of receipt of such notice.
- The application of potable water to landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures.
- The use of a hose that dispenses potable water to wash vehicles, including cars, trucks, buses, boats, aircraft, and trailers, whether motorized or not, except where the hose is

fitted with a shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use.

Restrictions on water use during shortages include, but are not necessarily limited to:

- Outdoor irrigation restrictions in terms of time of day and weekly frequency.
- Obligations to fix leaks, breaks, or malfunctions within five (5) business days of written notification by Cal Water.
- Application of potable water to driveways and sidewalks.
- The use of potable water in a water feature, except where the water is part of a recirculating system.
- The application of potable water to outdoor landscapes during and within 48 hours after measurable rainfall.
- The serving of drinking water other than upon request in eating or drinking establishments.
- Irrigation of ornamental landscape on public street medians.
- Irrigation outside of newly constructed homes and buildings with potable water in a manner inconsistent with regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development.
- Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each guest room using clear and easily understood language.
- Limits on filling ornamental lakes or ponds.
- Use of potable water for street cleaning with trucks, except for initial wash-down for construction purposes.
- Use of potable water for construction purposes, such as consolidation of backfill, dust control, or other uses unless no other source of water or other method can be used.

9.2.2 Metering

☑ ***CWC § 526 (a)***

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

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

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

☑ ***CWC § 527 (a)***

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

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

The District meters all service connections and bills customers for water use monthly. Cal Water may install advanced metering infrastructure (AMI) in the future to improve metering accuracy and supply prompt feedback to customers about water use and leaks. Cal Water is currently piloting (AMI) in several districts.

9.2.3 Conservation Pricing

The CPUC reviews and authorizes District water rates in a General Rate Case every three years. Currently, the District uses a three-tier increasing block rate design for residential water use and a single-tier uniform rate design for non-residential use. The District provides rate assistance to lower income households through its Customer Assistance Program (CAP).

9.2.4 Public Education and Outreach

The District's public outreach program is divided into four components, as follows:

Public Information Program – Cal Water operates an extensive public information program to provide information to customers on ways to use water efficiently and to market its conservation programs through multiple media outlets, including the Cal Water website, direct mail and bills, digital media, social media, and email.

School Education Program - Cal Water's school education program includes the Cal Water H2O Challenge, a project-based learning competition for grades 4-6, individual student competitions for grades K-12 and general information and learning materials for students and teachers. Cal

Water deploys its school education program in all its districts. Cal Water H2O Challenge is a project-based competition for classrooms, grades 4-6. The program is offered in partnership with DoGoodery, the California Association of Science Educators (CASE), and the WestEd K-12 Alliance. The program aligns with the Common Core State Standards and the Next Generation Science Standards. The Cal Water H2O Challenge offers a unique opportunity for upper elementary teachers to facilitate their students' learning of standards-based content, while developing the core understanding of environmental principles necessary to becoming science-literate citizens.

Smart Landscape Tune-Up Program – This program provides customers with an irrigation system evaluation and installation of approved efficient irrigation system equipment, such as a smart irrigation controller and high-efficiency sprinkler nozzles. The program also includes irrigation system adjustments and detection and repair of irrigation system leaks. This program is available to all Cal Water customers at no charge.

Residential Customer Portal – Through its residential customer portal, Cal Water provides tailored assistance to each residential customer via customized water-efficiency targets, water savings calculators, and customer-specific recommendations for programs and water-saving tips.

Non-Residential Customer Assistance – Cal Water provides tailored assistance to commercial customers through customized incentives, commercial water surveys, and large landscape water use surveys. The non-residential assistance program helps commercial customers efficiently use water for sanitation/cleaning, heating/cooling, process, and landscape purposes.

9.2.5 Programs to Assess and Manage Distribution System Real Loss

As discussed above, reducing distribution system losses is one of the main focuses of the new Making Water Conservation a California Way of Life regulations. In preparation for these new requirements, Cal Water took part in the California Water Loss Technical Assistance Program (TAP) in both 2016 and 2017. Cal Water annually conducts distribution system audits using the American Water Works Association (AWWA) Free Water Audit Software. It has also developed a Water Loss Control Plan and Water Loss Control Policy to guide future water loss management with respect to:

- Meeting CPUC and state water loss standards and regulations
- Improving audit data and validity scores
- Implementing cost-effective water loss control actions

To coordinate and oversee water loss management actions across its multiple districts, Cal Water has added a Water Loss Program Analyst position to its conservation staff.

9.2.6 Water Conservation Program Coordination and Staffing Support

The CPUC reviews and authorizes Cal Water conservation program and staffing level in a general rate case every three years. Currently, Cal Water has nine full-time conservation positions, as follows:

- Director of Water Resource Sustainability,
- Conservation Program Manager,
- Research, Analytics and Reporting Manager,
- Water Resource Sustainability Analyst,
- Water Loss Program Analyst,
- Three Conservation Program Coordinators, and
- Conservation Assistant.

These staff manage all aspects of Cal Water's conservation programs that are run in 24 districts serving a combined population of 1.8 million people.

9.2.7 Other Demand Management Measures

In addition to the DMM programs described above, Cal Water operates rebate, give-away, and direct installation programs aimed at plumbing fixture replacement and irrigation equipment and landscape efficiency improvements. Following are brief descriptions of each of these DMMs.

High-Efficiency Toilet Replacement – This program replaces old toilets with MaP certified high-efficiency toilets via financial rebates, direct installation, or direct distribution.[61] Current rebate amounts are up to $50/toilet for residential toilet replacement and up to $100/toilet for commercial toilet replacement.

High-Efficiency Urinal Replacement – This program replaces old urinals with high-efficiency urinals meeting the state's 0.125 gallon per flush water use standard via financial rebates and direct installation. While available to all non-residential customers, the program targets sites with higher-than-average bathroom utilization, such as restaurants and office buildings. The current rebate amount is up to $150/urinal.

Clothes Washer Replacement – This program provides a financial rebate to replace an old inefficient clothes washer with a new high-efficiency washer. The program is available to all residential and multi-family customers. The current rebate amount is up to $150/washer.

Residential Conservation Kit Distribution – This program offers residential customers conservation kits featuring a range of water-saving plumbing retrofit devices. The kits are

[61] For information on MaP certified toilets, see: https://www.map-testing.com/.

available at no charge and include two high-efficiency showerheads (1.5 gpm), two bathroom faucet aerators (1.0 gpm), one kitchen faucet aerator (1.5 gpd), toilet leak tablets, and an outside multi-function, full-stop hose nozzle.

Smart Irrigation Controller Installation – This program provides a financial rebate for the installation of a smart irrigation controller that automatically adjusts watering schedule in response to changing weather conditions. The current rebate amount is $125/controller for residential customers and $25/station for commercial customers.

High-Efficiency Sprinkler Nozzle Rebate – This program provides a financial rebate for the installation of high-efficiency sprinkler nozzles. This program is available to all Cal Water customers. The current rebate amount is $5/nozzle.

Large Rotary Nozzle Rebate – This program provides a financial rebate for the installation of high-efficiency large rotary nozzles. This program is available to all Cal Water customers. The current rebate amount is up to $30/nozzle toward the nozzle purchase cost and up to $8/spray body toward installation cost, if installed by a C-27 licensed landscape contractor.

Spray Body with Integrated Pressure Regulation and Check Valve Rebate – This program provides a financial rebate for the installation of high-efficiency spray bodies with integrated pressure regulation. This program is available to all Cal Water customers. The current rebate amount is up to $10/body toward the spray body purchase cost and up to $8/spray body toward installation cost, if installed by a C-27 licensed landscape contractor.

Turf Replacement Rebate – This program provides a financial rebate for replacement of turf with approved drought-tolerant landscaping. Cal Water operated this program in 2015/16 as a drought response measure. The program will be re-started as part of Cal Water's irrigation equipment/landscape upgrade program offerings.

Table 9-1 summarizes the DMMs available to District customers at the time this Plan was prepared.

Table 9-1. Cal Water DMMs Available to District Customers

Programs Offered	Customer Eligibility		
	Single-Family	Multi-Family	Commercial
Plumbing Fixture Replacement			
High-Efficiency Toilet Replacement	✓	✓	✓
High-Efficiency Urinal Replacement			✓
High-Efficiency Clothes Washer Rebate	✓	✓	
Conservation Kits	✓	✓	
Irrigation Equipment/Landscape Upgrades			
Smart Irrigation Controller Rebate	✓	✓	✓
High-Efficiency Sprinkler Nozzle Rebate	✓	✓	✓
Large Rotary Nozzle Rebate		✓	✓
Spray Body Rebate		✓	✓
Turf Replacement Rebate	✓	✓	✓
Customer Assistance			
Smart Landscape Tune-Up Program	✓	✓	✓
Residential Customer Portal	✓		
Non-Residential Customer Assistance		✓	✓

9.3 Implementation over the Past Five Years

Implementation of customer DMMs over the past five years is summarized in Table 9-2. The estimated annual and cumulative water savings shown in the table do not include water savings associated with water waste prevention ordinances, conservation pricing, general public information, or distribution system water loss management DMMs. Estimated water savings were calculated with the Alliance for Water Efficiency's Water Conservation Tracking Model.

Table 9-2. Implementation of Customer DMMs: 2016-2020

Indoor Programs	2016 – 2020 Total	Average Annual
Toilets & Urinals (number distributed)	1,870	374
Clothes Washers (number distributed)	178	36
Conservation Kits (number distributed)	980	196
Outdoor Programs		
Smart Controllers (number distributed)	86	17
Nozzles & Spray Bodies (number distributed)	1,071	214
Turf Buy-Back (sq ft removed)	10,035	2,007
Residential Assistance Programs		
Surveys/Audits (homes receiving)	52	10
Non-Residential Assistance Programs		
Surveys/Audits (sites receiving)	15	3
Large Landscape Reports (sites receiving)	110	22
Estimated Water Savings (AF)	490	98
NOTES: Estimated water savings for 2016-2020. DMMs will continue to generate savings after 2020 for their useful life.		

9.4 Implementation to Achieve Water Use Targets

All the DMMs described above contributed to the District's compliance with its SB X7-7 2020 target GPCD.

9.5 Water Use Objectives (Future Requirements)

CWC §10609 requires that urban retail water suppliers develop new water use objectives that are based on specific standards for certain water use sectors. These water use objectives will not be developed until 2023. Suppliers are encouraged in this UWMP cycle to consider how they will align their conservation management actions in order to meet these future obligations.

As noted above, Cal Water's conservation programs are subject to review and approval by the CPUC through a General Rate Case every three years. In making conservation program recommendations to the CPUC, Cal Water carefully considers how they will advance multiple objectives, including compliance with the pending water use objectives. Specific objectives identified in Cal Water's most recent General Rate Case included:

- Maintaining continuity with and furthering implementation of conservation programs authorized by the previous General Rate Case.
- Preserving gains in water conservation achieved during the 2013-2017 drought.
- Ensuring Cal Water districts are well-positioned to comply with state regulations and policies pertaining to water conservation, water loss management, and groundwater management, including Executive Order B-37-16, SB 555, and the Sustainable Groundwater Management Act (SGMA).
- Advancing cost-effective water use efficiency alternatives in districts with high water supply costs.

Cal Water developed a scoring methodology to adjust conservation programs and budgets to further these objectives. The methodology specifically considers five distinct conservation policy drivers:

1. State Conservation Standards and Water Use Objectives
2. SGMA Compliance
3. SB 555 Water Loss Management Requirements
4. Commercial, Institutional, and Industrial (CII) Water Management
5. Avoided Water Cost and Affordability

The methodology assigns greater weight to the State Conservation Standards and Water Use Objectives and SGMA Compliance policy drivers, reflecting their importance in terms of overall water resources management.

Scoring for the SGMA Compliance policy driver is based on groundwater basin priority, district dependence on groundwater supply, and basin adjudication status. The highest scores are assigned to districts in unadjudicated and critically overdrafted or high priority basins where groundwater comprises more than 45 percent of the water supply. The Stockton District ranked in the top third of Cal Water's districts for this policy driver.

Scoring for the State Conservation Standards and Water Use Objectives policy driver is based on four metrics that are used to gauge which districts are most likely to require adjustments to their conservation program mix or level of implementation to comply with the new standards. These metrics are:

1. Residential per capita landscape area
2. Residential per capita turf area
3. Size and number of large residential landscapes
4. Difference between a simulated water use budget and average water use for 2011-15

The Stockton District ranked in the bottom third of Cal Water's districts for this policy driver.

Scoring for the SB 555 Water Loss Management Requirements policy driver is based on the district's infrastructure leakage index (ILI) from its most recent validated water loss audit. The ILI is a performance indicator of real (physical) water loss from the water distribution system. A high ILI indicates possible distribution system inefficiencies and may also indicate significant water system leakage. Proposed adjustments to funding for water loss management are based on the ILI scoring criteria. The Stockton District ranked in the middle third of Cal Water's districts for this policy driver.

Scoring for the CII Water Management policy driver is based on the ratio of CII water uses to total water uses in a district. The Stockton District ranked in the middle third of Cal Water's districts for this policy driver.

Scoring for the Avoided Water Cost and Affordability policy driver is based on the District's avoided cost of water supply, as estimated by the California Urban Water Conservation Council (CUWCC)/Water Research Foundation Avoided Cost Model. The Stockton District ranked in the bottom third of Cal Water's districts for this policy driver.

The combination of scores on each policy driver were used by Cal Water to recommend to the CPUC in its most recent General Rate Case adjustments to the conservation budgets of its districts. The purpose of the adjustments is to increase Cal Water's capacity to deploy conservation programs in districts expected to face the most significant regulatory and water management challenges in coming years. Recommended adjustments ranged from a low of 5 percent to a high of 25 percent. The recommended adjustment for the Stockton District was 10 percent.

Attachment W.2. City of Stockton Urban Water Management Plan: Demand Management Measures

CHAPTER 9
Demand Management Measures

The City implements demand management measures to sustainably manage its water resources. If not mitigated, an increase in water demand and/or changes in water supplies due to climate change and other factors reduce water reliability. The implementation of demand management measures can help improve water service reliability and help meet City and State water conservation goals. This chapter describes the City's historical and existing water conservation program, status of implementation of DMMs, and projected future conservation implementation.

In previous UWMPs, a substantial amount of data was required to document a water supplier's progress in implementing fourteen specific DMMs. In 2014, Assembly Bill 2067 simplified, clarified, and updated reporting requirements for DMMs. Focus turned away from detailed descriptions of each of the 14 DMMs and turned to key water conservation measures implemented to achieve SB X7-7 water use targets. For retail agencies, the number of DMMs was reduced from fourteen to six (plus an "other" category). A narrative description of the status of the DMMs and how the DMMs help the water supplier achieve its water efficiency goals are required. Detailed data are not required.

9.1 WATER CONSERVATION PROGRAM OVERVIEW

The City has an ongoing water conservation program and is committed to implementing water conservation measures for all COSMUD customer sectors. Narrative descriptions addressing the nature and extent of each DMM implemented over the past five years, from 2016 through 2020 are provided in the following sections. Planned or continued implementation of each of the DMMs are also discussed.

In its 2015 UWMP, the City's SB X7-7 per capita water use target for 2020 was confirmed to be 165 GPCD. The DMMs that the City implemented have allowed it to meet its 2020 per capita water use target. In 2020, COSMUD's overall per capita water use was 158 GPCD as shown in Chapter 5.

9.2 DEMAND MANAGEMENT MEASURES

The six DMMs required to be described in the 2020 UWMP include the following:

- Water waste prevention ordinances
- Metering
- Conservation pricing
- Public education and outreach
- Programs to assess and manage distribution system real loss
- Water conservation program coordination and staffing support

The City is also required to describe any other DMMS that it has implemented that have had significant impact on water use.

For each of the DMMs, the current program is described, followed by a description of how the DMM was implemented over the previous five years to achieve its water use targets. The City's active water conservation program was tailored to meet its 2020 per capita water use target of 165 GPCD. As shown in Chapter 5, the City met its SB X7-7 water use target, achieving 158 GPCD in 2020.

The City plans to maintain its water conservation program for conformance with its 2014 Climate Action Plan. By implementing its water conservation program, the City may reduce its greenhouse gas emissions from importing, treating and distributing water, and treating wastewater, and adapting to changes in water supply availability due to climate change.

Furthermore, the City anticipates continuing and possibly expanding its water conservation program to meet potential new legislative and upcoming regulatory requirements that may further lower the SB X7-7 target.

9.2.1 Water Waste Prevention Ordinances

9.2.1.1 DMM Description

SMC Chapter 13.28 (Appendix J) is dedicated to water conservation and regulates water use. SMC Section 13.28.030 prohibits water waste by restricting specific uses, including hosing off hardscapes, washing automobiles and boats with hoses not equipped with a shut-off valve, and watering lawns in a manner that causes runoff. Furthermore, the SMC prohibits pools from being filled or drained between June 1 and October 1. The restrictions are enforceable per SMC Section 13.28.090 and are administered by COSMUD. The City routinely reviews and updates its water conservation ordinance. In response to Executive Order B-40-17, the City updated SMC Section 13.28.030 in August 2017 to incorporate permanent restrictions to prohibit wasteful practices.

9.2.1.2 Implementation over the Past Five Years to Achieve Water Use Targets

The City implemented this DMM over the past five years. Water waste complaints and violations are received and investigated by COSMUD staff and addressed via door hangers and/or direct contact in person or via telephone with tenants and property owners. Complaints and violations are opened, tracked, and closed in the COSMUD Monthly Operations and Maintenance Report. Between 2016 and 2020, the COSMUD responded to over 480 complaints and violations.

9.2.1.3 Plans for Continued Implementation

The City will continue to implement this DMM. Although water savings from this program cannot be directly quantified, this DMM is expected to help the City achieve its future water use objectives by minimizing the nonessential uses of water so that water is available to be used for human consumption, sanitation, and fire protection.

9.2.2 Metering

9.2.2.1 DMM Description

Since 1954, the entire COSMUD service area has been fully metered and all connections are billed based on the volume of water used. In addition, customers are classified by meter type and size including single-family residential, multi-family residential, non-residential, and irrigation accounts. All customer sectors are billed based on metered consumption. The City's current water rate schedule is provided on the City's website. For single-family residential customers, the City currently uses an increasing block rate structure with two tiers, where water consumption greater than 15 units (1,500 cubic feet or 11,220 gallons) is charged a higher unit rate. Multi-family residential, non-residential, and irrigation accounts are charged based on seasonal metered rates, where summer rates are higher.

When the City declares a water shortage, potable water rates include a drought recovery charge for all customers in stages to encourage water conservation and recover revenue needed to operate the water system with declining water sales. For additional information on City's current water rate structure, see Section 9.2.3.

9.2.2.2 Implementation over the Past Five Years to Achieve Water Use Targets

This DMM is fully implemented and the City will continue to install and read meters on all new services. Between 2016 to 2020, all water connections are metered and billed based on the volume of water used, as discussed in further detail under Section 9.2.3.

9.2.2.3 Plans for Continued Implementation

Continued implementation of this DMM is expected to help the City achieve its water efficiency goals by providing accurate water use information to the customer and the City. The meters allow the City to track customer water use and compare current use to historical data. They also allow customers to make informed decisions in managing their water use.

As discussed in Section 6.8.3, COSMUD may potentially implement an AMI project when funding becomes available. Other communities have shown that AMI has provided customer water savings and improved water conservation due to the availability of real-time consumption information. COSMUD may potentially commence implementation of this project between 2020 and 2025.

9.2.3 Conservation Pricing

9.2.3.1 DMM Description

As discussed above, all customer sectors are billed for water service based on actual metered consumption using the City water rate schedule. Conservation pricing structure is integrated into the rates. Single-family residential users have tiered rates, where uses greater than 15 hundred cubic feet (CCF) are billed at higher rates. Multi-family residential, non-residential, and irrigation users have seasonal rates, where uses during the summer season are higher. The higher rates are imposed to encourage customers to minimize water use. The City's water conservation ordinance allows the City to raise water rates during declared water emergencies.

9.2.3.2 Implementation over the Past Five Years to Achieve Water Use Targets

The City routinely reviews and updates its water rates. The City's water rates include water conservation pricing and drought recovery charges that are correlated to customer class, drought stage, and reduction level. Under water shortage conditions, the drought rates are implemented to encourage compliance to demand reduction actions described in Appendix I, Section 8. The City evaluates the effectiveness of conservation rates by tracking changes in unit water use resulting from rate increases.

In 2015, the Governor signed Executive Order B-29-15 which ordered mandatory water reductions and ordered implementation of conservation measures in response to the 2014-2016 drought. When the City adopted new water rates in 2016, it also implemented a drought recovery charge. The drought recovery charge would provide sufficient revenues for the City to meet additional water supply pumping and conservation program costs, and to offset the revenue loss resulting from decreased consumption due to conservation. Although water production cost decreased due to low consumption, the City must meet significant fixed operational costs that do not vary with water production levels.

The Governor's Drought State of Emergency was terminated in 2017 but mandates for water conservation remained in place. The drought recovery charge remained in place until the City's water consumption projections and water rates were able to meet the City's financial obligations. In 2018, City Council terminated the drought recovery charge.

9.2.3.3 Plans for Continued Implementation

The City plans to maintain the conservation pricing structure in future rate adjustments. In parallel with the preparation of this 2020 UWMP, the City is conducting a Water Rate Study and anticipates adopting updated water rates in Spring 2021. The City's latest water rates are available at www.stocktonca.gov. This DMM is expected to help the City achieve its water efficiency goals by ensuring water customers pay the true cost of water and to adequately fund water system operations and maintenance, including repair and replacement programs, and water conservation programs.

9.2.4 Public Education and Outreach

9.2.4.1 DMM Description

The City provides water conservation information as part of COSMUD's outreach program. In promoting water conservation, the City seeks to foster sustainable changes in behavior, not just temporary responses to drought.

Water supply information is shared in a public forum. The City's Water Advisory Group, Council Water Committee, and City Council periodically receive water supply updates from City staff. The update includes information regarding anticipated water supplies and provides an overview of the COSMUD water use and conservation programs.

The water conservation program's public education and outreach activities include the following activities:

1. Track and record event attendance and "impressions"
2. Maintain current program information on website
3. Assist with development and implementation of annual Water Awareness Campaigns
4. Maintain Water Conservation Hotline
5. Maintain current information on "phone tree"
6. Retrieve and reply to messages/requests for information
7. Update the City's website with information on the City's water conservation programs
8. Maintain WaterFacts dedicated email inbox
9. Maintain City's Waterwise Landscaping website

9.2.4.2 Implementation over the Past Five Years to Achieve Water Use Targets

The City includes funding for public education and outreach in its annual operating budget. Between 2016 and 2020, the City's average annual operating budget to maintain its public education and outreach is $192,952. The current draft 2020/2021 budget for the City's public information programs is $164,260, which includes labor, program, and advertising.

Components of the City's public education and outreach, including a water conservation website, water conservation education, WaterSense partnership, and outreach information distribution, are discussed in further detail below.

9.2.4.2.1 Water Conservation Website

The City maintained a water conservation website on the COSMUD web page between 2016 and 2020 and will continue to maintain the website for its customers. The website provides information on water use restrictions and links to valuable water conservation information as follows:

- City water conservation regulations:
  Stockton Municipal Code Section 13.28.030
- Water use restrictions and conservation tips:
  http://www.stocktongov.com/files/Water_Restrictions_Conservation_Tips.pdf
- Greater Stockton Chamber of Commerce's Recycling Energy Air Conservation Program, which provides water conservation assessment:
  http://www.greenteamsanjoaquin.com/REACON
- Water wise gardening, which provides landscaping resources, tips, and virtual tours and photo galleries of local low-water use gardens:
  http://www.stockton.watersavingplants.com/
- WaterSense program, which provides information on water-saving devices and other informational resources:
  https://www.epa.gov/watersense

Furthermore, the website provides a telephone number and includes a link to a form for the public to report water waste: Report Water Wasting.

9.2.4.2.2 Water Conservation Education

The City's public information and school education program is an ongoing, annual program. The City provides water conservation education as part of the community and school outreach program through their participation in SAWS. The SAWS group, which includes SEWD, Cal Water, San Joaquin County, and the City, believes that providing water education in elementary and secondary schools is highly effective in reaching the public at large because young children are apt to share the lessons they learn in class with their parents, siblings, and extended families.

The City works cooperatively with SAWS to develop and distribute water conservation information to K-6 grade students in public and private schools. Educational materials, pamphlets, and guidance to classroom activities highlight the value of water and ways to conserve. SAWS water conservation materials are included with teacher packets for classroom presentations and are discussed during classroom programs. Examples of materials used in public education programs are shown in Appendix K.

Between 2016 and 2020, the SAWS Water Conservation Program reached an average of 23,300 K-6 grade students annually. The program provided outreach in various formats including: a large assembly program, in-class presentations, after-school programs, booths at festivals and community events, and various workshops. The City collaborates with SAWS to develop teacher and student surveys to measure the effectiveness of the outreach campaign. All comments are tracked, and programmatic adjustments are made based on the information received. The 2019/2020 SAWS Water Conservation Program report provided in Appendix K reflects school year activities and plans that are normally included in the program.

The SAWS Water Conservation Program's budget is authorized annually. For the April 1, 2020 to March 31, 2021 term, the program has an authorized budget of $187,000.

9.2.4.2.3 WaterSense Partnership

As a United States Environmental Protection Agency (USEPA) WaterSense Partner, the City utilizes available promotion materials and actively promotes water awareness. The WaterSense Program provides guidance on water-efficient products and resources to improve water savings.

9.2.4.2.4 Outreach Information Distribution

The City distributes water conservation outreach literature throughout City departments and to various community centers and libraries. The City also distributes outreach literature and develops hands-on activities at community events. Community events include Family Day in the Park, Black Family Day, Cinco de Mayo, Earth Day Festival, Recycling Exposition (REXPO), Senior Day, National Night Out, Stockton Ports Educational Days, and State of the City.

The City implemented this program between 2016 and 2020, providing outreach in the above-listed community events. It plans on continuing this program to meet future water use objectives.

9.2.4.3 Plans for Continued Implementation

Continued implementation of this DMM is expected to help the City achieve its water efficiency goals by educating water users about the importance of improving water use efficiency and avoiding water waste.

9.2.5 Programs to Assess and Manage Distribution System Real Loss

9.2.5.1 DMM Description

COSMUD has a continuous distribution system water audit program in place. A water audit is a process of accounting for water use throughout a water system in order to quantify the unaccounted-for water. Unaccounted-for water is the difference between metered production and metered consumption on a system-wide basis.

A leak detection program typically consists of both visual inspection. Visual inspection includes the inspection of distribution system appurtenances (e.g., fire hydrants, valves, meters, etc.) to identify obvious signs of leakage. When needed, the City employs leak detection tools to locate the source of the leak. Under the program, COSMUD documents unmetered consumption in its Monthly Operations and Maintenance Report.

The City performs an annual water audit that conforms to the AWWA Method 36. The City's 2015 to 2019 AWWA Water Loss Audits are included in Appendix E and summarized in Chapter 4.

9.2.5.2 Implementation over the Past Five Years to Achieve Water Use Targets

The City implemented this program between 2016 and 2020, documenting the water losses described in greater detail below. The total amount of water conserved over the five-year period by implementing this DMM is directly related to the percentage of unaccounted-for water loss leaving the system. Between 2016 and 2019, the City's average annual water loss is 9.6 percent of total water supply.

Specific information on the City's water loss programs with regard to leaks and breaks, water system flushing, and other water system losses are described below:

- Leaks and Breaks. All water meter leaks, service line, main break and manifold leaks are reported to the City by customers calling in or by a system generated work order. All leaks/breaks are documented in the City's Computerized Maintenance Management System (CMMS). Communication with the customer, along with the following information are also documented: date and time of reported leak, name of person responding to the call, type of leak, work done, customer side or city leak, and time to complete. All meter leaks and emergency breaks are repaired the same day they are reported. Non-emergency service line and main breaks are usually held until a 48-hour Underground Service Alert is completed. Total water loss from main and service line breaks are estimated by using the pipe size, duration of the leak, and volume of water leaking. Meter leak water loss are estimated based on the volume of water found and duration of the leak.
- Water System Flushing. To maintain water quality, COSMUD flushes its water system annually through fire hydrants. The time spent flushing is documented in the CMMS. Hard copies of each hydrant flushed and the duration of flushing are kept as records. Water loss volumes are estimated by volume of water being flushed and time flushed multiplied by the number of hydrants flushed.
- Other Water System Losses. City fire flow tests, commercial and residential construction usage, and equipment testing are sources of water loss that are estimated based on the number of tests performed and number of new construction sites. The City is in the process of updating its methods of measuring street sweeping water usage by tracking metered volumes instead of load counts.

9.2.5.3 Plans for Continued Implementation

The City is committed to maintaining a goal of an average of eight percent or less unaccounted-for water annually. The City will continue to implement this DMM as part of COSMUD's ongoing operations and maintenance program. Implementation of this DMM is expected to help the City achieve its water efficiency goals by identifying sources of water loss quickly so repairs can be made, and losses are minimized.

9.2.6 Water Conservation Program Coordination and Staffing Support

9.2.6.1 DMM Description

Water Conservation Program coordination is conducted by the City's Water Resources Program Manager. The Program Manager administers the DMMs discussed in this chapter, estimates water conservation savings achieved, and establishes an annual program budget based on available funding and resources. The Program Manager's duties include:

1. Tracking the City's water conservation program accomplishments and preparing an annual report
2. Developing water conservation goals for the upcoming year
3. Coordinating with City staff to conduct water use surveys and to update the monthly operations and maintenance report (MOMR)

4. Tracking COSMUD's water production and demands and submitting monthly urban water supplier monitoring reports to the State
5. Preparing annual USEPA report

9.2.6.2 Plans for Continued Implementation

The implementation of this DMM is ongoing and is expected to help the City achieve its water efficiency targets by making water conservation and implementation of its water conservation program a priority among the City employees and the agencies that manage its external water supply sources.

9.2.7 Other Demand Management Measures

The City implements several other residential and non-residential demand management measures as described in this section.

9.2.7.1 Water Survey Program for Single-Family and Multi-Family Residential Customers

The City offers complimentary water use surveys as requested by single- and multi-family residential customers. Indoor and outdoor water use surveys are conducted by City staff. The indoor water use survey consists of water use evaluation for appliances, such as dishwashers, washing machines, toilets, and faucets. The outdoor water use survey consists of evaluation of landscaping and irrigation systems. The customer's water meter is observed to ensure no leaks are occurring. Following completion of the survey, customers are provided with a low-flow water efficiency kit.

Upon request, the City also offers residents self-surveys for water efficiency. The City provides instructions and forms for residents. Upon completion and submittal of the forms, the City provides residents water efficiency kits.

This program is ongoing but the City currently does not track the number of requests.

9.2.7.2 Residential Plumbing Retrofit

To promote residential water efficiency and encourage retrofits, the City offers low-flow water efficiency kits. The low-flow water efficiency kit includes two 1.5 gpm low-flow showerhead(s), a 1.5 gpm kitchen faucet aerator, two 1.0 gpm bathroom aerators, toilet flapper, an auto-shutoff garden hose nozzle, shower timer, landscape moisture meter, and a 2.5 gallon water bucket.

In addition to providing low-flow water use efficiency kits to residents participating in the water survey program, the City distributes these kits at community events and as requested through the City website and phone calls through 866-STOKWTR. The City advertises their availability through utility bill inserts.

This program is ongoing but the City currently does not track the number of water use efficiency kits distributed. The City will continue to maintain inventory and offer low-flow water use efficiency kits.

Implementation of this measure is supported by the City's Climate Action Plan (ICF International, 2014), which calls for promoting water efficiency for existing development.

9.2.7.3 Water-Efficient Landscape Program

The City's landscape conservation program consists of implementing a water efficient landscape program and contracting with Waterfluence to encourage efficient irrigation of large landscape areas. These programs are described in further detail in this section.

This DMM is fully implemented. Between 2016 and 2020, all new landscaping associated with projects requiring building permits are subject to the requirements of the State's Model Water Efficient Landscape Ordinance (MWELO), described in the Model Water Efficient Landscape Program.

9.2.7.3.1 Model Water Efficient Landscape Program

The City has adopted landscape standards that are water efficient and incorporated the standards in its municipal code. SMC Section 16.56.040, included as Appendix L, requires compliance with the State's MWELO for new landscaping. This requirement is supported by the City's Climate Action Plan (ICF International, 2014), which lists promotion of the use of water efficient landscaping as a supporting action.

MUD coordinates with other City Departments (Community Development Department and Utility Billing) to obtain information applicants submit during the permitting process to develop and track water budgets. The City develops and establishes water budgets for landscape customers before installation of MWELO landscapes.

9.2.7.3.2 Water Conservation Program for Large Landscape Users

The City maintains a contract with Waterfluence to encourage water efficient irrigation for large landscape customers, which typically irrigate commercial and public landscapes. Customer participation is voluntary, and the services offered are complementary. Between 2016 and 2020, the 125 large landscape sites (261 meters) have participated in this program.

Waterfluence provides services to analyze and monitor irrigation water use for large landscape customers. Site and water use information is hosted on Waterfluence's website and may be accessed by customers, including their authorized representatives—property owners, property managers, HOA board members, maintenance staff, or landscape contractors. Customers may review their system performance so that they can make informed decisions in managing their irrigation system and their irrigation water use.

For each site, Waterfluence charts how actual irrigation water use compares to a benchmark budget based on site-specific characteristics and real-time weather. Regular water use updates help customers track progress and make informed decisions in managing their irrigation use. Actual water use comes from monthly meter reads conducted for billing purposes. Waterfluence's service includes mapping landscape areas and customers can modify their maps online to improve water budget accuracy and to create controller maps to assist with irrigation operations.

Beyond identifying potential irrigation problems, Waterfluence continually analyzes water use at each site to identify possible leaks, poor scheduling, and ineffective irrigation equipment and recommend solutions. For customers accepting additional help, Waterfluence staff with irrigation expertise conduct on-site landscape field surveys to generate detailed diagnostics. When relevant, they encourage customers to take advantage of City-offered rebates to offset improvement costs.

9.3 WATER USE OBJECTIVES (FUTURE REQUIREMENTS)

In 2018, the State Legislature enacted two policy bills, SB 606 (Hertzberg) and AB 1668 (Friedman), to establish long-term water conservation and drought planning to adapt to climate change and the associated longer and more intense droughts in California. These two policy bills build on SB X7-7 and sets authorities and requirements for urban water use efficiency. The legislation sets standards for indoor residential use and requires the State Water Board, in coordination with DWR, to adopt efficiency standards for outdoor residential use, water losses, and CII outdoor landscape areas with dedicated irrigation meters. At the time of preparation of this UWMP, DWR and the State Water Board are in the process of finalizing water loss standards and are in the process of developing new standards for indoor and outdoor residential water use. These standards will require urban water retailers to develop agency-wide water use objectives, provide annual reports and update their UWMP.

The State Legislature established indoor residential water use standards as 55 GPCD until January 2025, 52.5 GPCD from 2025 to 2029, and 50 GPCD in January 2030, or a greater standard recommended by DWR and the State Water Board. By June 30, 2022, the State Water Board is anticipated to adopt an outdoor residential use standard, a standard for CII outdoor landscape area with dedicated irrigation meters, and performance measures for CII water uses. At that time, the State Water Board will adopt guidelines and methodologies for calculating the water use objectives. In accordance with CWC §10609.20(c), the water use objective for urban water retailers will be based on the estimated efficient indoor and outdoor residential water use, efficient outdoor irrigation of CII landscaped areas, estimated water losses, and estimated water use for variances approved by the State Water Board aggregated across the population in its water service area.

By November 1, 2023, and November 1 of every year thereafter, the City will calculate its urban water use objective and actual water use and provide an annual report to the State. By January 1, 2024, the City will prepare an UWMP supplemental incorporating DMMs and other water efficiency standards that it plans to implement to achieve its water use objective by January 1, 2027.

Attachment X SAWS Water Education Program Annual Report, 2022/2023 School Year

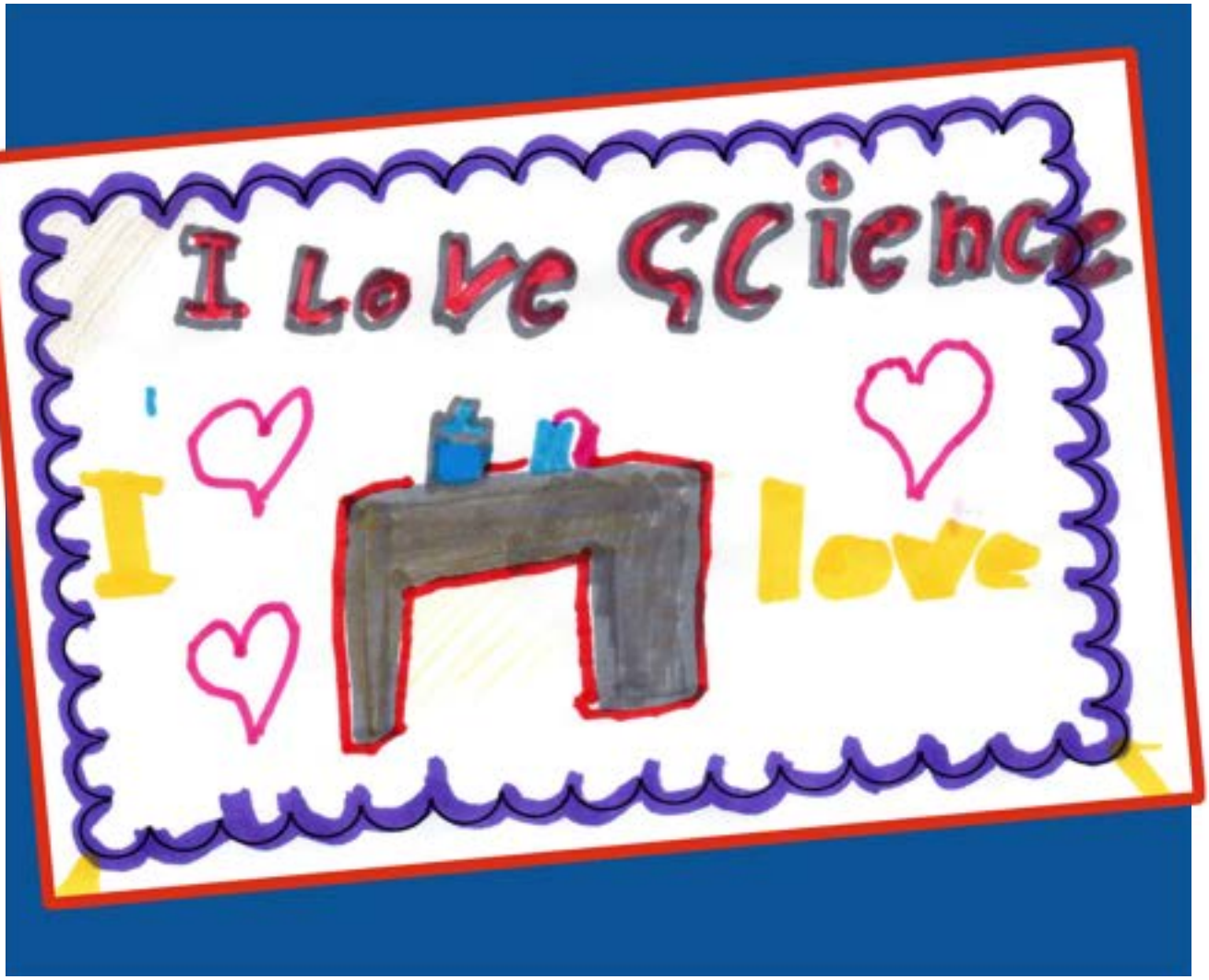
Attachment X.1. SAWS Annual Report

SAWS Water Education Program



ANNUAL REPORT

2022/2023 School Year



SAWS
STOCKTON AREA WATER SUPPLIERS

Stockton East Water District
California Water Service Co.
San Joaquin County
City Of Stockton

WATER EDUCATION PROGRAM

Report Summary



SAWS Water Education Program Annual Report

School Year: 2022/2023 ♦ August 1, 2022 through July 31, 2023

Report Summary

This report presents an overview of the implementation of the Stockton Area Water Suppliers (SAWS) Water Education Program in the 2022/2023 school year. The report includes a summary of the year's outreach effort, a full report, the data and statistics resulting from that outreach effort, a description of the programs and presentations offered to Stockton area educators by the SAWS Water Education Program, participant feedback, and a plan for the 2023/2024 school year.

In the 2022/2023 school year, the four school districts served by SAWS returned to normal operations. The virtual program offered during COVID was no longer necessary. The Zun Zun assembly program was discontinued. In its place, the coordinator and staff are producing a short video entitled "Where Does My Water Come From?" for use virtually and in the classroom for grades 2-6. The video will trace Stockton's water supply from source to tap.

The SAWS Water Education Program calendar for the 2022/2023 school year was fully booked by the end of May 2021. Presentations began on September 1, 2022. Starting in September allows teachers to become familiar with their students and get them settled into a routine before introducing a visitor.

In the 2022/2023 school year, the SAWS Water Education Program offered six grade-level specific in-class presentations and participated in a variety of Stockton area youth-oriented events. The virtual program on Padlet continued to be offered to teachers to use as pre-teaching, supplemental and follow-up resources.

In the 2022/2023 school year, the SAWS Water Education Program reached 10,434 students in 341 classrooms through the in-class program and 10,170 students at six youth-oriented events, for a total of 20,604 students in 54 Stockton area schools, venues, and events. A breakdown into specific categories (presentation type, grade level, school district and water provider) is presented in the "Program Stats" section of this report.

2022/2023 Program Highlights:

In the 2022/2023 school year, the SAWS Water Education Program offered in-class presentations, virtual/resource learning through Padlet and participation in local, youth-oriented events.

- The program served 54 schools and venues, supplying supplies and materials for 347 classrooms, and participated in six youth and environmental education oriented events, reaching a total of 20,604 students and citizens.
- The coordinator attended a variety of on-line meetings and seminars, including DWR's Water Education Committee meetings, SAWS meetings and Drought/Flood Committee meetings via Zoom/Teams. The coordinator is also a member of the San Joaquin County Office of Education's Community Partners for Environmental Literacy (CPEL), a collaboration of local educators working toward effective environmental outreach, both physical and virtual.
- The coordinator continues to attend DWR Water Education Committee Meetings, which are held both in-person and virtually throughout the year. This group usually meets in person bi-annually to share outreach methods and strategies intended to promote collaborative and coordinated water education outreach throughout the State of California.

For a complete breakdown of the 2022/2023 SAWS Water Education Program outreach statistics, please turn to the "Program Stats" tab in this report.

Looking Ahead: The 2023/2024 School Year

All Stockton area campuses are now open, and the SAWS Water Education Program staff has been background checked and approved for presentations by the four school districts served by the Stockton Area Water Suppliers. The SAWS Water Education Program will implement our regular schedule in the coming school year.

In May 2023, the coordinator sent broadcast invitations to hundreds of teachers and administrators in schools served by the SAWS Water Education Program. The response was enthusiastic, and at this writing our calendar is essentially full for in-class presentations and youth-oriented events for the coming school year (August 2023 through early June 2024).

Mrs. Coon and staff are currently working on production of a video entitled "Where Does My Water Come From?" We hope to finish production of the video and have it embedded in our classroom PowerPoint presentations in time for our first presentations on September 1, 2023. We are also working to implement a revised program for Grade 4 and add new hands-on activities to our Grade 3 presentation.

Miss Sue and Miss Blair have signed on for another year of SAWS Water Education Program classroom presentations, and Mrs. Coon will continue to provide backup for classroom presentations while managing the SAWS Water Education Program, including further program development and implementation as well supplemental outreach, scheduling and working with SEWD, the Urban Contractors, schools and other water agencies to disseminate effective water education to Stockton area schools and communities.

The SAWS Water Education Program is entering its 19th year serving Stockton area schools. The program has developed a devoted following among teachers in the four school districts we serve. Educators often design lesson plans that coordinate with our presentations, which focus on water science, water awareness and conservation. In pursuit of these goals, the coordinator will continue to work with staff, the Department of Water Resources, SJCOE/CPEL and other outreach organizations to develop and integrate Next Generation Science Standards (NGSS) and content standards relating to water into our presentations. Resources and materials will continue to be available to teachers; the SAWS Water Education Program uses both physical and virtual educational tools to reinforce our message through pre and post teaching, classroom programs, and outreach at events. This includes videos, digital links and narrated water education vignettes and clips that can be inserted into or used in conjunction with teachers' lesson plans. The SAWS Water Education Program also supplies valuable classroom materials and supplies for teachers who utilize the program. Each child receives a grade appropriate lesson-related workbook and coloring/work sheet, a sharpened pencil and/or a box of crayons, and each teacher receives a package containing white board markers, magnet clips, rain gauges, hand sanitizers, and other items they can use in the classroom.

Despite last year's abundant rainfall, California continues to contend with serious water issues. Water shortages in this state are due to many factors. With this in mind, SAWS Water Education Program presentations will continue to stress conservation along with raising awareness of California's water issues. We have found that elementary school age children are very effective messengers, as they are likely to discuss their school day with parents and family.

Full Report


SAWS
Stockton East Water District
California Water Service Co.
San Joaquin County
City Of Stockton
STOCKTON AREA
WATER SUPPLIERS
WATER EDUCATION PROGRAM

THE SAWS WATER EDUCATION PROGRAM

What We Do and How We Do It

Effectively Promoting Water Awareness and Conservation

It is well known that measuring the success of water conservation/education outreach is difficult. How much did the target audience learn? How many will actually embrace the message and act on it? Who will share the information with family and friends? Will those who participate make water conservation a life-long habit? Quantifying the results of these queries is nearly impossible, and under normal circumstances, water providers can only hope these efforts are making a difference. But in recent years California's response to prolonged drought produced evidence that water conservation education raises awareness and promotes wise water use, resulting in substantial, quantifiable water savings throughout the state. Water conservation education in the primary grades certainly plays a major role in these results, as it teaches conservation concepts as students are forming lifelong habits.

The SAWS Water Education Program strives to make students aware that wise water use must be practiced daily, helping them understand that a banner rainfall year, or even two, will not remedy California's water dilemma. Through our outreach, we hope to make our future citizens and leaders understand that, due to our dry climate, storage issues and population growth, water will continue to be a very important issue in California, and we must all be prepared to make water conservation a way of life.

During earlier extreme drought years, state outreach and media messaging put an emphasis on water conservation in California, and that emphasis provided rare, tangible evidence of the effectiveness of outreach programs like ours. Stockton was one of the most successful cities in the state when it came to implementing conservation measures during the last drought, reducing water use by nearly 30 percent. Since its inception, the Stockton Area Water Suppliers (SAWS) alliance has funded multi-faceted outreach in our communities, reaching thousands of students and citizens every year; the program has reached over 400,000 people through classroom presentations and public, youth-oriented events since 2005. Many of the students we have worked with over the years are now adult citizens of Stockton with a heightened awareness of the importance of our water resources because they participated in our programs when they were forming life-long habits in their youth. These are the people who have and will continue to practice conservation measures to aid in dealing with California's water issues.

We have found that the students and teachers we visit are drought aware. Even primary grade students can define the meaning of the word "drought" and the source of the problem. While media messaging may be responsible for heightened water awareness in our communities, our presentations take students to the next level, reinforcing the conservation message and providing insight into the reasons behind it. Our programs address the learning standards that relate to water for every grade level: the water cycle, weather, ecosystems, water's three states of matter, the scientific properties of water, current and historic water use in California, farming issues and ag water, water conveyance and distribution systems, and the conservation concepts that relate to all these topics. We enhance learning with a variety of hands-on activities that make the lessons fun and memorable.

The SAWS In-Class Presentation Program is in High Demand

The SAWS in-class presentations continue to be in high demand in Stockton area schools. Invitations to book presentations for the 2022/2023 school year were sent to teachers and administrators via email in early May 2021. The presentation calendar was full by mid-June. The final headcount for the 2022/20223 school year of 20,604 students/citizens reached through our in-class and event program indicates that our outreach numbers are returning to pre-pandemic levels.

The SAWS Water Education Program has developed a devoted following among Stockton teachers. Those familiar with the program often design their lesson plans with the SAWS Water Education Program in mind; the colorful visuals and hand-on activities featured in our presentations can bring these lessons to life for students. Often, one teacher takes the lead to schedule multiple presentations for the entire grade level. Many teachers coordinate our grade-specific presentations with established curriculum and Next Generation Science Standards (NGSS), inviting the program to their classrooms in conjunction with units specifically related to water. Some schools even plan field trips that coordinate with our programs; St. Luke, Tully Knoles Elementary, John McCandless STEM, and several other schools often coordinate our "California Water" presentation with field trips to Columbia State Park. Fifth grade teachers are encouraged to book a water treatment plant tour/field trip in conjunction with our Grade 5 "Water Cycle: The Incredible Journey" presentation.

In-Class Presentations Meet Grade-Specific Standards

Every presentation offered by the SAWS Water Education Program is designed to meet standards specific to certain grade levels. Teachers know that our presentations can address multiple content /NGSS standards in 60-90 minutes with little or no teacher prep; we provide an excellent introduction or follow up to standard curriculum involving water for every elementary and middle school grade level.

Kindergarten and Grade 1 teachers can use our popular "Water Cycle Story" presentation to reinforce lessons and meet standards involving weather, states of matter, and forming and testing a hypothesis.

Grade 2 teachers often coordinate their lesson plans with our "H20 to Go!" presentation to reinforce standards related to gravity, motion and machines as students track water's journey from source to tap using a variety of fun and exciting hands-on pumping activities.

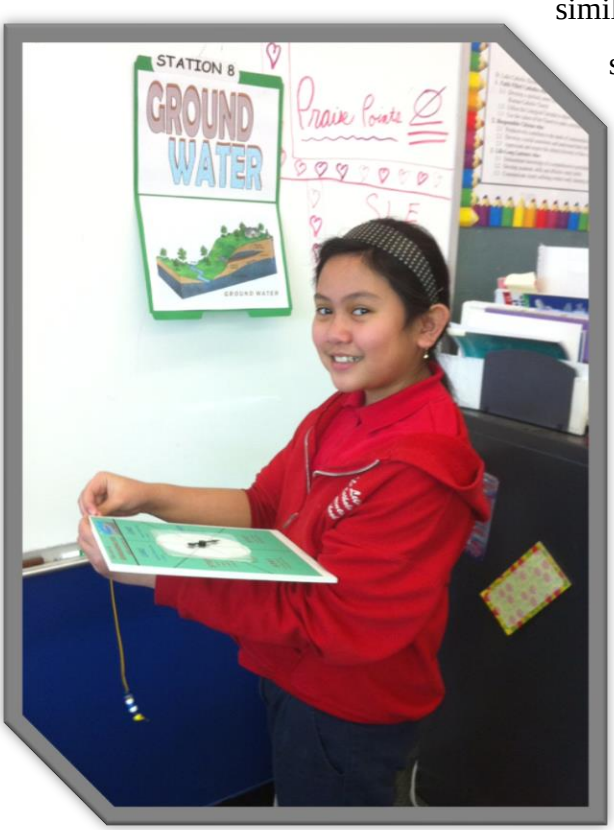


The "H20 to Go!" presentation reinforces second grade standards related to gravity, motion and machines through fun, hands-on activities



SAWS presenter explains how water is conveyed from the water treatment plant to water storage tanks and finally to our homes

Teachers of Grades 3, 4, 5 and 6 can use the "Water Matters" and **"Water Cycle: The Incredible Journey"** programs to target physical and life science content standards. The two presentations are similar but have been adapted for content/NGSS standards specific to each grade level. Both programs focus on the water cycle and water treatment and distribution, addressing a variety of science standards through fascinating facts and figures and a demonstration of the ratio of fresh to salt water on earth. During the "Water Matters" program, students perform a hands-on "scientific experiment" that demonstrates the properties of surface tension and cohesion, as well as concepts related to food chains and webs and environmental issues in our communities, standards specific to Grades 3 and 4. The "Incredible Journey" program addresses similar science standards for grades 5 and 6; after a refresher on the water cycle, students participate in an active, social game from Project WET, embarking on the "Incredible Journey" of a water molecule in the water cycle, evaporating, condensing and precipitating around the room as they make a beaded bracelet, with each bead representing a component and process of the water cycle. Both "Water Matters" and "Incredible Journey" also include a comprehensive "Source to Tap" diagram depicting how water travels from the water cycle to their faucets at home. A scale model sand and gravel water filter demonstration gives students a glimpse of the processes involved in water treatment and distribution and provides information about local water sources and the agencies that sponsor the SAWS Water Education Program. Drought, conservation, agricultural and state water issues are also discussed throughout the program.



Students become water molecules moving through the water cycle in the "Incredible Journey" hands-on activity

The "California Water" presentation, which covers the history, use and distribution of water in the State of California, is responsive to both fourth and sixth grade content standards and features a variety of hands-on activities, including map interpretation and a role-playing game designed to introduce students to the concepts of water rights and legislation relating to agriculture and allocation of our natural resources. Students learn how water is distributed throughout the state via the State Water Project and work collaboratively to find water bodies, cities, and landmarks on topographical maps.



The SAWS Water Education Program only distributes promotional items that are practical and useful in the classroom.

Every student in every classroom we visit receives a pre-sharpened water-saver pencil and an age-appropriate workbook with information and activities pertaining to water conservation and awareness. As a thank you for inviting us to present, participating teachers receive a variety of gifts, that may include tote bags, magnetic clips, seed packets, water activity guides, sponges, pocket hand sanitizers, white board markers, crayon packs and other items.

These items are of great value in the classroom, as teachers often supply these items at their own expense. There is evidence that as Stockton's educational resources have diminished, our water education presentations have steadily gained favor. Teachers find value in our ability to connect content/NGSS standards to water resources, the environment, conservation and, recently, current events, such as drought and water legislation in California. The combination of education and



Our message is reinforced through the use of colorful visuals, songs, physical activity and audience participation

entertainment we provide makes learning exciting and fun for students. We like to remind teachers that, despite budget cuts, students can still experience the benefit of community learning because SAWS sponsors in-class programs that "bring the field trip to the classroom."

Water Treatment Plant Tours

When the SAWS Water Education Program visits middle/ high school and college classrooms (Grade 5 and up), we encourage teachers to schedule a visit to the Dr. Joe Waidhofer Drinking Water Treatment Plant for a facility tour. When elementary and middle-school classes visit, we ask that the groups include at least one parent/adult chaperon for every five students. While the main purpose for this request is crowd control, we have found that parents touring the plant often learn more than their children do, and invariably leave with a greater appreciation for their community's water resources. College classes and community groups are fascinated by and impressed with our facilities and the treatment process; most citizens never take the time to consider the source and systems that provide them with drinking water. While school districts often lack funding for field trip transportation, some public and private schools are able to visit by using adult/parent chauffeurs and chaperons. Facility tours are valuable in raising public awareness and can provide an enlightening experience for students and community members, as well as those looking for career path possibilities.



Plant Supervisor Jim Wunderlich explains the water treatment process to fifth grade students during a tour of the Dr. Joe Waidhofer Drinking Water Treatment Plant

Event/After School Program

The "H20lympics" program is offered to any school with a Stockton address and can serve as an after-school program, a booth at school festivals and events, or as a hands-on activity presentation to serve an entire grade level. The program features a series of fun, hands-on water activities or "experiments" that demonstrate scientific properties of water, including cohesion, adhesion and surface tension. This encourages contemplation of the scientific principles behind the activities: *How many water drops can I fit on the head of a penny? Why does the paperclip float? Can I keep my water drop intact while guiding it through a laminated maze?*



SAWS presenter explains surface tension to fourth-grade students at Tully Knoles Elementary during a hands-on activity included in the "SAWS H20lympics" after school presentation.

The format of the H20lympics program allows students to have fun while learning in a relaxed, non-classroom atmosphere. As with other SAWS Water Education Programs, we have incorporated a drought/conservation discussion into the "H20lympics" program format, and, depending on the venue, sometimes include a prize wheel or "water saver" button-making activity.



Third grade students and their teacher learn about the cohesive properties of water during an "H2Olympics" presentation at the Great Valley Elementary School Farm Day Event

Benefits of the SAWS H20lympics Programs include:

- Hands-on activities educate and entertain
- Format holds students' attention because it provides an alternative to classroom learning structure
- Students are likely to take message home
- Parents often show up at after school programs and may even participate
- Broad outreach to multiple grade levels (K-8): maximum contacts in minimum amount of time
- Use of upper elementary and middle school helpers allows older students to work with/teach younger students: excellent learning environment for all
- Provides teachers, facilitators and activities coordinators with free, appropriate educational activities

AgVenture



As part of the SAWS Water Education Program activities at AgVenture, students make personalized "I'm a Water Saver!" buttons

Every third grader in San Joaquin County is eligible to participate in this innovative program sponsored by San Joaquin Farm Bureau and Select San Joaquin Foundation. AgVenture participants enjoy a day of fun while learning about the vast diversity of agriculture in San Joaquin County. This event exposes students to important concepts during their "day on the farm," including nutritional values, agronomics, marketing, farm and crop production, the value of locally grown products and the role that producers, vendors and the purveyors of our natural resources play in bringing these commodities to the community.



AgVenture's unique format offers a meaningful and memorable experience for students and a special opportunity for the agricultural community to reach out to some of our most impressionable citizens. SAWS participation in these events allows us to promote our in-class, after school and assembly programs while sharing our message of water awareness and conservation with thousands of third graders and their teachers. Each of the three San Joaquin County AgVenture events hosts approximately 3,500 third graders.

Since 2010, the Stockton Area Water Suppliers alliance, through SEWD, has donated $1,000 annually to AgVenture to help sustain this valuable program.

The SAWS "Conservation Cottage" Exhibit at the Children's Museum of Stockton

The Children's Museum of Stockton is currently operating under the management of its Board of Directors. The facility has been mostly closed due to COVID-19. The Coordinator hopes to resume working with museum personnel to maintain and improve the exhibit in the 2023/2024 school year.



The "Waterburger" at the Children's Museum

SAWS Water Education Program and the Community

The SAWS Water Education Program participates in and supplies hand-outs and materials for numerous community gatherings and other special activities and events in Stockton. The following is a list of some of the community events the SAWS Water Education Program participates in regularly:

- **San Joaquin County AgVentures (South County, Stockton & Lodi)**
  The SAWS Water Education Program has participated in AgVenture since 2005. SAWS staffs a booth featuring a hands-on activity and prize wheel. Our participation in AgVenture allows us to promote SAWS sponsored in-class, after school and assembly programs while sharing our message of water/drought awareness and conservation with thousands of third grade students and their teachers. Each AgVenture event hosts approximately 3,500 third graders. Besides staffing a booth at each event, SAWS/SEWD supports AgVenture with a $1,000 annual donation. The SAWS Water Education Program participated in all three AgVenture in the 2022/2023 school year. In previous years, the coordinator submitted a water science/conservation video that was used during virtual AgVenture and posted on-line for future viewing.
- **Rotary Read-In:** The SAWS Water Education Program participates in this annual event.
- **Lincoln USD "Window on Your Future":** The coordinator participates in this event annually, wherein mock job interviews designed to prepare Lincoln High School students for entry into the job market are conducted by members of the business community. This event presents an opportunity for staff to share career path outreach with potential job seekers.
- **Manteca Unified School District's Farm Days:** SAWS sponsors H20lympics booths at these MUSD Farm Day events.
- **Stockton's Earth Day Festival:** SAWS is a principle sponsor of this popular annual festival at Victory Park in Stockton. The Coordinator staffed a booth at the event on April 24, 2023.
- **Water Treatment Plant Tours:** The SAWS Water Education Program and SEWD staff offer tours of the Dr. Joe Waidhofer Drinking Water Treatment Plant for Grade 5 and above.
- **Community Based Programs:** Upon request, SAWS supplies water conservation materials for Special Day and science classrooms at local middle and high schools as well as for

programs for developmentally disabled adults, regional pre-school programs, and other community programs requesting materials and resources.

- **DWR Water Education Committee:** The coordinator attends both virtual and in-person DWR Water Education Committee meetings, joining water educators from all over California to share resources and ideas for water conservation education and outreach.
- **CPEL:** The Coordinator participates in the San Joaquin County Office of Education's (SJCOE) formation of the Community Partners for Environmental Literacy (CPEL), a collaboration of local educators working toward effective environmental outreach. CPEL/SJCOE often sponsors virtual seminars to share learning tools and methods with environmental educators and promote networking among environmental educators in San Joaquin County.



A recruit staffing the SAWS booth at Stockton's Earth Day Festival

Program Administration

Kristin Coon (Kristin Coon Consulting) is responsible for administration of the SAWS Water Education Program. This includes hiring and supervision of employees, payroll, payroll taxes, worker's compensation and liability insurance, subcontractor negotiations/compensation, scheduling and all other aspects of program operations, including implementation of in-class and virtual learning programs. The approved program budget for 2023/2024 went into effect on April 1, 2023, and the contract between SEWD and Kristin Coon Consulting is currently in effect from August 1, 2022 through July 31, 2024.

Staffing

In the 2022/2023 school year, under the supervision of Kristin Coon Consulting, the SAWS Water Education Program continued to serve the SAWS alliance, providing in-class water education presentations in Stockton area schools and outreach at various youth-oriented events.

When the statewide shutdown of schools occurred in mid-March 2020 and all scheduled presentations were cancelled, Kristin Coon Consulting continued to pay classroom instructors based on an average of the previous year's compensation. This was necessary to retain instructors and prepare for resumption of the in-class program. In 2021, coordinator Kristin Coon developed a virtual outreach program, offered the program to teachers and administrators, organized, prepared, scheduled and delivered virtual learning supplies and supporting materials to Stockton area schools, and managed the day-to-day business of the Water Education Program.

In early 2022, long-time SAWS Water Education Instructor Kathy Kirchhof retired. Mrs. Coon filled in for Mrs. Kirchhof in the classroom for the remainder of the 2021/2022 school year, working with SAWS Water Education Instructor Sue Daugherty ("Miss Sue"). In August 2022, Blair Baker ("Miss Blair") joined the SAWS Water Education team as an instructor. Miss Sue and Miss Blair shared instructor duties for the entire 2022/2023 school year, backed by Mrs. Coon, who also tended to administrative tasks and prepared and hosted events. Our team received rave reviews from teachers and administrators (see "Feedback" section). As of this writing, the SAWS Water Education Program is fully staffed, and Miss Sue and Miss Blair have committed to the SAWS Water Education Program for another year.

Looking Ahead: The Coming School Year

The SAWS Water Education Program calendar is fully booked through the 2023/2024 school year for classroom presentations and youth-oriented events.

The SAWS Water Education Program staff hope to finish production of our "Where Does My Water Come From?" video and have it embedded in our classroom PowerPoint presentations in time for our first presentations on September 1, 2023. We are also working to implement a revised program for Grade 4 and add new hands-on activities to our Grade 3 presentation. Miss Sue and Miss Blair have signed on for another year of SAWS Water Education Program classroom presentations, and Mrs. Coon will continue to provide backup for classroom presentations while managing the SAWS Water

Education Program, including further program development and implementation as well supplemental outreach, scheduling and working with SEWD, the Urban Contractors, schools and other water agencies to disseminate effective water education to Stockton area schools and communities.

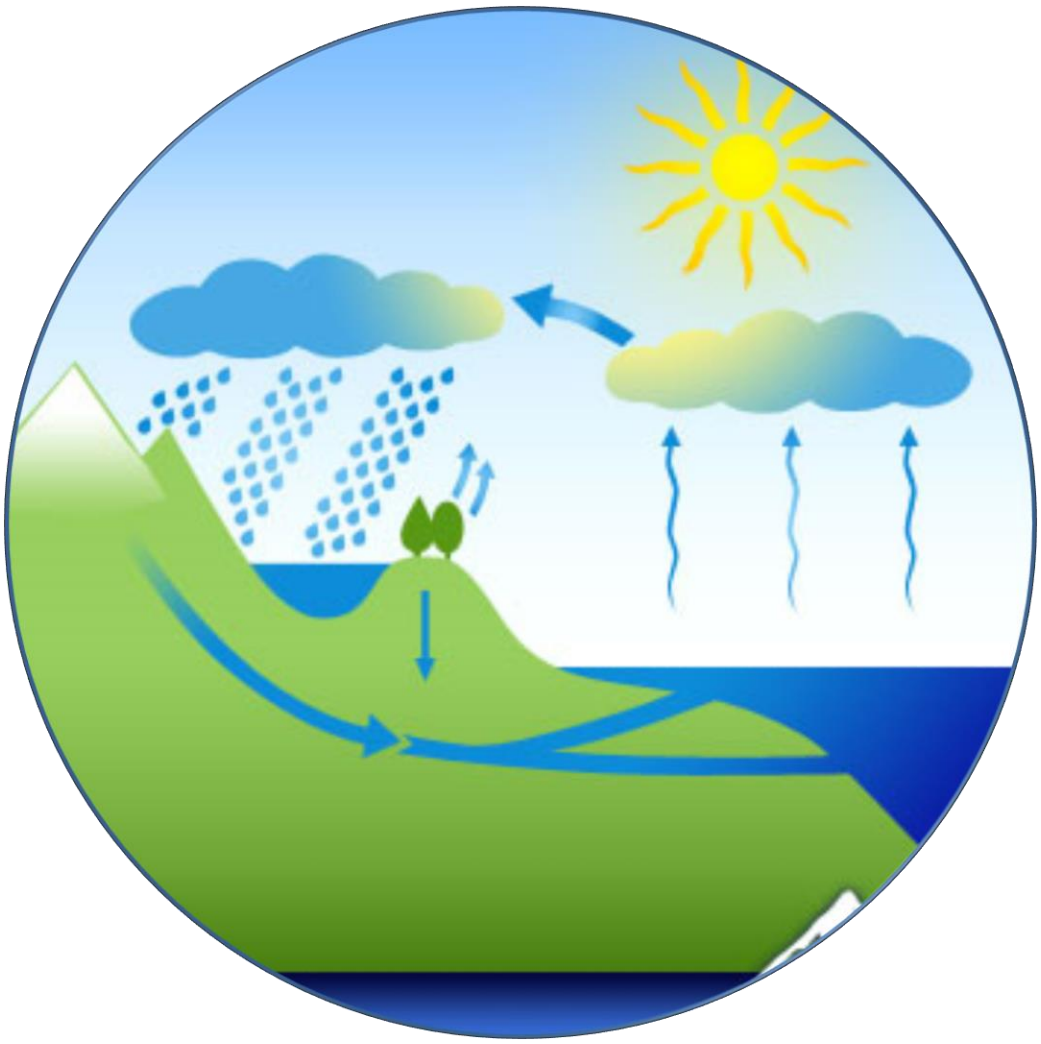
Conclusion

As we embark upon our 19th year serving SAWS and Stockton area schools, the SAWS Water Education Program staff is proud to say that our outreach programs are well-known and respected in the community. Our presentations reach significant numbers of students and community members with a variety of programs, and we participate in many high-profile youth oriented local events.

In the 2022/2023 school year, the SAWS Water Education reached 20,604 students through in-class, virtual and special event programs. The feedback from teachers and administrators is testament to the fact that we have excellent presenters who are adept at sharing knowledge of and enthusiasm for our water resources; we are invited back to schools and events year after year because the programs we offer are a valuable resource for Stockton area schools and the community.

The SAWS Water Education Program is endorsed and approved by the Stockton, Lincoln, Lodi and Manteca school districts as well as a variety of charter and private schools in the Stockton metropolitan area. The program is also sanctioned by the San Joaquin County Office of Education. Our success is evidenced by the numbers: teachers participate enthusiastically year after year and demand for presentations exceeds availability. The most effective tool for program sustainability remains teacher-to-teacher recommendations; we continue to visit new teachers and schools each year, and our loyal followers recommend us to their colleagues and take us along when they move to new schools. Teachers often coordinate our presentations with their lesson plans and many use our outreach programs to enhance field trip experiences. This promotes a comprehensive learning approach, which is a major component of the overall plan: when we make multiple contacts, seeing students year after year, we are building a broad knowledge base that will make water conservation and awareness second nature for those residing in our communities, ultimately helping us achieve our goal of promoting effective, community-wide water conservation and awareness in Stockton. Evaluations from both teachers and students are always enthusiastic and positive (see Feedback section), and support for the program remains strong because it reinforces grade specific content/NGSS standards, coordinates seamlessly with curriculum, and provides a hands-on, memorable learning experience for students.

Teacher feedback and student comments and illustrations are provided in the Feedback section of this report.



Feedback


SAWS
Stockton East Water District
California Water Service Co.
San Joaquin County
City Of Stockton
STOCKTON AREA
WATER SUPPLIERS
WATER EDUCATION PROGRAM

Teacher and Student Feedback on the SAWS Water Education Program

Teacher Feedback is key to enhancing and improving our programs

We LOVE this program! It ties in perfectly with our 4th grade curriculum. We keep coming back because we love and appreciate the presentations – your programs are WONDERFUL!
Ms. Rodriguez, Grade 4, Manlio Silva Elementary

***

This presentation helps me prepare my students for the science lessons I will be teaching and supports our science standards very well. It also helps students understand where water in the tap comes from.
Ms. McGrew, Grade 5, Great Valley Elementary

***

This lesson fits perfectly with our content standards. Miss Blair was awesome! She had complete control of the class and kept them engaged…she also validated all their answers, even if they weren't quite what she was looking for!
Ms. Wright, Grade 2, Lincoln Elementary

***

Mrs. Coon had wonderful posters that clearly stated the agenda – everything was Kinder appropriate – colorful, big and fun. I love this program and look forward to having it in my classroom every year…keep up the good work!
Ms. Flores, Kinder, Tully C. Knoles School

***

The material was very kid-friendly and tied directly into our new unit on how water changes the earth. Miss Sue was great – she held my kids' attention the whole time. The presentation was seamless.
Mr. Tucker, Grade 2, Hoover Elementary

***

The presentation met the science standards for third grade and the hands-on activity was simple and easy – it helped tie it all together. The filtering demonstration was very interesting for both me and my students.
Ms. Espinoza, Grade 3, San Joaquin Elementary

***

Wow!! * Clear objectives * age appropriate * interactive * connecting to community, real life * quick, flexible scheduling * great posters and activities * questions answered * Our presenter was awesome!
Ms. Nguyen, Grade 1, Wagner-Holt Elementary

***

California State Standards! NGSS! Hands on visual demos! Excellent presentation!
Mrs. Best, Grade 5, Don Riggio Elementary

***

The presentation aligns perfectly with our science standards, and social studies as well. We love the "goodies" that we can use in the classroom. Literally, everything about this program is great – it's our favorite presentation!
Ms. Dillender, Grade 2, John Muir Elementary

***

Life science, Earth science, water cycle, ecosystems, gravity – the whole experience is so valuable!
Ms. Smith, Grade 3, Commodore Stockton Skills

***

This presentation reinforced the science concepts we are learning and aligns with our content standards. Excellent presenter – engaged all students!
Ms. Toth, Grade 5, Brookside School

9-30-22

Dear Miss Blair,

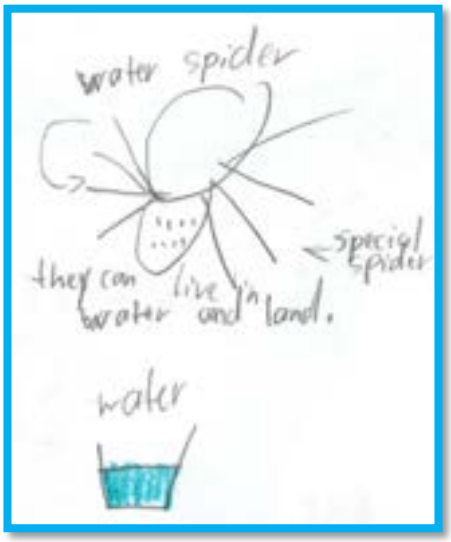
I appreciate all the energy and enthusiasm you brought to your very clear presentation of the water cycle and the states of water. My students learned so much and didn't realize they were learning because they were so engaged with your games, songs, and overall guided instruction. Well done!

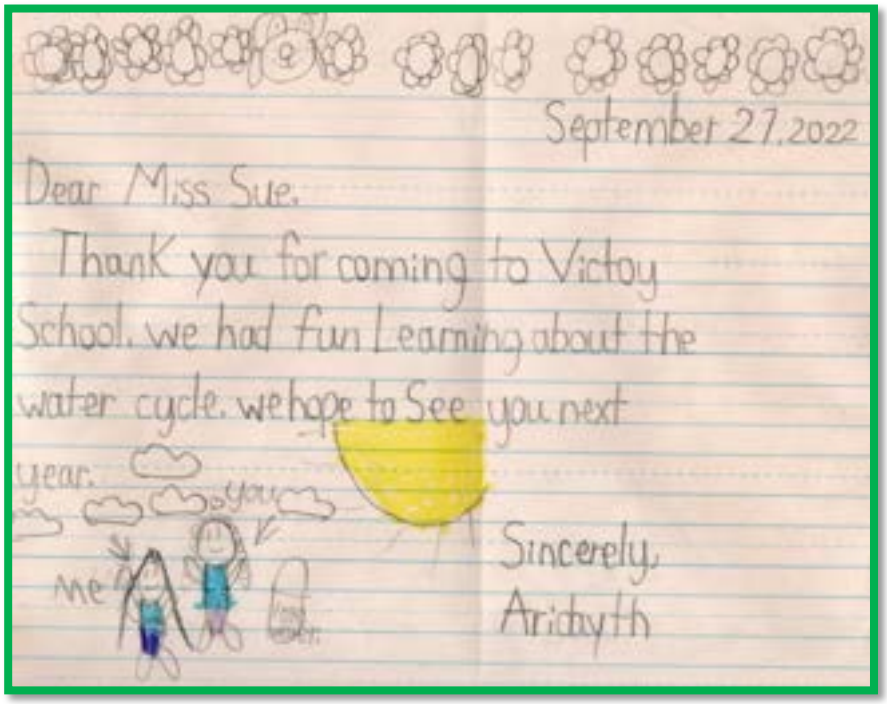
My students were thrilled to receive toothbrushes, coloring books, and crayons! They left for Fall Break with a smile on their faces!

I look forward to seeing you again next year. My future students will be so fortunate to learn such important concepts from you.

All the best,
Mrs. Borrego
August School
First Grade







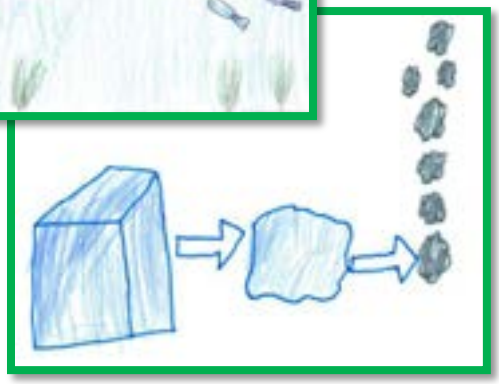
Thank you, Miss Blair!
I loved learning about water.
I learned that once cowd water gets hot, it becomes vapor

Jayvin









Dear Ms. she,
Thank you for being with us and teaching us about the water cycle and how we can save water. My favorite part about the water presentation was when you turned the dirty water into clean water. The Incredible Journey was an Incredible Exploration. I learnd a lot of new things about the water cycle. Thank you for the pencils work books beads and work sheet.

From
Areli
to Ms.
she

19

The Classroom Kits Supplied by SAWS

Teachers participating in the SAWS Water Education Program receive a “bag of goodies,” supplies and materials to share with students that complement the videos and activities on the SAWS Padlets, along with items for their classroom. The Coordinator and Water Education Instructors deliver the materials and supplies to each classroom we visit.



SAWS Water Education Program Staff



Miss Blair



Mrs. Coon



Miss Sue



Willy the Waterdrop

Report Stats



SAWS Water Education Program
Students Participating: All Outreach Programs, All Providers
Comparison by School Year (SY)

In-Class/Assembly	School Year / # of Students																	
	SY 05/06	SY 06/07	SY 07/08*	SY 08/09*	SY 09/10*	SY 10/11*	SY 11/12*	SY 12/13*	SY 13/14*	SY 14/15*	SY 15/16*	SY 16/17*	SY 17/18*	SY 18/19*	SY 19/20*	SY 20/21*	SY 21/22*	SY 22/23*
SAWS Water Ed Prog	8044	12357	15344	18293	18838	18915	21345	19748	26320	23538	24350	18670	22438	23980	16111	8373	18775	20604
Assembly Program	3002	11452	9925	13989	4459	4660	6085	4731	5934	4730	5736	0	2725	2151	658	2383	0	N/A
Totals:	11046	23809	25269	32282	23297	23575	27430	24479	32254	28268	30086	18670	25163	26131	16769	10756	18775	20604

*** See notes by SY below:**

SY 05/06: 14 GWM (SYRCL) assemblies performed in the 2005/2006 school year. One presenter (KC)

SY 07/08: 53 GWM (SYRCL) assemblies performed in the 2006/2007 school year. One presenter (KC)

SY 07/08: 46 GWM (SYRCL) assemblies performed in the 2007/2008 school year. One presenter (KC)

SY 08/09: 54 GWM (SYRCL) assemblies performed in the 2008/2009 school year. Two Presenters (KC & SW)

SY 09/10 & 10/11: 15 Zun Zun assemblies performed in 09/10 and 10/11 school years covered under agreement with Zun Zun. Three presenters (KC, SW & CT)

SY 11/12: 18 Zun Zun assemblies performed in 11/12 covered under agreement with Zun Zun. Three presenters (KC, SW & MQ)

SY 12/13: 14 Zun Zun assemblies performed in 12/13 covered under agreement with Zun Zun. Two presenters (KC & MQ)

SY 13/14: 15 Zun Zun assemblies performed in 13/14 covered under agreement with Zun Zun. Three presenters (KC, MQ & SK)

SY 14/15: 14 Zun Zun assemblies performed in 14/15 covered under agreement with Zun Zun. Three presenters (KC, MQ & SK)

SY 15/16: 15 Zun Zun assemblies performed in 15/16 covered under agreement with Zun Zun. Three presenters (KC, MQ & SK)

SY 16/17: Zun Zun assembly program was not funded by SAWS. Three presenters through 12/16 (KC,MQ,SK), two presenters Jan-July 2017 (KC, SK)

SY 17/18: Zun Zun assembly program funding partially restored by SAWS; 9 Zun Zun assemblies performed in 17/18. Three presenters (KC, SK & KK)

SY 18/19: 6 Zun Zun assemblies performed in 18/19. Three presenters (KC, SK, KK)

SY 19/20: 1 Zun Zun assembly performed in 19/20. Three presenters (KC, SK, KK), schools closed mid-March 2020 due to COVID19

SY 20/21: 4 Zun Zun assemblies performed in 20/21 (virtual only). Two presenters (KC, KK), one contractor (Zun Zun). Schools closed entire 20/21 school year due to COVID19; all outreach was virtual. In-class presentations for 2021 Summer School only.

SY 21/22: 0 Zun Zun assemblies 21/22 due to COVID19. Three presenters (KC, KK, SD) thru Feb 22, two presenters (KC, SD) Mar-July. Many school campuses still closed first semester due to COVID19, most opened after Jan 1. Mix of virtual and in-class presentations.

SY 22/23: Zun Zun assemblies discontinued. Staff working on video outreach. Three presenters (KC, SD, BB). All school districts resumed normal operations

SAWS Water Education Program Presentation/Event Breakdown
School Year: 2022/2023

By Presentation Type

Presentation Type	# of Presentations	# of Students or	%
Classroom Presentations	341	10434	51%
Virtual Program			0%
Events	6	10170	49%
Water Treatment Plant Tours			0%
Water Conservation Workshops			0%
Career Workshops			0%
After School Program			0%
Totals	**347**	**20604**	**100%**

By Grade

Grade	Clsrms	Students	%
K	43	1080	5%
Gr 1	71	1780	9%
Gr 2	58	1635	8%
Gr 3	77	2709	13%
Gr 4	40	1380	7%
Gr 5	38	1335	6%
Middle School	14	515	2%
Event/Other**	6	10170	49%
	347	**20604**	**100%**

By Presenter

Presenter	Venues/ Classrooms	Students/ Citizens	%
Kristin Coon	29	10874	53%
Miss Blair	150	4405	21%
Miss Sue	168	5325	26%
	347	**20604**	**100%**

By School District

District	Students	%
Stockton USD	3910	19%
Lodi USD	2919	14%
Lincoln USD	2565	12%
Manteca USD	880	4%
Aspire/Charter/Private	330	2%
All/Other**	10000	49%
	20604	**100%**

By Water Provider

Provider	Students	%
Cal Water	3715	18%
City of Stockton	6129	30%
Unincorporated/SJ County	760	4%
All **	10000	49%
	20604	**100%**

Total Schools/Venues 20/21
54

**** Students or children reached through city or county wide events: unable to determine district, provider, or grade**

Attachment X.2. SAWS Ed Brochure

What teachers are saying...



"…an excellent presentation…fun and engaging!"

"…very appropriate for my grade level. The students loved the visual demonstrations and hands on activities."

"Meets content standards very well…all information was extremely relevant!"

"This lesson is fun and educational…perfect…like a field trip without the bus!"

What students are saying...

"I learned that there is more salt water than fresh water and I am drinking the same water the dinosaurs drank!" –Maysee, Grade 2

"You showed us how water is used over and over again. I loved the part when you made the dirty water turn clean!" –Vang, Grade 3



"Thank you for coming to teach us about the water cycle. I like the story the best and all of it was fun." –Emma, Grade 1

"At home I am trying my best not to waste water." –Isiah, Grade 3

"I found out that our water comes from melting snow in the mountains, and that it's very old. I loved the water cycle game!" –Krystal, Grade 5

SAWS Water Education Programs

This brochure includes brief descriptions of the stimulating, in-classroom water education programs we offer educators in all schools in the City of Stockton metropolitan area. Each grade specific program is designed to support your classroom curriculum and provide California Content Standards based learning that will inform and educate students about the practical and scientific concepts behind society's need to conserve water.

Water Education Programs

SAWS, the Stockton Area Water Suppliers, is an association of water professionals from the California Water Service Company, the City of Stockton, Stockton East Water District, and San Joaquin County. We understand that one of the best ways to encourage the wise use of water is to educate our young citizens about the precious nature of water as a necessary resource for society's survival. Please review this brochure and call us with any questions.

To Schedule Your Presentation...

Email or call
Kristin Coon
Water Conservation Coordinator
Stockton East Water District

kcoon@sewd.net
or
(209) 444-3126

Space is limited; presentations will be booked on a first-come, first-served basis

Standards Based Learning for Stockton Area Schools

FREE PRESENTATIONS

Sponsored by
Stockton Area Water Suppliers (SAWS)

SAWS
STOCKTON AREA WATER SUPPLIERS
Water Education Program

CLASSROOM PRESENTATIONS

Kinder/Grade 1
"Water Cycle Story"

This presentation provides an introduction to the water cycle and water's three states of matter. A flannel board story uses colorful pictures and scenarios to discuss how we use water in our lives and how water's three "costumes" play an important part in the water cycle. The concepts of recycling and conservation are also discussed. Midway, we break for a "cloud stretch" and a song. The program ends with a water themed game.

Program Duration: 60-70 minutes.

This program is most effective for late-year Kindergarten and Grade 1 students.



Standards: Hist/Soc Sci: K.1.1, K.4.2, K6.2, 1.21
Phys Sci: K.1.a, b, c,. 1.1.a,b. Life Sci: 1.2b, 1.2e.
Earth Sci: K.3.a, b, c. 1.3.b, c.
Invest/Exp: K.4.a, K.4.d, 1.4.a, c, g

Grade 2 "H20 to Go"

The Grade 2 program focuses on water in motion. Students will trace water's journey from the mountaintops to our faucets and learn about the push/pull forces used to move water in nature and in man-made conveyance systems. Weather permitting, the class will move outdoors for hands-on pumping and siphoning activities (water activities can also be done inside classrooms with a roomy sink area). The program concludes with a question and answer session about water in motion.

Program Duration: 90 minutes



Standards: Hist/Soc Sci 2.2.2,
Phys Science: 2.1.c, d, e.
Invest/Exp: 2.4g

Grade 3 or 4
"Water Matters!"



This presentation focuses on the water cycle, the ratio of salt water to fresh water, water's three states of matter, and the water cycle's amazing ability to provide the earth with a reliable supply of fresh water. A hands-on activity demonstrates how liquid water's cohesive properties relate to the delicate balance of our natural ecosystems. Stockton's water sources are discussed. A water filtering demonstration concludes the program.

Program duration: 90 minutes

Standards: Hist/Soc Sci 3.1.1
Phys Science: 3.1.e, f, g, h.
Life Sci: 3.3.c, 4.2.b, 4.3.a, b. Invest/Exp: 4.6.c

Grade 4 or 6
"California Water"

Eureka! Liquid Gold! From the gold rush to modern day farming, water affects every aspect of our lives here in California. In this program, students vie for water rights in a game designed to demonstrate how water availability affects growth and progress in our state. This knowledge is linked to the processes used to bring food to our tables and move water to arid southern regions of the state through map interpretation and hands-on activities. Requires some preteaching.

Program Duration: 2 hours



Standards: Hist/Soc Sci: 4.1.3, 4.1.4, 4.1.5, 4.3.3, 4.4.2, 4.4.6, 4.4.7, 4.5.5, 6.2.1, 2

Grade 5
"The Incredible Journey"

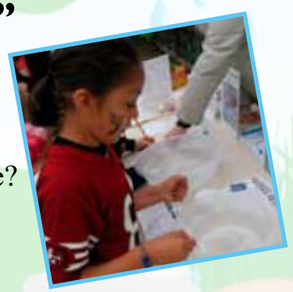


Learning is fun as students become water molecules in a fast-paced game that moves them from oceans to rivers, plants, glaciers, lakes and clouds; evaporating, condensing, transpiring, accumulating, and precipitating to demonstrate the endless process of the water cycle. The program also includes an in-depth review of the water cycle and a water filtering demonstration. On-site water treatment plant tours are also available for Grade 5 classrooms.

Program Duration: 90+ minutes

Standards: Phys Sci: 5.1.b, 5.1.g. Life Sci: 5.2.e, 5.3.a, 5.3.b, 5.3.c, 5.3.d, 5.3.3, 5.4.b. Invest/Exp: 5.6.g

After School/Event
"H2OLYMPICS"



How many water drops will fit on the head of a penny? Can you negotiate the water maze? Make a paper clip float? The SAWS H2Olympics combines water science and fun to make your special event even more special! This program can be structured to serve up to six classes. Great for farm days, after school programs and other organized special events.

SAWS Virtual Water Education Program

This online program provides water education when a physical presentation is not possible. Using Padlet, each board includes a collection of water education videos, links, websites, and activities focusing on grade level appropriate water science and conservation topics. Teachers able to physically share materials with students will be provided with a complementary supply kit.



Contact kcoon@sewd.net or (209) 444-3126

Attachment Y – Division of Water Rights Contract for Linden Irrigation District supply

STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

ORDER

APPLICATION 6522 PERMIT 3652 LICENSE 2021

ORDER ALLOWING CHANGE IN PLACE OF USE.

Licensee having established to the satisfaction of the State Engineer that the change in place of use under Application 6522, Permit 3652, License 2021 for which petition was submitted on May 1, 1947 will not operate to the injury of any other legal user of water, the State Engineer so finds, and

IT IS ORDERED that permission be and the same is hereby granted to change the place of use under said Application 6522, Permit 3652, License 2021 to a place of use described as follows to-wit:

4095.27 ACRES WITHIN THE BOUNDARIES OF THE LINDEN IRRIGATION DISTRICT AS SHOWN ON A MAP FILED WITH THE STATE ENGINEER ON JULY 31, 1947.

WITNESS my hand and the seal of the Department of Public Works of the State of California this 25th day of August, 1947.

Edward Hyatt, State Engineer.

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STATE OF CALIFORNIA
THE RESOURCES AGENCY
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

ORDER

APPLICATION 6522 PERMIT 3652 LICENSE 2021

ORDER ALLOWING CHANGE IN POINTS OF REDIVERSION
AND PLACE OF USE

WHEREAS, License 2021 was issued to Linden Irrigation District and was filed with the County Recorder of San Joaquin County on May 21, 1940, and

WHEREAS, said license was subsequently assigned to Stockton and East San Joaquin Water Conservation District, and

WHEREAS, the State Water Resources Control Board has found that the change in points of rediversion and place of use under said license for which petitions were submitted on October 31, 1969, will not operate to the injury of any other legal user of water, and

WHEREAS, the Board has approved and allowed said changes and has directed that an order be issued to describe said points of rediversion and place of use in accordance with said petitions;

NOW, THEREFORE, IT IS ORDERED that permission be and the same is hereby granted to change the points of rediversion under said License 2021 to points of rediversion described as follows, to wit:

POINT OF DIVERSION

SOUTH 88° WEST 300 FEET FROM CENTER OF SECTION 5, T2N, R9E* BEING WITHIN NE¼ OF SW¼ OF SAID SECTION 5.

* All reference to township and range are from Mount Diablo Base and Meridian (MDB&M)

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POINTS OF REDIVERSION

1. NORTH SLOUGH HEADWORKS - NORTH 1,550 FEET EAST 1,650 FEET FROM SW CORNER OF SECTION 2, T2N, R8E, BEING WITHIN NE¼ OF SW¼ OF SAID SECTION 2.

2. CLEMENTS ROAD DAM - NORTH 120 FEET EAST 30 FEET FROM SW CORNER OF SECTION 2, T2N, R8E, BEING WITHIN SW¼ OF SW¼ OF SAID SECTION 2.

3. TULLY ROAD DAM - SOUTH 1,650 FEET WEST 2,450 FEET FROM NE CORNER OF SECTION 32, T3N, R8E, BEING WITHIN SW¼ OF NE¼ OF SAID SECTION 32.

4. EIGHT MILE ROAD DAM - NORTH 1,100 FEET WEST 3,150 FEET FROM SE CORNER OF SECTION 36, T3N, R7E, BEING WITHIN SE¼ OF SW¼ OF SAID SECTION 36.

5. MURPHY DAM - SOUTH 26° WEST 3,200 FEET FROM NE CORNER OF SECTION 3, T2N, R7E, BEING WITHIN NE¼ OF SE¼ OF SAID SECTION 3.

6. PEZZI DAM - SOUTH 36° WEST 5,200 FEET FROM NE CORNER OF SECTION 3, T2N, R7E, BEING WITHIN SE¼ OF SW¼ OF SAID SECTION 3.

7. SOLARI ROAD DAM - SOUTH 52°30' EAST 4,450 FEET FROM SW CORNER OF SECTION 8, T2N, R7E, BEING WITHIN NE¼ OF SW¼ OF SECTION 71 OF CAMPO DE LOS FRANCESES, AND ALSO WITHIN NW¼ OF SE¼ OF PROJECTED SECTION 17, T2N, R7E.

8. CHERRYLAND ROAD DAM - SOUTH 18° WEST 7,700 FEET FROM SW CORNER OF SECTION 8, T2N, R7E, BEING WITHIN NE¼ OF NE¼ OF SECTION 52 OF CAMPO DE LOS FRANCESES, AND ALSO WITHIN SE¼ OF NE¼ OF PROJECTED SECTION 19, T2N, R7E.

9. McALLEN ROAD DAM - SOUTH 13° EAST 10,350 FEET FROM NW CORNER OF SECTION 13, T2N, R6E, BEING WITHIN SW¼ OF NE¼ OF SECTION 41 OF CAMP DE LOS FRANCESES, AND ALSO WITHIN SE¼ OF SW¼ OF PROJECTED SECTION 24, T2N, R6E.

10. LYONS DAM - NORTH 760 FEET EAST 850 FEET FROM SW CORNER OF SECTION 25, T3N, R7E, BEING WITHIN SW¼ OF SW¼ OF SAID SECTION 25.

11. LEFLER DAM - SOUTH 1,250 FEET EAST 2,580 FEET FROM NW CORNER OF SECTION 5, T2N, R7E, BEING WITHIN NE¼ OF NW¼ OF SAID SECTION 5.

12. QUASHNICK DAM - NORTH 850 FEET WEST 1,350 FEET FROM SE CORNER OF SECTION 6, T2N, R7E, BEING WITHIN SW¼ OF SE¼ OF SAID SECTION 6.

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IT IS FURTHER ORDERED that permission be and the same is hereby granted to change the place of use under said License 2021 to a place of use described as follows, to wit:

> THE AREA OF USE CONSISTS OF A NET AREA OF 4,095.27 ACRES WITHIN A GROSS AREA OF APPROXIMATELY 51,200 ACRES WITHIN THE BOUNDARIES OF THE STOCKTON AND EAST SAN JOAQUIN WATER CONSERVATION DISTRICT. THE GROSS AREA INCLUDES LANDS WITHIN T1N, R7 & 8E; T2N, R6, 7, 8 & 9E; T3N, R7 & 8E, AS SHOWN ON MAP FILED WITH THE STATE WATER RESOURCES CONTROL BOARD.

Dated: MAY 11 [illegible]

K. L. Woodward

K. L. Woodward, Chief
Division of Water Rights

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

License for Diversion and Use of Water

LICENSE 2021 PERMIT 3652 APPLICATION 5528

THIS IS TO CERTIFY, *That* Linden Irrigation District, Linden, California,

(Owner)

has made proof to the satisfaction of the Division of Water Resources of California of a right to the use of the waters of Calaveras River in San Joaquin County

tributary of San Joaquin River

for the purpose of irrigation and domestic uses *under Permit* 3652 *of the Division of Water Resources and that said right to the use of said waters has been perfected in accordance with the laws of California, the rules and regulations of the Division of Water Resources and the terms of the said permit; that the priority of the right herein confirmed dates from* January 3, 1930;

that the amount of water to which such right is entitled and hereby confirmed, for the purposes aforesaid, is limited to the amount actually beneficially used for said purposes and shall not exceed thirteen and seventy-five hundredths (13.75) cubic feet per second by direct diversion from about January 1st to about June 15th of each season and eleven thousand five hundred (11500) acre feet per annum by storage to be collected from about November 1st to about June 1st of each season. In case of rotation the equivalent of such continuous flow allowance for any thirty day period may be diverted in a shorter time if there be no interference with other vested rights.

The points of diversion of such water are described as follows:

Diversion from Calaveras River is at a point bearing south eighty-eight degrees no minutes West (S. 88°00' W.) three hundred (300) feet from the center of Section 5, T 2 N, R 9 E, M.D.B.&M., being within the NE¼ of SW¼ of said Section 5, whence the water flows down the improved channel of North Slough and thence into Old Calaveras River to the Passi Dam located within the SE¼ of SW¼ of Section 3, T 2 N, R 7 E, M.D.B.&M. and being within Linden Irrigation District as now constituted. Absorption into the underground storage basin occurs throughout the length of these channel, intensified by the action of check dams at several points thereon, and diversion for immediate use is made by means of gates and pumps at various points along their banks. Recovery of water charged underground is effected by pumping from wells within the district.

A description of the lands or the place where such water is put to beneficial use is as follows:

7765 acres within the boundaries of the Linden Irrigation District as now constituted in Townships 2 and 3 North, Ranges 7, 8 and 9 East, M.D.B.&M. as shown on the map filed with the Division of Water Resources on January 22, 1940, and entitled "Linden Irrigation District Water Application General Map and Location."

Amended by order of 8-25-47

Except as modified herein, this license is granted and said appropriator takes all rights herein mentioned subject to all of the terms and conditions contained in said permit.

Reports shall be filed promptly by licensee on appropriate forms which will be provided for the purpose from time to time by the Division of Water Resources.

The right to the diversion and use of the water aforesaid hereby confirmed is restricted to the point of diversion herein specified and to the lands or place of use herein described.

This license is granted and said appropriator takes all rights herein mentioned subject to the terms and conditions set forth in Section 20 of Chapter 586, Statutes of 1913, as amended, which is as follows:

Sec. 20. All permits and licenses for the appropriation of water shall be under the terms and conditions of this act, and shall be effective for such time as the water actually appropriated under such permits and licenses shall actually be used for the useful and beneficial purpose for which said water was appropriated, but no longer; and every such permit or license shall include the enumeration of conditions therein which in substance shall include all of the provisions of this section and likewise the statement that any appropriator of water, to whom said permit or license may be issued, shall take the same subject to such conditions as therein expressed; *provided*, that at any time after the expiration of twenty years after the granting of a license, the state or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the state shall have the right to purchase the works and property occupied and used under said license and the works built or constructed for the enjoyment of the rights granted under said license; and in the event that the said state, city, city and county, municipal water district, irrigation district, lighting district or political subdivision of the state so desiring to purchase and the said owner of said works and property can not agree upon said purchase price, said price shall be determined in such manner as is now or may hereafter be determined in eminent domain proceedings. If it shall appear to the state water commission at any time after a permit or license is issued as in this act provided that the permittee, or licensee, or the heirs, successors, or assigns, of said permittee or licensee, has not put the water granted under said permit or license to the useful or beneficial purpose for which the permit or license was granted, or that the permittee or licensee, or the heirs, successors, or assigns of said permittee or licensee, has ceased to put said water to such useful or beneficial purpose, or that the permittee or licensee, or the heirs, successors or assigns of said permittee or licensee, has failed to observe any of the terms and conditions in the permit or license as issued, then and in that case the said commission, after due notice to the permittee, licensee, or the heirs, successors or assigns of such permittee or licensee, and a hearing thereon, may revoke said permit or license and declare the water to be unappropriated and open to further appropriation in accordance with the terms of this act. The findings and declaration of said commission shall be deemed to be prima facie correct until modified or set aside by a court of competent jurisdiction; *provided*, that any action brought so to modify or set aside such finding or declaration must be commenced within thirty days after the service of notice of said revocation on said permittee or licensee, his heirs, successors or assigns. And every licensee or permittee under the provisions of this act if he accepts such permit or license shall accept the same under the conditions precedent that no value whatsoever in excess of the actual amount paid to the state therefor shall at any time be assigned to or claimed for any permit or license granted or issued under the provisions of this act, or for any rights granted or acquired under the provisions of this act, in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any permittee or licensee, his heirs, successors or assigns or by the holder of any rights granted or acquired under the provisions of this act, or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the state or any city, city and county, municipal water district, irrigation district, lighting district or any political subdivision of the state, of the rights and property of any permittee or licensee, or the possessor of any rights granted, issued, or acquired under the provisions of this act. The application for a permit by municipalities for the use of water for said municipalities or the inhabitants thereof for domestic purposes shall be considered first in right, irrespective of whether they are first in time; *provided, however*, that such application for a permit or the granting thereafter of permission to any municipality to appropriate waters, shall not authorize the appropriation of any water for other than municipal purposes; *and providing, further*, that where permission to appropriate is granted by the state water commission to any municipality for any quantity of water in excess of the existing municipal needs therefor, that pending the application of the entire appropriation permitted, the state water commission shall have the power to issue permits for the temporary appropriation of the excess of such permitted appropriation over and above the quantity being applied from time to time by such municipality; *and providing, further*, that in lieu of the granting of such temporary permits for appropriation, the state water commission may authorize such municipality to become as to such surplus a public utility, subject to the jurisdiction and control of the railroad commission of the State of California for such period or periods from and after the date of the issuance of such permission to appropriate, as may be allowed for the application to municipal uses of the entire appropriation permitted; *and provided, further*, that when such municipality shall desire to use the additional water granted in its said application it may do so upon making just compensation for the facilities for taking, conveying and storing such additional water rendered valueless for said purposes, to the person, firm or corporation which constructed said facilities for the temporary use of said excess waters, and which compensation, if not agreed upon between the municipality and said person, firm or corporation, may be determined in the manner provided by law for determining the value of property taken by and through eminent domain proceedings.

Witness my hand and the seal of the Department of Public Works of the State of California, this **ninth** *day of* **May**, *19* **40.**

EDWARD HYATT
State Engineer

By Harold Conkling
Deputy

3/11/53 RECEIVED NOTICE OF ASSIGNMENT TO Stockton and East San Joaquin Water Conservation District (until 11/30/58)

4-29-58 RECEIVED NOTICE OF ASSIGNMENT TO Stockton East San Joaquin Water Conservation District

#2-22-72 name changed to Stockton - East Water District

LICENSE 2021

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

DIVISION OF WATER RESOURCES

LICENSE
TO APPROPRIATE WATER

ISSUED TO Linden Irrigation District

DATED May 9, 1940

83760 7-40 1300 STATE PRINTING OFFICE

Attachment Z – Water Transfer Agreements with SSJID/OID and RCWD

Attachment Z.1. Water Transfer Agreement Rock Creek WD

AGREEMENT FOR THE TRANSFER OF WATER BY AND BETWEEN ROCK CREEK WATER DISTRICT AND STOCKTON EAST WATER DISTRICT

This AGREEMENT FOR THE TRANSFER OF WATER ("**Agreement**") is entered into this **9th** day of **April, 2024** ("**Effective Date**"), by and between the ROCK CREEK WATER DISTRICT ("**Rock Creek**"), and the STOCKTON EAST WATER DISTRICT ("**Stockton East**"). Rock Creek and Stockton East are each individually referred to as a "**Party**" and collectively as the "**Parties.**"

RECITALS

WHEREAS, Rock Creek is operating under and by virtue of Division 11 of the California Water Code; and

WHEREAS, Rock Creek is the owner of pre-1914 water rights to the waters of Rock Creek as identified in Statement 000666, and Manadise Creek as identified in Statement 000665 on file with the State Water Resources Control Board ("**State Board**"), both of which are stored in Salt Spring Valley Reservoir; and

WHEREAS, Rock Creek is charged with putting their water rights to the fullest beneficial use; and

WHEREAS, due to ongoing conservation practices and improvements in facilities by Rock Creek, the water to be sold to Stockton East by this Agreement is surplus to the current needs of the landowners and water users of Rock Creek in accordance with California Water Code section 22259; and

WHEREAS, the Parties previously entered into agreement for the transfer of up to 1,000 acre feet in 2022; and

WHEREAS, Stockton East is a water conservation district formed pursuant to special act of the California Legislature;

WHEREAS, Stockton East holds a contract with the United States Bureau of Reclamation for water delivery from the New Melones Project as a Central Valley Project contractor from the East Side Division and receives zero allocation in certain years;

WHEREAS, Stockton East supplies irrigation, municipal and industrial and domestic water to portions of eastern San Joaquin County from a combination of surface and groundwater sources; and

WHEREAS, the quantity and quality of groundwater within the Eastern San Joaquin Groundwater Subbasin underlying Stockton East, Rock Creek, and the Intended Recipients is threatened and without the sale of the water to Stockton East under this Agreement, the intended recipients may pump groundwater; and

WHEREAS, Stockton East intends by this Agreement to (1) obtain additional surface water for use within its boundaries, (2) cause of reduction in the extraction of groundwater, and (3) assist its landowners, water users and water purveyors in obtaining a safe and reliable water supply;

WHEREAS, Stockton East recognizes the benefits of making advance payment available to Rock Creek to facilitate Salt Springs Valley Reservoir outlet works rehabilitation and corresponding increase of delivery flows to Stockton East.

NOW, THEREFORE, the Parties, on the terms and conditions herein set forth, agree as follows:

AGREEMENT

1. **TERM**: This Agreement shall become effective upon the Effective Date and shall terminate on December 31, 2028. Stockton East shall have an option to renew this Agreement for an additional five (5) Years, upon conditions mutually agreeable to the Parties.

2. **WATER AVAILABLE FOR PURCHASE**: Rock Creek shall make pre-1914 water under Statements 000665 and 000666 ("**Transfer Water**") available to Stockton East in the amounts set forth in this Section, subject to the terms and conditions of this Agreement. Transfer Water will be used within the boundaries of Stockton East. The Parties acknowledge that the Central Valley Project East Side Division Shortage Policy for New Melones used by Reclamation to determine allocations to CVP East Side Division contractors as set forth in that letter from Reclamation to Stockton East dated December 22, 2021 ("**Shortage Policy**") currently anticipates the following allocations to Stockton East under the following Year Types:

Annual Allocations for Central Valley Project, East Side Division Contractors

60-20-20 Index	**CVP Contractor Allocation** (acre feet)
Critical	0
Dry	49,000
Below Normal, Above Normal and Wet	155, 000

A. The amount of Transfer Water made available under this Agreement will depend on Reclamation's determination of allocations to its East Side Division CVP contractors, under the Shortage Policy as follows:

i. Critical Year. Rock Creek shall make up to One Thousand Five Hundred (1,500) acre feet of Transfer Water available to Stockton East pursuant to this Agreement as scheduled by Stockton East in accordance with Section 11.

ii. Dry Year, Below Normal, Above Normal and Wet Years. When the East Side Contractors receive less than a full allocation of 155,000 acre feet, Rock Creek shall make available to Stockton East pursuant to this Agreement up to Three

Thousand (3,000) acre feet of Transfer Water as scheduled by Stockton East in accordance with Section 11.

B. As used in this Agreement, "**Year Type**" means the Year Types as determined by the San Joaquin River Basin 60-20-20 Index, and shown on the table in this Section 2. These year types are currently used, in part or in whole, by Reclamation under the Shortage Policy. "**Year**" shall run concurrently with the Stockton East fiscal year defined as April 1 through March 31 of the following calendar year.

3. **DELIVERY**.

A. Delivery Point. The Transfer Water will be made available by Rock Creek, and measured by a gauge furnished and installed by Stockton East at Wagner Dam (the "**Delivery Point**") in accordance with the scheduled agreed to by the Parties pursuant to Section 10. Transfer Water made available at the Delivery Point shall be considered "**Delivered**". Transfer Water will be diverted by Stockton East at the Stockton East Rock Creek Diversion Structure at Farmington Dam located on the Rock Creek west and downstream of Wagner Dam. This definition of the term "**delivery**" including "**deliver**" and "**delivered**," where such term is used in reference to the Transfer Water.

B. Delivery Rate. Rock Creek shall provide the Transfer Water to be made available as set forth in Section 2 at a rate not less than twenty (20) cubic feet per second. The Transfer Water will be made available and measured at the Delivery Point to an accuracy accepted by the water industry. Measurements shall be provided monthly to Rock Creek in the Years in which water is made available.

4. **COMPLIANCE WITH APPLICABLE LAWS AND APPROVALS:**

A. It is a condition to the obligations of the Parties under this Agreement that the Parties comply with the requirements of the California Environmental Quality Act ("**CEQA**"). Rock Creek shall be the lead agency for CEQA purposes.

B. No approval of the transfer is required by the State Board as the State Board does not have jurisdiction over pre-1914 water rights.

5. **PURCHASE PRICE**: Stockton East shall pay Two Hundred Dollars ($200.00) for each acre foot of Transfer Water Delivered at the Delivery Point.

6. **PAYMENT**:

A. Within ten (10) days of the Effective Date, or later date set by Rock Creek, Stockton East shall make available to Rock Creek an advance payment for Transfer Water under this Agreement in an amount up to Five Hundred Thousand Dollars ($500,000.00) ("**Advance Payment**").

B. Rock Creek shall invoice Stockton East every month for in the Years that Transfer Water is made available. The invoices will be based on the amount diverted and measured at the Delivery Point.

C. The Advance Payment shall be applied to payment of the first Two Thousand Five Hundred (2,500) acre feet of Transfer Water. When all Advance Payment has been expended, Stockton East shall remit payment within sixty (60) days of receipt of the invoice.

D. In the event Rock Creek is unable to fulfill the Transfer Water obligations of this Agreement, Rock Creek shall repay Stockton East all amounts of the outstanding balance of the Advance Payment prior to the termination of this Agreement in the manner set forth in Section 7.

7. **INTEREST**:

A. The Parties acknowledge that Stockton East is providing Rock Creek with the Advance Payment because Rock Creek is in need of funds. In consideration of Stockton East providing the Advance Payment, Rock Creek shall pay Stockton East interest on the outstanding amount of the Advance Payment at an annual rate of one-half (1/2) an acre-foot of Transfer Water per One Thousand Dollars ($1,000.00) of the Advance Payment until such time the full amount of the Advance Payment is recovered by Stockton East.

B. In the event the Transfer Water conditions defined in Section 2.A are not met for three (3) consecutive years, Rock Creek will not accrue additional interest on Advance Payment until Transfer Water is provided under the obligations of this Agreement.

C. Rock Creek will accrue zero interest on the Advance Payment if Transfer Water obligations to Stockton East are fulfilled within the same Year as the Advance Payment.

D. In the event Rock Creek is unable to fulfill the Transfer Water obligations of this Agreement as specified in Section 6.D, Rock Creek shall pay Stockton East at an annual interest rate of five (5) percent on the outstanding balance of the Advance Payment until the amount of the Advance Payment is repaid in full.

E. Stockton East shall pay Rock Creek interest at an annual interest rate of ten (10) percent on any charges that remain unpaid under this Agreement sixty (60) days beyond the due date.

8. **WATER QUALITY**: Rock Creek makes no warranty or representations as to the quality of the Delivered to Stockton East.

9. **LIMITING CONDITIONS**:

A. Rock Creek Limiting Conditions. Rock Creek's obligation to make Transfer Water available pursuant to this Agreement will, at all times, be subject and subordinate to the following conditions (collectively, "**Rock Creek's Limiting Conditions**"):

i. The terms and conditions of their water rights as they currently exist;

ii. Pursuant and subsequent to Rock Creek satisfying repayment to Stockton East for any Advance Payment, the rights of landowners, within Rock Creek's boundary, to the beneficial use of their respective district water as related to the delivery of water purchased pursuant to this Agreement;

iii. Applicable federal and state laws now in existence, and as modified from time to time, which may affect Rock Creek's rights or obligations;

Nothing is this Agreement shall be construed so as to contradict, conflict with, or otherwise be contrary to the provisions of any of Rock Creek's Limiting Conditions; and in the event of any conflict between any of Rock Creek's Limiting Conditions and this Agreement, Rock Creek's Limiting Condition(s) shall control, and Rock Creek shall not be deemed to be in violation of this Agreement by any modifications of the Agreement, including reduced supply for Stockton East, that may be required to ensure compliance with any of Rock Creek's Limiting Conditions.

B. Stockton East Limiting Conditions. Stockton East's obligation to purchase Transfer Water as provide in this Agreement will, at all times, be subject and subordinate to the following conditions (collectively "**Stockton East's Limiting Conditions**"):

i. Stockton East shall be obligated to pay only for Transfer Water that has been scheduled and delivered by Rock Creek, except for the Advance Payment; and

ii. Applicable federal and state laws now in existence, and as modified from time to time, which may affect Stockton East's rights or obligations.

Nothing is this Agreement shall be construed so as to contradict, conflict with, or otherwise be contrary to the provisions of any of Stockton East's Limiting Conditions; and in the event of any conflict between any of Stockton East's Limiting Conditions and this Agreement, Stockton East's Limiting Condition(s) shall control, and Stockton East shall not be deemed to be in violation of this Agreement by any modifications of the Agreement that may be required to ensure compliance with any of Stockton East's Limiting Conditions.

10. **DELIVERY SCHEDULE:** Consistent with this Agreement, Rock Creek will make Transfer Water available at the Delivery Point on a schedule developed by the

Parties ("**Delivery Schedule**"). The Parties shall start every February after Reclamation's initial forecast and allocation to develop the Delivery Schedule. The Delivery Schedule will change every year. When the Delivery Schedule is finalized will depend upon Reclamation's final determination of allocation to Stockton East. The Delivery Schedule will be limited by the concurrent delivery of Stockton East's other water (generally March through October), Reclamations' determination of allocation, and Stockton East's needs.

11. **WATER SUPPLY REDUCTIONS**: Rock Creek may reduce the Delivery for any of the following reasons: Rock Creek's Limiting Conditions; failure of facilities; intervening acts, including litigation and stream adjudication brought by third parties, or actions of any state or federal agency exercising jurisdiction or claiming an interest and/or right to reduce and/or modify operations and/or quantities of water otherwise available to Rock Creek; diversions outside the control of Rock Creek which may hereafter be authorized for others from tributaries to the Salt Springs Valley Reservoir; and any action, legislation, ruling or determination adverse to Rock Creek affecting the Agreement and beyond the reasonable control of Rock Creek. Rock Creek shall make good faith efforts to avoid such reductions, but Stockton East agrees that Rock Creek shall not be liable for reductions of supply in this Agreement due to the above-stated causes.

12. **APPROVALS AND COSTS**: Stockton East shall pay the cost to prepare, notice, and file the appropriate CEQA documentation and Rock Creek shall approve the appropriate CEQA documentation as the lead agency.

13. **LITIGATION COSTS**: Rock Creek agrees to defend its own interests in any litigation or regulatory action challenging the validity of Rock Creek's water rights. The Parties shall each defend their own interests in litigation or regulatory action involving this Agreement, including environmental compliance and purchase of the Transfer Water. All Parties agree to reasonably cooperate with each other in the defense of any litigation that may be filed as a result of this Agreement. This Section shall survive termination or expiration of this Agreement.

14. **COOPERATION**: To the extent reasonably required, each Party to this Agreement shall, in good faith, assist the other Party in obtaining all such necessary approvals and preparation of required environmental documents. The Parties agree to cooperate and assist each other in good faith in meeting such requirements of regulatory agencies as may be applicable to performance of any terms of the Agreement.

15. **WAIVER OF RIGHTS**: Any waiver, at any time, by any Party of its rights with respect to a breach, default, or any other matter arising in connection with this Agreement, shall not be deemed to be a waiver with respect to any other breach, default, or matter with respect to this Agreement.

16. **ASSIGNMENT**: No Party may assign its rights or obligations under this Agreement, in whole or in part, without prior written consent of all Parties hereto. Any attempted assignment of this Agreement, in whole or in part, without the prior written consent of all Parties hereto is void. Notwithstanding the foregoing, the Parties acknowledge that Stockton East has pending a current application before the San Joaquin

Local Agency Formation Commission to consolidate with the Central San Joaquin Water Conservation District. Such consolidation is expressly contemplated by this Agreement, and upon consolidation, the phrase "Stockton East" as used in this Agreement shall include the consolidated district.

17. **NOTICES**: Any notice or communication required or permitted hereunder shall be in writing and shall be delivered personally, delivered by a nationally recognized overnight courier service or sent by certified or registered mail, postage prepaid, or sent by electronic transmission subject to confirmation of such transmission. Any such notice or communication shall be deemed to have been given (i) when delivered, if personally delivered, (ii) one (1) Business Days after it is deposited with a nationally recognized overnight courier service, if sent by a nationally recognized overnight courier service, (iii) the day of sending, if sent by email prior to 5:00 p.m. (PT) on any Business Day or the next succeeding Business Day if sent by email after 5:00 p.m. (PT) on any Business Day or on any day other than a Business Day or (iv) five (5) Business Days after the date of mailing, if mailed by certified or registered mail, postage prepaid, in each case, to the following address or email address, or to such other address or addresses as such party may subsequently designate to the other Party by notice given hereunder:

ROCK CREEK WATER DISTRICT
Don Harper, President
Rock Creek Water District
9601 State Route 4
Farmington, CA 95230
Email: rockcreekwd@gmail.com
Phone: (775) 790-2043

STOCKTON EAST WATER DISTRICT
Justin Hopkins, General Manager
Stockton East Water District
Post Office Box 5157
Stockton, CA 95205
6767 East Main Street,
Stockton, CA 95215
Email: jhopkins@sewd.net
Phone: (209) 948-0333

As used herein, "**Business Day**" means any day other than a Saturday, Sunday, or any other day on which banking institutions in the State of California are authorized by law or executive action to close.

18. **MISCELLANEOUS**.

A. Approvals. Where the terms of this Agreement provide for action to be based upon a judgment, approval, review, or determination of any Party, such terms are

not intended to be and shall never be construed as permitting such opinion, judgment, approval, review, or determination to be arbitrary, capricious, or unreasonable.

B. Dispute Resolution. In the event of any dispute regarding interpretation or implementation of this Agreement, authorized representatives from the Parties shall endeavor to resolve the dispute by meeting within thirty (30) days after the request of a Party to resolve the dispute. If the dispute remains unresolved after such meeting, the Parties shall use the services of a mutually acceptable consultant in an effort to resolve the dispute. Parties shall share the fees and expenses of said consultant equally. If a consultant cannot be agreed upon, or if the consultant's recommendations are not acceptable to the Parties, and unless the Parties otherwise agree, the matter may be resolved by litigation and any Party may, at its option, pursue any available legal remedy including, but not limited to, injunctive and other equitable relief.

C. Other Agreements. Nothing contained within this Agreement restricts the ability of Rock Creek to provide water services and sales to its existing landowners and outside lands.

D. Entire Agreement. This Agreement constitutes the entire Agreement between the Parties, and supersedes any oral agreement, statement or promise relating to the subject matter of the Agreement. No other agreement, statement, or promise made to any party, or to any employee, officer, or agent of a Party to this Agreement, or to any other person, that is not in writing and signed by all Parties shall be binding upon them. Any amendment, including oral modifications, must be reduced to writing and signed by all Parties to be effective.

E. Counterparts. This Agreement may be executed in two counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. This Agreement shall not be effective until the execution and delivery between each of the Parties of at least one full set of counterparts. The Parties authorize each other to detach and combine original signature pages and consolidate them into a single identical original. Any one of such completely executed counterparts shall be sufficient proof of this Agreement.

F. Authority. The signatories represent that they have appropriate authorization to enter into this Agreement on behalf of the Party for whom they sign.

G. General Interpretation. The terms of this Agreement have been negotiated by the Parties hereto and the language used in this Agreement shall be deemed to be the language chosen by the Parties to express their mutual intent. This Agreement shall be construed without regard to any presumption or rule requiring construction against the Party causing such instrument or any portion thereof to be drafted, or in favor of the Party receiving a particular benefit under the Agreement. No rule of strict construction will be applied against any Party.

IN WITNESS WHEREOF, the Parties have executed this Agreement effective as of the date first above written.

PARTIES:

STOCKTON EAST WATER DISTRICT

By: _____
Justin Hopkins, General Manager

ROCK CREEK WATER DISTRICT

By: _____
Don Harper, President

Attachment Z.2. Water Transfer Agreement SSJID OID

AGREEMENT FOR THE TRANSFER OF WATER BY AND AMONG THE OAKDALE IRRIGATION DISTRICT, THE SOUTH SAN JOAQUIN IRRIGATION DISTRICT, AND THE STOCKTON EAST WATER DISTRICT

This AGREEMENT FOR THE TRANSFER OF WATER ("**Agreement**") is entered into this 3rd day of January 2023, by and among the OAKDALE IRRIGATION DISTRICT ("**OID**"), the SOUTH SAN JOAQUIN IRRIGATION DISTRICT ("**SSJID**") (collectively, the "**Districts**"), and the STOCKTON EAST WATER DISTRICT ("**Stockton East**").

RECITALS

WHEREAS, the Districts are California irrigation districts operating under and by virtue of Division 11 of the California Water Code; and

WHEREAS, the Districts have pre-1914 adjudicated water rights to divert the first 1816.6 cfs from March 1 until November 1 from the Stanislaus River; and

WHEREAS, the Districts and Stockton East had previously entered into the transfer of up to 30,000 acre feet annually ("**AFA**") from 1999 to 2009; and

WHEREAS, Stockton East is a water conservation district formed pursuant to special act of the California Legislature;

WHEREAS, Stockton East holds a contract with Reclamation for water delivery from the New Melones Project as a CVP contractor from the East Side Division;

WHEREAS, Stockton East intends by this Agreement to (1) obtain additional surface water for use within its boundaries, (2) cause the reduction in the extraction of groundwater, and (3) assist their landowners, water users and water purveyors in obtaining a safe and reliable water supply.

NOW, THEREFORE, the Districts and Stockton East, on the terms and conditions herein set forth, agree as follows:

AGREEMENT

1. **DEFINITIONS**: The following definitions shall govern this Agreement:

A. "**California Environmental Quality Act**" or "**CEQA**" means Public Resources Code Section 21000 et seq.

B. "**CVP**" means the Central Valley Project.

C. "**Delivery**" means the Districts' water made available at Goodwin Dam and measured at the Stockton East gauge located at the Goodwin Tunnel outlet. The Districts will make the water available at Goodwin Dam on the schedule developed pursuant to Section 14 of this Agreement. The water made available at Goodwin Dam will be diverted by Stockton East at the Stockton East tunnel located on the north side of the impoundment behind Goodwin

Dam. This definition is intended to include the grammatical variations of the term "**delivery**" including "**deliver**" and "**delivered,**" where such term is used in reference to water.

D. "**Delivery Point**" shall mean the Stockton East gauge located at the Goodwin Tunnel outlet.

E. "**FNF**" shall mean the Full Natural Flow calculation made by the California Department of Water Resources for the Stanislaus River.

F. "**Goodwin Agreement**" shall mean that March 23, 1990 agreement by and among the County of San Joaquin, City of Stockton, Districts, Goodwin Tunnel Financing Authority and Stockton East.

G. "**Parties**" means the Districts and Stockton East.

H. "**Reclamation**" means the United States Bureau of Reclamation.

I. "**Shortage Policy**" shall mean the Central Valley Project East Side Division Shortage Policy for New Melones used by Reclamation to determine allocations to CVP East Side Division contractors as set forth in that letter from Reclamation to Stockton East dated December 22, 2021.

J. "**State Board**" shall mean the State Water Resources Control Board.

K. "**Transfer Water**" shall mean that water to be made available by the Districts to Stockton East pursuant to Section 3 and the terms and conditions of this Agreement.

L. "**Year Type**" means the Year Types as determined by the San Joaquin River Basin 60-20-20 Index and shown on the table in Section 3. These year types are currently used, in part or in whole, by Reclamation under the Shortage Policy.

M. "**Year**" shall run concurrently with the "Water Year" defined as October 1 through September 30 of the following calendar year.

2. **TERM**: This Agreement shall become effective upon execution by all Parties and shall terminate on December 31, 2033. The Parties agree to make a good faith effort to renegotiate the terms of this Agreement at its conclusion with the aim of reaching an additional ten (10) year deal.

3. **WATER AVAILABLE FOR PURCHASE**: Pursuant to this Agreement the Districts shall make Transfer Water available to Stockton East in the amounts set forth in this Section, subject to the terms and conditions of this Agreement. Transfer Water will be used within the boundaries of Stockton East. The Parties acknowledge that the Shortage Policy currently anticipates the following allocations to Stockton East under the following Year Types:

Annual Allocations for Central Valley Project, East Side Division Contractors

60-20-20 Index	CVP Contractor Allocation (acre feet)
Critical	0
Dry	49,000
Below Normal, Above Normal and Wet	155, 000

A. The Transfer Water made available under this Agreement will depend on Reclamation's determination of allocations to its East Side Division CVP contractors, under the Shortage Policy as follows:

i. Critical Year. Stockton East shall request water from Reclamation for Health, Safety and Welfare. If Reclamation does not make water available to Stockton East pursuant to their request, then the Districts shall make Ten Thousand (10,000) acre feet ("**AF**") of Transfer Water available to Stockton East pursuant to this Agreement.

ii. Dry Year, Below Normal, Above Normal and Wet Years. When the East Side Contractors receive less than a full allocation of 155,000 AF, the Districts shall make available to Stockton East pursuant to this Agreement up to Twenty Thousand (20,000) AF of Transfer Water as scheduled by Stockton East in accordance with Section 12.

B. The Transfer Water made available for Delivery will be made available by the Districts at the Delivery Point in accordance with the requirements set forth in Section 10.

4. **COMPLIANCE WITH APPLICABLE LAWS AND OBTAINING APPROVALS:**

A. It is a condition to the obligations of the Parties under this Agreement that the Parties comply with the requirements of CEQA. The Districts shall be lead agencies for CEQA purposes.

B. No approval of the transfer is required by the State Board as the State Board does not have jurisdiction over pre-1914 water rights.

5. **PURCHASE PRICE**: Stockton East shall pay Two Hundred Dollars ($200.00) per AF for water diverted and used for irrigation purposes, and Three Hundred Dollars ($300.00) per AF for water diverted and used for municipal and industrial purposes. The price for water used for agricultural purposes shall be increased annually by the percentage increase specified Terms And Conditions For Irrigation Of Lands Outside Oakdale Irrigation District Boundaries During The 10-Year Out-Of-District Water Sale Program.

6. **WATER QUALITY**: The Districts make no warranty or representations as to the quality of the Delivery to Stockton East.

7. **WATER MEASUREMENT AND DELIVERY**: Districts shall provide the Transfer Water to be made available as set forth in Section 3. The Transfer Water will be made available and measured at the Delivery Point to an accuracy accepted by the water industry. Measurements shall be provided monthly to the Districts in the Years in which water is made available.

8. **PAYMENT**:

A. The Districts shall invoice Stockton East every month in the years in which Transfer Water is made available. The invoices will be based on the amount diverted and measured at the Delivery Point. In addition, Stockton East will provide the districts with a monthly breakdown of how the Transfer Water was used so the price can be determined for the quantity diverted.

B. Stockton East shall remit payment within sixty (60) days of receipt of the invoice.

9. **INTEREST**: Stockton East shall pay the Districts interest at an annual interest rate of ten (10) percent on any charges that remain unpaid sixty (60) days beyond the due date.

10. **DISTRICTS' LIMITING CONDITIONS**: The Districts' obligation to make available the quantity of Transfer Water specified in Section 3 of this Agreement will, at all times, be subject and subordinate to the following conditions:

A. The terms and conditions of the Districts water rights as they currently exist; and

B. The availability of pre-1914 water in the Stanislaus River at Goodwin Dam as determined by the FNF calculation; and

C. The 1988 Agreement and Stipulation between the Districts and Reclamation as it now exists and as modified from time to time;

D. The terms and conditions of Federal Energy Regulatory Commission licenses, as they now exist, and as they may be amended and/or renewed upon relicensing including, but not limited to, those held for Tulloch and Goodwin Dams;

E. The rights of landowners, within the boundaries of OID or SSJID, to the beneficial use of their respective District's water as relates to the delivery of water purchased pursuant to this Agreement; and

F. The rights of landowners outside the boundaries of OID who have signed up to receive water under the districts 10 year program

G. Applicable federal and state laws now in existence, and as modified from time to time, which may affect the Districts' rights or obligations; and

H. The rights of the cities of Lathrop, Manteca, Escalon, and Tracy pursuant to each city's Water Supply Development Agreement with SSJID.

The conditions described in (A) – (H), inclusive, above, are collectively referred to as the "**Districts' Limiting Conditions**". Nothing in this Agreement shall be construed so as to contradict, conflict with, or otherwise be contrary to the provisions of any of the Districts' Limiting Conditions; and in the event of any conflict between any of the Districts' Limiting Conditions and this Agreement, the Districts' Limiting Conditions shall control.

11. **STOCKTON EAST LIMITING CONDITIONS:** Stockton East's obligation to purchase Transfer Water specified in Section 3 of this Agreement will, at all times, be subject and subordinate to the following conditions:

A. Stockton East shall be obligated to pay only for Transfer Water that has been scheduled and delivered by Districts; and

B. Applicable federal and state laws now in existence, and as modified from time to time, which may affect Stockton East's rights or obligations.

12. **DELIVERY SCHEDULE:**

A. Consistent with this Agreement and specifically Section 3, the Districts will make the Delivery available at the Delivery Point on a schedule developed by the Districts and Stockton East ("**Delivery Schedule**"). The Districts and Stockton East shall start every February after Reclamation's initial forecast and allocation to develop the Delivery Schedule. The Delivery Schedule will change every year. When the Delivery is finalized will be based on Reclamation's final determination of allocation to Stockton East. The Delivery Schedule will be limited by the Districts' ability to divert March 1 – November 1, the daily Full Natural Flow, and Reclamation's determination of allocation, and Stockton East's needs.

B. The parties shall meet in February after the Department of Water Resources ("**DWR**") releases its February forecast. Using the forecasts released by DWR, Tri Dam Authority, DWR, and the Pacific Institute, the parties will work to determine the San Joaquin River Basin Index. The parties will make a determination as to the Index. The parties will then determine the amount of water to be delivered to Stockton East.

C. If the parties determine it is a critical year, then Stockton East shall request 10,000 Health and Safety water from Reclamation. If no response is received from Reclamation by March 1, then the Districts will commence to deliver water. If Reclamation agrees to deliver 16,000 AF of Health and Safety Water after March 1, then deliveries shall cease and Stockton East will pay the Districts for the water delivered. If Reclamation does not agree, then the Districts will deliver up to 10,000 AF.

D. If the parties determine it is a Dry year, then the Districts will provide up to 20,000 AF on a delivery schedule agreed to by the parties. Deliveries will commence on March 1. If the SJR Basin Index goes from Dry to Below Normal on May 1, then deliveries shall cease. If the SJR Basin goes from Dry to Critical the parties shall meet and confer if 10,000 AF or 20,000 AF shall be delivered.

E. If the parties determine in February it is a Wet, Above Normal, or Below Normal water year, then no water shall be delivered. Stockton East may ask Reclamation after this determination if Reclamation is going to abide by its allocation or determine that a lesser amount of water will be available. If by March 1 Reclamation determines that a lesser amount of water will be made available to Stockton East than the annual allocations for Above Normal, Below Normal and Wet years specified in Section 3, then the Districts will commence delivery on March 1, as if it was a Dry year. If Reclamation subsequently determines it will make a full allocation available then deliveries will cease.

13. **WATER SUPPLY REDUCTIONS**: The Districts may reduce or terminate the Delivery for any of the following reasons: the Districts' Limiting Conditions arise; failure of facilities; intervening acts, including litigation and stream adjudication brought by third parties, or actions of any state or federal agency exercising jurisdiction or claiming an interest and/or right to reduce and/or modify operations and/or quantities of water otherwise available to the Districts; diversions outside the control of the Districts which may hereafter be authorized for others from the North, Middle or South Forks of the Stanislaus River; and any action, legislation, ruling or determination adverse to the Districts affecting the Agreement and beyond the reasonable control of the Districts. The Districts shall make good faith efforts to avoid such reductions, but Stockton East agrees that Districts shall not be liable for reductions of supply in this Agreement due to the above-stated causes.

14. **APPROVALS AND COSTS**: The cost to prepare the appropriate CEQA documentation shall be paid one-half by the Districts and one-half by Stockton East.

15. **LITIGATION COSTS**: The Districts agree to defend their own interests in any litigation or regulatory action challenging the validity of the Districts' water rights. The Parties shall each defend their own interests in litigation or regulatory action involving this Agreement, including environmental compliance and purchase of the Transfer Water. All Parties agree to reasonably cooperate with each other in the defense of any litigation that may be filed as a result of this Agreement. This Section shall survive termination or expiration of this Agreement.

16. **COOPERATION**: To the extent reasonably required, each Party to this Agreement shall, in good faith, assist the other Parties in obtaining all such necessary approvals and preparation of required environmental documents. The Parties agree to cooperate and assist each other in good faith in meeting such requirements of regulatory agencies as may be applicable to performance of any terms of the Agreement.

17. **WAIVER OF RIGHTS**: Any waiver, at any time, by any Party of its rights with respect to a breach, default, or any other matter arising in connection with this Agreement, shall not be deemed to be a waiver with respect to any other breach, default, or matter with respect to this Agreement.

18. **ASSIGNMENT**: No party may assign its rights or obligations under this Agreement, in whole or in part, without prior written consent of all Parties hereto. Any attempted assignment of this Agreement, in whole or in part, without the prior written consent of all Parties hereto is void. Notwithstanding the foregoing, the Parties acknowledge that Stockton East has pending a current application before the San Joaquin Local Agency Formation Commission to consolidate with the Central San Joaquin Water Conservation District. Such consolidation is expressly contemplated by this Agreement, and upon consolidation, the phrase "Stockton East" as used in this Agreement shall include the consolidated district.

19. **NOTICES**: All notices that are required, either expressly or by implication, to be given by any Party to the other under this Agreement shall be signed for by the Districts and Stockton East by such officers as they may, from time, authorize in writing to so act. Any notices to Parties required by this Agreement shall be hand-delivered, mailed by United States first-class postage prepaid, or delivered by electronic mail followed by written notice sent by U.S. mail, and addressed as follows:

OAKDALE IRRIGATION DISTRICT
Scot Moody, General Manager/Secretary
Oakdale Irrigation District
1205 East "F" Street
Oakdale, CA 95361
Email: smoody@oakdaleirrigation.com
Phone: (209) 847-0341

SOUTH SAN JOAQUIN IRRIGATION DISTRICT
Peter Rietkerk, General Manager
South San Joaquin Irrigation District
11011 East Highway 120
Manteca, CA 95336
Email: prietkerk@ssjid.com
Phone: (209) 249-4645

STOCKTON EAST WATER DISTRICT
Justin Hopkins, General Manager
Stockton East Water District
Post Office Box 5157
Stockton, CA 95205
6767 East Main Street,
Stockton, CA 95215
Email: jhopkins@sewd.net
Phone: (209) 948-0333

Notice shall be deemed given by operation of any of the following, whichever occurs earliest: (1) two (2) calendar days following mailing via regular or certified mail, return receipt requested, (2) One (1) business day after deposit with any one-day delivery service assuring "next day" delivery, (3) upon actual receipt of notice, which, for notice by electronic mail, will be deemed received on the day the electronic mail is sent if the electronic mail is sent to an address or addresses listed in this Section. The Parties shall promptly give written notice to each other of any change of address and mailing or shipment to the addresses stated herein shall be deemed sufficient unless written notification of a change of address has been received.

20. **APPROVALS**: Where the terms of this Agreement provide for action to be based upon a judgment, approval, review, or determination of any Party, such terms are not intended to be and shall never be construed as permitting such opinion, judgment, approval, review, or determination to be arbitrary, capricious, or unreasonable.

21. **TERMINATION**: If final CEQA activities and requirements are not satisfied by January 3, 2024, any Party may terminate this Agreement by written notice to the other Party or Parties. If the State Board, Reclamation, or any other state or federal agency, or any state or federal court, exercising jurisdiction over this Agreement and/or the operations of any Party or the Districts' water rights, imposes any requirement, limitation, mitigation, operational restrictions, fees, charges, costs, water right restrictions or operating criteria upon any Party, then any Party may determinate that compliance with this Agreement or with such requirement, limitation, restriction or other constraint is not in its best interest and may unilaterally terminate this Agreement upon written notice to the other Party or Parties. If, in either Party's judgment,

the costs of litigation, the restrictions or mitigation imposed by any agency or court pursuant to CEQA, or any relief afforded to plaintiffs in an action brought in state or federal court involving this Agreement are too burdensome in relation to the benefits to be received under this Agreement, then any Party may terminate this Agreement upon written notice to the other Party or Parties.

22. **DISPUTE RESOLUTION**: In the event of any dispute regarding interpretation or implementation of this Agreement, authorized representatives from the Districts and Stockton East shall endeavor to resolve the dispute by meeting within thirty (30) days after the request of a Party to resolve the dispute. If the dispute remains unresolved after such meeting, the Parties shall use the services of a mutually acceptable consultant in an effort to resolve the dispute. Parties involved in the dispute shall share the fees and expenses of said consultant equally. If a consultant cannot be agreed upon, or if the consultant's recommendations are not acceptable to one or more of the Parties, and unless the Parties otherwise agree, the matter may be resolved by litigation and any Party may, at its option, pursue any available legal remedy including, but not limited to, injunctive and other equitable relief.

23. **OTHER AGREEMENTS:**

A. Nothing contained within this Agreement restricts the ability of the Districts to provide water services and sales to its existing landowners, municipalities and outside lands.

B. This Agreement amends the Goodwin Agreement to the extent necessary to permit the Parties to carry out the terms hereof. Districts specifically agree that the license granted Stockton East pursuant to Section 2.1 of the Goodwin Agreement shall be deemed to enable Stockton East to take delivery of water made available by Districts under this Agreement.

24. **ENTIRE AGREEMENT**: This Agreement constitutes the entire Agreement between the Districts and Stockton East, and supersedes any oral agreement, statement, or promise between them relating to the subject matter of the Agreement. Any amendment of this Agreement, including oral modifications, must be reduced to writing and signed by all Parties to be effective.

25. **COUNTERPARTS**: This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. This Agreement shall not be effective until the execution and delivery between each of the Parties of at least one full set of counterparts. The Parties authorize each other to detach and combine original signature pages and consolidate them into a single identical original. Any one of such completely executed counterparts shall be sufficient proof of this Agreement.

26. **SIGNATURE CLAUSE**: The signatories represent that they have appropriate authorization to enter into this Agreement on behalf of the Party for whom they sign.

27. **GENERAL INTERPRETATION**: The terms of this Agreement have been negotiated by the Parties hereto and the language used in this Agreement shall be deemed to be the language chosen by the Parties to express their mutual intent. This Agreement shall be construed without regard to any presumption or rule requiring construction against the Party

causing such instrument or any portion thereof to be drafted, or in favor of the Party receiving a particular benefit under the Agreement. No rule of strict construction will be applied against any Party.

IN WITNESS WHEREOF, the Parties have executed this Agreement effective as of the date first above written.

PARTIES:

STOCKTON EAST WATER DISTRICT

By: _____
Justin Hopkins, General Manager

OAKDALE IRRIGATION DISTRICT

By: _____
Scot Moody, General Manager

SOUTH SAN JOAQUIN IRRIGATION DISTRICT

By: _____
Peter Rietkerk, General Manager