



SAN JUAN CREEK OCEAN OUTFALL ASSET MANAGEMENT PLAN

NPDES No. CA0107417, Order No. R9-2022-0005

Abstract

In conformance with NPDES Section 6.2.5.7, SOCWA and SOCWA Member Agencies developed this Asset Management Plan for proper operation, engineering and financial management, and Board level oversight of the permitted facilities. This AMP also complies with Section 6.3.5.7.

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Acronyms and Abbreviations

List of Tables

Executive Summary

Asset Management Plan Intent and Purpose

Purpose: To comply with the SJCOO NPDES Permit. As stated in the NPDES permit: “Asset management planning provides a framework for setting and operating quality assurance procedures and ensuring the Dischargers have sufficient financial and technical resources to continually maintain a targeted level of service and the operational integrity of the POTWs. Asset management requirements have been established in this Order to ensure compliance with Standard Provision 1.4 in Attachment D of this Order and the requirements of 40 CFR section 122.41(e).”

Objectives: Proactive approach to repair, rehabilitation, and replacement, assets are reliable and operating when need, minimization of unplanned outages, management of risks associated asset or service impairment through asset performance optimization, development of cost-effective management strategies in the long-term, and striving for continual improvement of asset management practices.

1. Introduction

Overview of SJCOO Discharge Facility Infrastructure in Compliance with § 6.3.5.7.3

The NPDES permit requires that the AMP require a map of the wastewater treatment plant that “shall incorporate assets from the asset management inventory”. Each agency provided maps related to this requirement which are included in Appendix A with descriptions as to how the agencies interpreted this requirement and responded with materials available that were previously provided.

Asset Management Organization

There are nine permitted facilities under the SJCOO permit as described in Table 1 below. The Oso Creek Water Reclamation Plant (OCWRP) is also named in the SJCOO permit. OCWRP discharges to the Oso Trabuco sewer line and not directly to the SJCOO, thus the facility is included under the requirements of this AMP. The table below provides the reference point each named facility, the facility’s responsible agency, and the permitted description of the facility in compliance with the AMP requirement for inclusion. Each section of this AMP refers to the responsible agency to organize the list of facilities that the agency has direct oversight over, through contracted agreements, or through direct oversight as part of their organizational structure. The responsible agencies are listed in alphabetical order throughout the AMP for consistency and clarity throughout the document.

Monitoring Location Name	Facility Name	Responsible Agency	Permitted Description NPDES Section in Attachment F
M-001	San Juan Creek Ocean Outfall	SOCWA	2.2
M-001A	JB Latham Treatment Plant	SOCWA, SCWD, MNWD, and SMWD	2.1.1.
M-001B	Chiquita Water Reclamation Plant	SMWD	2.1.2.
M-001C	3A Water Reclamation Plant	MNWD	2.1.3.
M-001D	San Clemente Water Reclamation Plant	CSC	2.1.4.
M-001E	San Juan Capistrano Groundwater Treatment Plant	SMWD	2.1.5.
M-001F	South Coast Water District Groundwater Recovery Facility	SCWD	2.1.6.
M-001G	Segunda Deshescha Runoff Plant	CSC	2.1.7.
M-001H	Doheny Desalination Project	SCWD	2.1.8.
	Oso Creek Water Reclamation Plant	SMWD	2.1.1.

Table 1: SJCOO Permitted Dischargers

2. State of SOCWA Member Agency Infrastructure

Area Asset Management Summaries

- i. Facility Key Issues, Actions, and Recommendations – Summary Recommendation received from Member Agencies

3. Program Monitoring

Compliance with NPDES Sections §6.3.5.7.1., §6.3.5.7.2., and §6.3.5.7.6

Each agency includes a robust system of rehabilitation and replacement plans that are tied into their operational planning through their respective operational structures. Computerized maintenance and management systems (CMMS) are the main operational management software system that agencies utilize for maintenance planning and scheduling of replacement maintenance activities. Management structure with personnel in charge of direct oversight to accomplish the preventative maintenance and other rehabilitation activities in the primary mechanism for completion of the permit compliance requirements. The San Diego Regional Water Quality Control Board (SDRWQCB) completes compliance evaluation inspections to review the rehabilitation and preventative maintenance requirements with a metric scoring system to identify if the activity levels are unacceptable or not. In April 2022, the SDRWQCB staff performed CEIs at all of the facilities with no facility receiving an unacceptable rating that would be out of compliance with these permit requirements.

Rehabilitation and Replacement Plan in Compliance with NPDES § 6.3.5.7.1

The SJCOO NPDES permit states: “Each agency includes a robust system of rehabilitation and replacement plans that are tied into their capital spending and budgeting processes.” Detailed in this section is how each agency is meeting this permit requirement.

CSC

The City of San Clemente plans on spending \$2.15M in maintenance activities between FY 21/22 through FY 27/28 for activities spent on the Water Reclamation Plant. Those maintenance activities are included in Appendix B.

MNWD

System reliability is paramount. Moulton Niguel Water District maintains more than \$2 billion worth of water and wastewater infrastructure assets.

Moulton Niguel’s 10-year Capital Improvement Program (CIP) contains \$623M of identified projects for primarily the rehabilitation of: the District’s 3A wastewater treatment plant, lift stations, pump stations, reservoirs, transmission mains, valve replacements, and other identified infrastructure. Attached is Appendix A from the District’s FY2022-23 approved budget. This document summarizes all of the currently identified projects in the District’s 10-year CIP, including the approximate timeframe for implementation. The District’s capital

financing plan accounts for unexpected cost impacts, such as updated condition assessments, delayed project starts, and municipal permitting requirements. Significant projects in the 10-year CIP include: a pipeline replacement program, reliability investments in vertical assets, such as pump and lift stations, reservoir management system replacements, electrical system improvements, as well as a comprehensive rehabilitation and replacement plan for the 3A wastewater treatment plant.

Vertical Asset Rehabilitation and Replacement Program

The District operates and maintains over 50 pump stations, lift stations, take-outs, and flow control facilities for potable water, recycled water, and wastewater services throughout its service area. As part of its CIP, Moulton Niguel has implemented a program to comprehensively rehabilitate each vertical asset facility as part of an \$82.6M Vertical Asset Rehabilitation and Replacement Program. Each project will include a comprehensive assessment of all aspects of the facility, including sitework, structures, mechanical systems, electrical, and instrumentation, and will complete all necessary improvements as a single project. The early stages of design are underway for the complete reconstruction of the North Aliso Lift Station and the comprehensive rehabilitation of the Aliso Creek Lift Station. Construction of each of these projects is anticipated to begin in FY2023-24 with overall project budgets of approximately \$6.0M and \$3.9M, respectively.

Pipeline Rehabilitation and Replacement Program

The District operates and maintains approximately 1,400 miles of buried pipelines for potable water, recycled water, and wastewater services throughout its service area. As part of its CIP, Moulton Niguel has implemented a program to systematically replace pipelines as part of a \$108M Pipeline Rehabilitation and Replacement Program. The program was established using a risk-based prioritization process to rank pipelines based on a variety of factors including age, materials, leak history, CCTV observations, number of services or hydrants out of service, soil corrosivity, adjacent land uses, and proximity to water bodies as applicable. These rankings are updated annually as part of the CIP budget development process and then utilized to prioritize pipelines for condition assessment, rehabilitation, and replacement. Design is nearly completed for the Regional Force Main Replacement Project and Crown Valley Pipelines Replacement Project (comprised of the Lower Salada Lift Station Force Main Replacement, Crown Valley Parkway Transmission Main Lower Reach Replacement, and I.D. No. 1 Master Meter Replacement). Construction of each of these projects is anticipated to begin in FY2023-24 with overall project budgets of approximately \$19.2M and \$17.3M, respectively.

Plant 3A Capital Improvement Program

Moulton Niguel Water District constructed Plant 3A in the late 1980s. The District managed the operation of the facility when it came online in June 1990 until the operation was transferred to the South East Regional Reclamation Authority, which subsequently became the South Orange County Wastewater Authority (SOCWA), in June 1998. SOCWA operated Plant 3A until Spring 2015 when Santa Margarita Water District assumed operation for a three-year term. Since resuming operations and capital planning for Plant 3A in 2019, Moulton Niguel has

initiated the comprehensive rehabilitation of the Plant 3A facilities. Although a number of smaller projects have been (and continue to be) undertaken by staff and outside contractors, the significant rehabilitation efforts are primarily included in a Ground Subsidence Mitigation project, a Solids Handling Facilities Improvements project, and a Liquids Handling Facilities Improvements project. Upon completion of these projects, all mechanical, electrical, instrumentation and control systems will be upgraded in such a manner that the entire facility will be restored to be functionally redundant with the treatment processes optimized for current and projected flows and loadings.

The Ground Subsidence Mitigation project will remediate site subsidence and settlement throughout the site, provide improved storm drainage facilities, and replace the existing pavement surfaces. The plant water systems will also be converted to recycled water as part of this project. The current FY 2022-23 project budget is approximately \$4.8M, with construction underway.

The Solids Handling Facilities Improvements project will provide a comprehensive rehabilitation of the solids handling facilities including scum pumping, sludge thickening, digesters, digester mixing systems, sludge heating systems, sludge feed system, dewatering, flare, electrical systems, SCADA systems, and other ancillary facilities. Additionally, a solids loadout facility will be constructed, including conveyors, a sludge silo and a truck scale system. The project is currently in the final design stages with an overall project budget of approximately \$58M. Construction is anticipated to begin in early FY 2023-24.

The Liquids Handling Facilities Improvements project will provide a comprehensive rehabilitation of the liquids handling facilities including headworks, grit handling, aeration basins, secondary clarifiers, and other ancillary facilities. The existing tertiary treatment system will also be evaluated for rehabilitation or replacement and is planned to be completed as part of this project. The current project budget is approximately \$21M, with design planned to begin in early FY 2023-24 and construction planned to begin in FY 2025-26.

SCWD

The SCWD plans on spending ~\$745,000 on the Groundwater Recovery Facility. A portion of the chart that shows the spending levels is included on p.11 of the SCWD's FY23 Budget and in Appendix B of this document for reference. The SCWD budget can be found on the SCWD website here:

https://www.scwd.org/open_government/financials/budget.php

SCWD also participates and funds operational projects for the JB Latham Facility through participation in the SOCWA Engineering Committee, SOCWA Finance Committee, and the SOCWA Board.

SMWD

SMWD uses the Mainstar CMMS. As of the April 2022 inspection, there were 30 corrective maintenance and 124 preventative maintenance work orders. Each group has a dashboard in MaintStar based on operator areas a, b, and c; mechanics, electricians; and collections.

SOCWA

In FY 2021-22, SOCWA Operational and Maintenance staff completed 52 Small Capital projects at a value of \$2.08 million (estimated 80% spent). Goods on order for installation \$1.08 million which have delayed small capital projects due to supply chain issues.

Maintenance Planning and Asset System Summaries in Compliance with NPDES § 6.3.5.7.2 & § 6.3.5.7.6 .

SJCOO NPDES § 6.3.5.7.2. states that: “The AMP shall identify individual or categories of maintenance activities and frequency with which they are performed. The Maintenance Plan shall estimate ongoing and projected cost of maintenance activities.” Please see below for a description as to how each facility is meeting this requirement.

Requirement in NPDES §6.3.5.7.6. provide a framework for inventory tracking of assets valued over \$5,0000 to for automatic workflow, work order production and tracking, and prioritization of system maintenance and rehabilitation projects. Each agency automates workflow through organizational management structures and staff direction with oversight by their respective Board of Directors. These systems for asset management of agency infrastructure ensure that there is adequate planning, maintenance and financial management of facilities. How each agency complies with the structure are articulated below.

CSC

The City of San Clemente plans on spending \$2.15M in maintenance activities between FY 21/22 through FY 27/28 for activities spent on the Water Reclamation Plant. Those maintenance activities are included in Appendix B. At the April 2022 SDRWQCB inspection, there were 14 open work order/service requests. In April, 2022, Joann Lim of the SDRWQCB conducted a Compliance Evaluation Inspection (CEI) of the agency facilities, which reviewed the computer maintenance and management system software used to track assets used in the maintenance and capital spending projects. A review of the preventative maintenance activities was conducted, and no deficiencies were found as described in the CEI letter received from Ms. Lim in May 2022.

MNWD

The Collections, Electrical/Instrumentation, Facilities Maintenance, and Wastewater Treatment departments of Moulton Niguel Water District each have extensive preventive maintenance (PM) programs in place. These PMs are scheduled within the District’s recently implemented computerized maintenance management system (CMMS) of record, NEXGEN. NEXGEN is an advanced CMMS that provides customizable, easy to use modules and allows for expeditious/timely data exports as well as complex performance reporting for a variety of metrics. The preventive maintenance module in NEXGEN allows for a variety of frequency options, customizable checklists, and attachments to be added to the work orders, such as photographs, standard operating procedures, and reference materials. The tables below

represent a summary of the preventive maintenance activities and frequencies for wastewater collection, pumping, and treatment systems by department. The total cost of these preventative maintenance activities is approximately \$1.4M annually. Appendix B provides a break down of the maintenance plan spending on a per item basis.

Moulton Niguel Water District has an extensive history of utilizing asset management (AM) software to track and manage operational workflows and preventative maintenance schedules of its assets. In 2017, the District began leveraging its GIS software, Microsoft Excel, and GIS-based asset data to determine prioritization scores for its pipelines. Using criteria including age, materials, soil corrosivity, CCTV observations, adjacent land uses, and proximity to water bodies, we calculated Probability of Failure and Consequence of Failure scores, enabling the District to rank pipelines by overall priority. These rankings were then utilized to establish and prioritize upcoming capital projects and forecast capital funding needs.

Historically, the District's primary AM software was "Tabware" by AssetPoint. Starting in the spring of 2021, the District implemented a new AM software to more effectively manage and enhance the maintenance of the District's vertical assets and infrastructure. This new software, "Nexgen", provides a comprehensive, cloud based AM software solution and Computer Maintenance Management System (CMMS) for the District moving forward. The software provides the following benefits:

- Provides management visibility and operational execution and allows for consistent data for analysis and reporting.
- Enables mobile work orders, automatic email alerts and review/approve requests through smartphones or tablets.
- Tracks staff workflow data to assign the right work tasks to the right people at the right time, minimizing unplanned downtime and improving efficiency.
- Sends automatic email alerts when review or approval is needed to keep workflows moving.
- Use the workorder history data, and time/material data, to develop asset lifecycle cost information.

That, along with developed remaining useful life and costing data, will be utilized to inform a comprehensive asset management program that leverages data into actionable asset decision-making on system maintenance and rehabilitation projects.

- Increased Inventory Control

As of August 2022, the Nexgen implementation has been completed with nearly all workgroups within the Operations, Engineering, and Customer Service divisions. This implementation established routine preventative maintenance and reactive workorders, software and systems configuration, and initial development of an asset register, along with integrations with our geographic information system ("Geocortex"), timesheet management, fuel management, underground service alert process, collection system CCTV database, and our enterprise resource planning software ("JDEdwards). Additional planned implementations will include

enhanced development of the asset registry data (including useful life values, cost values, and the refinement of risk analysis scores), and the development of more robust asset management reporting. A sample of the asset details are included in Appendix B.

At the April 2022 SDRWQCB inspection, there were 13 open work order/service requests for 3A.

SCWD

All planning activities for maintenance activities are handled in the Maintenance Connection CMMS. In April, 2022, Joann Lim of the SDRWQCB conducted a Compliance Evaluation Inspection (CEI) of the agency facilities, which reviewed the computer maintenance and management system software used to track assets used in the maintenance and capital spending projects. A review of the preventative maintenance activities was conducted, and no deficiencies were found as described in the CEI letter received from Ms. Lim in May 2022.

SMWD

SMWD uses the Mainstar CMMS. As of the April 2022 inspection, there were 30 corrective maintenance and 124 preventative maintenance work orders for the CWRP. Each operational group has a dashboard in MaintStar based on operator areas a, b, and c; mechanics, electricians; and collections. The OCWRP was offline for the inspection. For the Groundwater Treatment Plant, SMWD uses a program called Maintenance Connection. No work open work orders were evaluated at the inspection.

SOCWA

SOCWA uses Tabware by Aptean. Tabware by Aptean is a computerized maintenance management system or CMMS software that centralizes maintenance information and facilitates the processes of maintenance operations. It helps optimize the utilization and availability of physical equipment like vehicles, machinery, communications, plant infrastructures, and other assets.

The core of the CMMS is the database. It has a data model that organizes information about the assets needed for maintaining the equipment, materials, and other resources management by SOCWA. The information in the CMMS database supports various functions of the system, which enable the following capabilities:

Resource and labor management:

- Track available employees
- Assign specific tasks
- Schedule projects requiring multiple crafts and/or Departments

Asset registry: Store, access, and share asset information such as:

- Manufacturer, model, serial number and equipment class, and type
- Associated costs and codes
- Location and position
- Performance and downtime statistics
- Associated documentation, video, images such as repair manuals, safety procedures, and warranty information

Work order management: Typically viewed as the main function of CMMS, work order management includes information such as:

- Work order number

- Description and priority
- Order type (repair, replace, scheduled)
- Cause and remedy codes
- Personnel assigned and materials used
- Backlog reports

Work order management also includes capabilities to:

- Automate work order generation
- Schedule and assign employees
- Review status and track downtime
- Record planned and actual costs
- Attach associated documentation, repair, safety information, equipment nameplate data (manufacturer, model, serial number, sizing, etc.), specifications, location and criticality information, documents and video files, user-defined data fields, hierarchy of components, assemblies, sub-assemblies and parts, maintenance and cost history, parts ordering information

Preventive maintenance:

- Automate work order initiation based on time, usage, and triggered events.
- Tabware allows staff to sequence and schedule preventive work orders.

Reporting, analysis, and auditing:

- Generate reports across maintenance categories such as asset availability, materials usage, and labor.
- Tabware also allows viewing equipment assemblies, sub-assemblies, components, and parts to maximize asset performance and improve technician wrench time by eliminating time spent searching for parts.

Information stored in Apteian EAM's Equipment Module is integrated throughout other Apteian EAM modules to help maximize asset performance. For example, inventory items listed on the hierarchy are integrated with the Apteian EAM Inventory Module.

Key features include:

- Reach any function with just 2 mouse clicks
- Apteian EAM's Query Wizard provides quick access to equipment and easy reporting
- Specify multiple meters for equipment to drive preventive maintenance
- Hierarchy view identifies plants, areas, systems, equipment, assemblies, parts, etc.
- Create work orders and requisitions directly from the equipment hierarchy
- Link any type of document to equipment and classes of equipment
- Specify components by equipment and equipment class for failure reporting and analysis
- Move equipment from one location to another directly from the equipment hierarchy

SOCWA staff reports key performance indicators related to Tabware CMMS to the SOCWA Board on a monthly and quarterly basis.

Asset Management Program Accomplishments and Improvement Opportunities

- i. Condition Assessment Program Work
- ii. Other Examples Member Agencies would like to include
- iii. Short-to-Medium Term Improvement Opportunities
- iv. Longer-Term Strategy and Improvement Opportunities

4. Budgetary Considerations

Funding in compliance with §6.3.5.7.4.

NPDES §6.3.5.7.4 states that: “The AMP shall create an accounting of current and projected funding sources, relevant expenses and financial reserves. Expenses may include operational, administrative, interest, or capital expenses. Funding sources may include federal, State, local or private grants, loans, or bonds, as well as connection and user fees.

CSC

The Annual Adopted Budget of the City includes a section that presents the City’s Capital Improvement Program (CIP) for the Fiscal Year. The CIP section provides a six-year Capital Improvement Plan for the City that includes both Capital and Maintenance projects. Individual project sheets, within the CIP section, include a project description, the division managing the project, the type of project, and the budgeted project costs. Capital projects include new construction, replacement, rehabilitation and maintenance of assets.

The CIP for the CSC can be found here:

https://issuu.com/z.y.mazboudi/docs/fy_2021_cip_and_maintenance_projects_with_link

MNWD

Appendix C contains the 10-year CIP. A timeline summary of the 3A Capital projects is included below.

Timeline of Significant Plant 3A Capital Improvement Projects

PROJECT NAME	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28
PLANT 3A SUBSIDENCE MITIGATION	CONSTRUCTION					
PLANT 3A SOLIDS HANDLING FACILITIES IMPROVEMENTS	DESIGN	CONSTRUCTION	CONSTRUCTION	CONSTRUCTION		
PLANT 3A LIQUIDS HANDLING FACILITIES IMPROVEMENTS		DESIGN	DESIGN	CONSTRUCTION	CONSTRUCTION	CONSTRUCTION

SCWD

The SCWD budget can be found here:

https://cms9files.revize.com/scoastwaterdist/SCWD_FY22_BudgetBook_final.pdf

The Appendix to the budget contains the breakdown in spending for SCWD’s facilities. The graphic below is provided for reference to the budgeted materials.

APPENDIX – CAPITAL IMPROVEMENT PROJECTS

Fund	Funding Source	Project Description	Proposed Total Expenditures by Year					5-Yr Budgeted Total
			FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	
Water	Rate	General Infrastructure (Sanitary/Storm) and related to grid costs	1,867	487,000				488,867
Water	Grant	Sanitary Sanitation (Sanitary/Storm) - grant reimbursement 10%	250,000					250,000
Water	Funding	Equipment Replacement - Water	5,000		80,000			85,000
Water	2019 Bonds	Revenue - 25 Replacement	120,000	2,000,000	2,000,000			4,120,000
Water	Funding	Infrastructure Replacement - Water	154,000	107,000	200,000	250,000	80,000	791,000
Water	2019 Bonds	Revenue - 10 Rehabilitation		100,000	1,000,000			1,100,000
Water	Funding	PIP Capital				100,000	1,000,000	1,100,000
Water	Rate	Urban Water Management Plan (UWMP)	4,215				10,000	14,215
Water	Rate	Revenue Equipment or Land Cost	40,000					40,000
Water	Scholarship	Revenue Equipment or Land Cost		700,000				700,000
Water	Rate	Revenue Equipment or Land Cost	1,200	20,000	20,000	20,000		61,200
Water	2019 Bonds	Capital City Water Transmission Line Replacement	400,000					400,000
Water	Funding	Capital City Water Transmission Line Replacement		4,500,000	4,500,000			9,000,000
Water	Rate	Annual City Securitizing Projects - Water for Development		100,000	100,000	100,000		300,000
Water	Funding	Annual City Securitizing Projects - Water for Development		100,000	100,000	100,000		300,000
Water	Scholarship	Report Storm Water and Service Improvements		400,000				400,000

SMWD

Capital Repair and Replacement (CRP) Projects

The District continues to reinvest in its infrastructure to maintain its high level of service to its customers. Capital Repair and Replacement (CRP) projects also help to extend the life of the District’s existing fixed assets.

Oso Creek Water Reclamation Plant (OCWRP) Optimization

The District has identified the expansion of the OCWRP as the optimum approach to meeting future its wastewater treatment needs and its goal of recycling the equivalent of 100% of the District’s wastewater. The construction of the expanded OCWRP is expected to result in approximately 1,350 acre-feet per year of additional tertiary effluent for use in the District’s recycled water system and will reduce average daily liquid treatment requirements at SOCWA’s Jay B. Latham Wastewater Treatment Plant.

Supply / Reliability Projects

San Juan Groundwater Plant Maximization. Among the facilities acquired with the annexation of the City of San Juan Capistrano’s water system is a groundwater extraction facility known as the San Juan Groundwater Plant. The District expects to undertake certain capital improvements to wells, pumps, and related infrastructure to increase the production capacity of the plant. Ranch Water Filtration Plant. The District has an existing agreement with RMV Mutual Water Company to purchase up to 2,500 acre-feet per year of groundwater produced by RMV. This project will change the ultimate use from irrigation to potable domestic use, by utilizing treatment of the extracted groundwater to potable water standards.

Chiquita Water Reclamation Plant (CWRP) Expansion / Upgrades

Based on the expected buildout of the District’s service area, the treatment capacity of CWRP will need to be expanded. The District intends to undertake the expansion in two phases. The first phase, which consists of the construction of additional aeration basins and secondary clarifiers to increase the CWRP’s secondary process capacity, is expected to be completed in early FY 2023. The second phase, which consists of the expansion of the pumping capacity in the lift station, the construction of an additional grit removal system, primary clarifier, and tertiary filter and two chlorine contact basins, as well as other related improvements, is expected to be completed over the next several years based on the pace of new development within the District’s service area. SMWD’s operating budget is found here:

<https://www.smwd.com/DocumentCenter/View/3739/20222023-Fiscal-Year-Budget>

The SMWD Capital budget is found here: <https://www.smwd.com/DocumentCenter/View/2562/FY20-5-Yr-Cap-Rep-Program>

CIP budget summaries are provided below:

FY 2023 CIP BUDGET SUMMARY

IDs 1-8 FY 2023 Capital Improvement Program (\$ millions)

Project Descriptions	Project Budgets ¹	Committed Spending ²	Net Remaining Costs ¹
Capital Repair and Replacement Projects (CRP)	105.4	39.9	65.5
FY 2022 Budgeted and Prior Projects	91.9	39.9	52.1
<i>FY 2023 Budget (start year)</i>	<i>13.5</i>	<i>0.0</i>	<i>13.5</i>
Oso Creek Water Reclamation Plant Optimization	32.1	1.9	30.3
Plant Improvements	29.4	1.9	27.6
La Paz Zone B Pump Station	2.7	0.0	2.7
Supply/Reliability	43.9	0.8	43.1
San Juan Groundwater Plant Maximization	2.1	0.2	1.9
Ranch Water Filtration Plant – All Components Total	41.5	0.6	40.9
Treatment Plant	28.3	0.6	27.7
<i>Pipeline Rehab</i>	<i>0.4</i>	<i>0.0</i>	<i>0.4</i>
<i>Infiltration Basins</i>	<i>12.8</i>	<i>0.1</i>	<i>12.7</i>
<i>Automated Meter Replacement</i>	<i>0.3</i>	<i>0.0</i>	<i>0.3</i>
Chiquita Water Reclamation Plant Expansion	15.9	11.6	4.3
Secondary Treatment Expansion	13.0	11.6	1.4
<i>Expansion Electrical and Instrumentation</i>	<i>2.9</i>	<i>0.0</i>	<i>2.9</i>
Technology Projects	1.8	0.9	0.9
Recycled Water (RW) Conversion/Conveyance	9.6	1.4	8.3
<i>Zone A Modifications</i>	<i>2.0</i>	<i>0.4</i>	<i>1.6</i>
Sendero RW Pump Station Equipment	1.2	0.5	0.7
Monterrey Villa Zone E Pump Station	0.3	0.0	0.3
Esencia 3 rd RW Pump	0.2	0.0	0.1
Las Flores Conversion (209 acre-feet per year)	5.5	0.3	5.2
Ranch Santa Margarita Conversion (Public Outreach / Planning)	0.5	0.2	0.3
Totals	\$208.8	\$56.4	\$152.4

Note: Totals above may not sum due to rounding.

¹ Project Budgets and net remaining amounts indicated are total estimated lifetime project costs, not the amount expected to be expended in FY 2023.

² As of April 19, 2022. Committed spending is comprised of all expenditures to date, plus encumbered amounts remaining on executed contracts and purchase orders.

ID 9 FY 2023 Capital Improvement Program (\$ millions)

Project Descriptions	Project Budgets	Committed Spending	Net Remaining Costs
Potable & Recycled Water	11.44	0.10	11.34
CSJC Eastern Transmission Main Assessment / Rehab	1.64	0.00	1.64
Mission Street ZA-350 Well – Electrical/SCADA	0.03	0.01	0.02
CSJC FY22 Various Recycled Repairs	0.10	0.00	0.10
CSJC Riding Park Planning / Infiltration Basin (SJGP) ¹	6.30	0.09	6.21
Sacarama PS Rehab	0.30	0.00	0.30
Green Sand Filter Rehab (SJGP) ¹	2.00	0.00	2.00
Sand Separator Replacement (SJGP) ¹	0.10	0.00	0.10
Clearwell Replacement (SJGP) ¹	0.60	0.00	0.60
Steeple Chase Z1-574 PS – Upgrade Pumps	0.04	0.00	0.04
CSJC Advanced Utility CIS v3 to v4 System Migration	0.27	0.00	0.27
Vista Marina PRS – Upgrade	0.06	0.00	0.06
Wastewater	5.69	0.01	5.68
De La Vista LS – Add Pump Rail System	0.03	0.01	0.02
Flow Monitoring and Model	1.00	0.00	1.00
System Rehab Projects FY 2022-2023	2.50	0.00	2.50
Spotted Bull Septic Conversion	0.05	0.00	0.05
FY 2023 – Various Sewer Repairs	0.40	0.00	0.40
Treatment Plant (SOCWA)	1.71	0.00	1.71
Totals	\$17.13	\$0.11	\$17.02

Note: Totals above may not sum due to rounding.

¹ Project costs related to the San Juan Groundwater Plant will be allocated between IDs 1-8 and ID 9 based on the proportionate potable water demands of each system.

SOCWA

Large Capital Improvements Projects (CIP) projected spending of \$15,996,104. Of this amount, \$8,185,065, is expected to be expended to complete six major projects, including the JBL Package B Construction at the PC 2 J.B. Latham Treatment Plant and the Aeration System Upgrade at the PC 17 Regional Treatment Plant site. The Large Capital Improvements budget is submitted for approval of the Board with one year of additional detail prepared for future planning purposes through Fiscal Year 2023-2024 (2 Years). The CIP and SOCWA budget can be found here: <http://www.socwa.com/wp-content/uploads/2022/07/FY-2022-23-BOD-Approved-Budget-1.pdf>

Substantial Progress on Capital Improvements

SOCWA prioritizes capital spending based on remaining useful life (RUL) for individual components of the facility with direction from the SOCWA Engineering Committee. The JB Latham facility RUL breakdown is included in Appendix C which also includes the estimated replacement cost, where the asset is located, and the asset tag in connection with the Tabware CMMS . Large Capital Funds held on Account continued to be spent down. Close of Fiscal Year (6/30/2022) with expected \$11.86 million in capital construction currently underway, including work for:

- JBL Package B, Project in Construction
- JBL Plant Standby Power Generator
- JBL Effluent Pump Station

Major Projects in FY 2022-23:

- JBL Package B Construction
- JBL Plant 1 Electrical Rehabilitation
- JBL Miscellaneous Gates and Pipe Rehabilitations
- JBL Miscellaneous Roof Rehabilitations
- JBL Centrate Piping Reconstructions

System Projections in compliance with §6.3.5.7.5

Each agency identifies service area vulnerabilities and population water access needs through rate setting projects and Urban Water Management Plans which are referenced and provided in the narrative for each agency below. In addition, NPDES §6.3.4.4 requires dischargers to develop a climate change plan as described here: “The Facilities shall be protected against regional impacts of changing climate conditions (e.g., rising sea levels, flooding, higher storm surges, and changing hydrography, including more intense atmospheric rivers). Compliance with this requirement shall be implemented through development and implementation of applicable measures identified in the Climate Change Action Plan which is required to be submitted within three years of the effective date of this Order pursuant to section 6.1 of the MRP (Attachment E).”

CSC

Section 3.4 of the CSC’s Urban Water Management Plan includes service area projections, demographics and service area population found here: <https://www.san-clemente.org/home/showpublisheddocument/64986/637612710083430000>

The CSC will work with SOCWA to identify system vulnerabilities in compliance with NPDES §6.3.4.4 to develop a climate change plan as described in the NPDES Permit.

MNWD

Service Area

Moulton Niguel Water District has grown tremendously since its formation; initially formed by local ranchers to provide water service to eight accounts, the District now provides water, recycled water, and wastewater service to more than 170,000 customers within a 37 square mile service area covering portions of six cities in southern Orange County. The District service area is largely built-out and includes the cities of Aliso Viejo and Laguna Niguel along with portions of the cities of Laguna Hills, Mission Viejo, San Juan Capistrano, and Dana Point. In 2020 within the District’s service area there were 67,091 homes, of which approximately 50 percent are single-family. While its operations have evolved along with the growth of its service area, the District’s primary focus has remained largely unchanged: ensuring ratepayers have a reliable, sustainable, and economical water supply for the future.

Service Area Population

Population growth between 2000 and 2020 averaged 670 residents per year or an average annual growth rate of 0.41 percent. However, during the period 2004 to 2006 the annual average growth declined by 668 residents per year or 0.41 percent over those three years. As

there are fewer and fewer areas to develop within the District’s service area, population growth will primarily come from redevelopment and infill activities and is anticipated to be on average 2 percent over the next 10 years. Beginning in 2035, population is expected to decrease in the service area by approximately 1 percent through 2045. Forecast population for the District from 2020 to 2045 was provided by the Center for Demographic Research at California State University Fullerton (CDR). Table below shows the population projections in five-year increments to the year 2045.

Population - Current and Projected

Population Served	2020	2025	2030	2035	2040	2045
	170,236	172,134	174,202	174,241	174,169	172,802
Notes: Data provided by Center for Demographics.						

System Vulnerabilities

With increased temperatures and higher intensity storms in recent years, the importance of identifying and mitigating inflow and infiltration (I&I) in wastewater collection systems has been brought to the forefront of the water and wastewater industries. As part of its ongoing efforts to identify and mitigate vulnerabilities in the wastewater collection systems, the District has implemented several strategies to evaluate potential I&I issues within its collections system. The intent behind these components is to take a focused and strategic approach to identify locations prone to I&I, review and determine the cause of I&I, and implement improvements to mitigate or eliminate identified I&I into the collection system. These strategies include:

1. Utilize the flow data for the identified wastewater sub-basins within the District’s service area to determine areas that are experiencing higher peaking factors during rain events;
2. Identify areas within the collection system that may be subject to I&I, such as sewer mains that run parallel to or cross existing creeks;
3. Perform video inspection of higher risk sewer mains, including inspections of sewer siphons;
4. Revise procedure for annual manhole condition assessments to incorporate location of manholes relative to street drainage systems, i.e. ribbon gutters or curb & gutter;
5. Coordinate with the responsible city within the identified sub-basin to identify designated pool constructions that were connected to the sewer system.

SCWD

The Capital Improvement Project Budget for SCWD can be found here, with specific budgeting information found on p.24 in the budget:

https://cms9files.revize.com/scoastwaterdist/SCWD_FY22_BudgetBook_final.pdf

SCWD will work with SOCWA to identify system vulnerabilities in compliance with NPDES §6.3.4.4 to develop a climate change plan as described in the NPDES Permit.

SMWD

SMWD's Urban Water Management Plan includes service area projections, demographics and service area population found here: <https://www.smwd.com/DocumentCenter/View/3156/2020-Urban-Water-Management-Plan>

SMWD will work with SOCWA to identify system vulnerabilities in compliance with NPDES §6.3.4.4 to develop a climate change plan as described in the NPDES Permit.

SOCWA

SOCWA will work with agencies to identify system vulnerabilities in compliance with NPDES §6.3.4.4 to develop a climate change plan as described in the NPDES Permit.

5. Conclusion

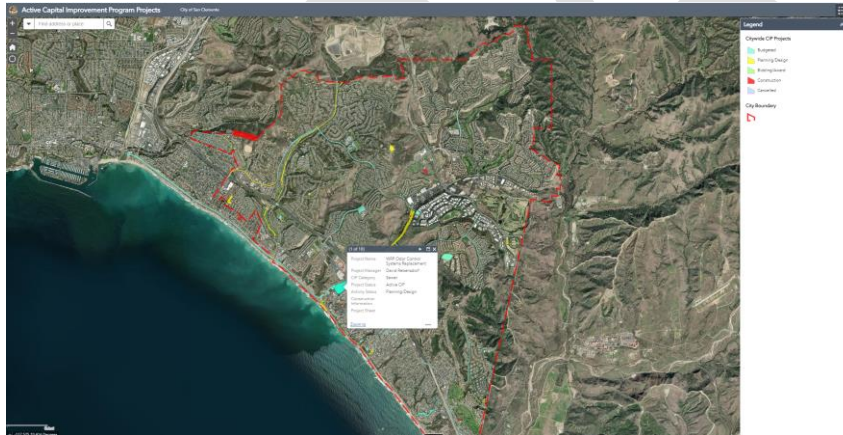
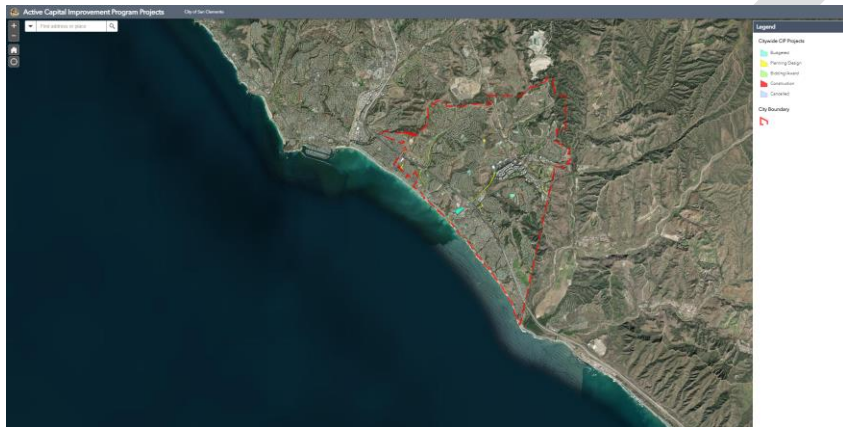
To be included based on comments from agencies.

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Appendix A - Overview of SJCOO Discharge Facility Infrastructure in Compliance with § 6.3.5.7.3.

CSC – City of San Clemente has a color-coded map for reference related to budgeted actions in connection with the agency’s Capital Improvement Program. The map is web accessible and can found in the following link:

<https://sanclementca.maps.arcgis.com/apps/webappviewer/index.html?id=e8cf01cc94154ac598dcd4e417b10172>



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Appendix B – In compliance with § 6.3.5.7.2. & § 6.3.5.7.6.
 CSC

FUND 054-476			Current Year Projected				Future Years							
Proj #	Description	DIV	Project Category	Budgeted	11/30/2021 YTD		Projected	Six year	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28
				FY 21/22	Exp	Balance								
Maintenance & Other Projects														
21201	Computerized Maintenance Management System Implementation	Eng.	Maint.	63,850	-	63,850	63,580							
24200	Sewer System Rehabilitation			250,000	4,877	245,123	250,000	1,300,000	250,000	250,000	250,000	250,000	300,000	300,000
28212	WRP Sluice Gate Replacements	Eng.	Maint.	214,440	24,340	190,100	214,440	500,000	500,000					
21203	Digester #2 Cleaning, Residual Disposal & Inspection	Eng.	Maint.	250,000	-	250,000	250,000	100,000	100,000					
36202	WRP Odor Scrubber Analysis	Eng.	Study	12,600	-	12,600	12,600							
New	Centrifuge Conveyor Improvements								300,000					
Future	Sewer Asset Management							50,000			50,000			
12208	WRP Ferric Tank Replacement	Eng.	Maint.	150,000	4,289	145,711	150,000	0						
21295	WRP and Sewer Facility Pavement Rehabilitation	Eng.		299,700	-	299,700	299,700	200,000				200,000		
Total M & O Projects				\$1,240,590	\$33,506	\$1,207,084	\$1,240,320	\$2,150,000	\$1,150,000	\$250,000	\$300,000	\$460,000	\$300,000	\$300,000

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MNWD

NextGen Asset to be included in pdf— from MNWD

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SCWD

WATER OPERATING EXPENDITURES

	FY 2021 Actuals	FY 2022 Revised Budget	FY 2022 Actuals YTD (April 29, 2022)	FY 2022 Projected Expenditures	FY 2023 Proposed Expenditures	Difference	% Change
Water Operations							
Cross Connection	\$ 167,100	\$ 178,160	\$ 164,152	\$ 207,490	\$ 196,527	\$ (10,964)	-5%
GRF POCHE	107,345	81,938	69,436	98,645	85,000	(13,645)	-14%
GRF SCOTF	66,214	75,000	52,546	65,082	78,000	12,918	20%
Ground Water Recovery	663,499	738,407	591,592	709,551	744,357	34,806	5%
Meters	65,790	168,872	72,431	92,524	107,625	15,101	16%
Monitoring Wells	107,525	107,407	50,743	63,845	77,722	13,877	22%
Reservoir Management System	273,771	290,075	237,234	293,973	365,386	71,413	24%
Reservoirs and Tanks	173,975	256,715	147,507	167,952	232,360	64,408	38%
Water Pump Plants	396,929	451,552	297,459	370,262	543,122	172,861	47%
Water Sampling	185,592	190,294	135,459	181,571	182,188	616	0%
Water Supply & Purchases	6,674,732	6,565,780	4,767,212	6,337,621	7,069,036	731,415	12%
Water Transmission Lines	2,061,792	2,173,522	1,573,694	1,988,379	2,146,525	158,146	8%
	10,944,263	11,277,722	8,159,465	10,576,894	11,827,848	1,250,953	12%

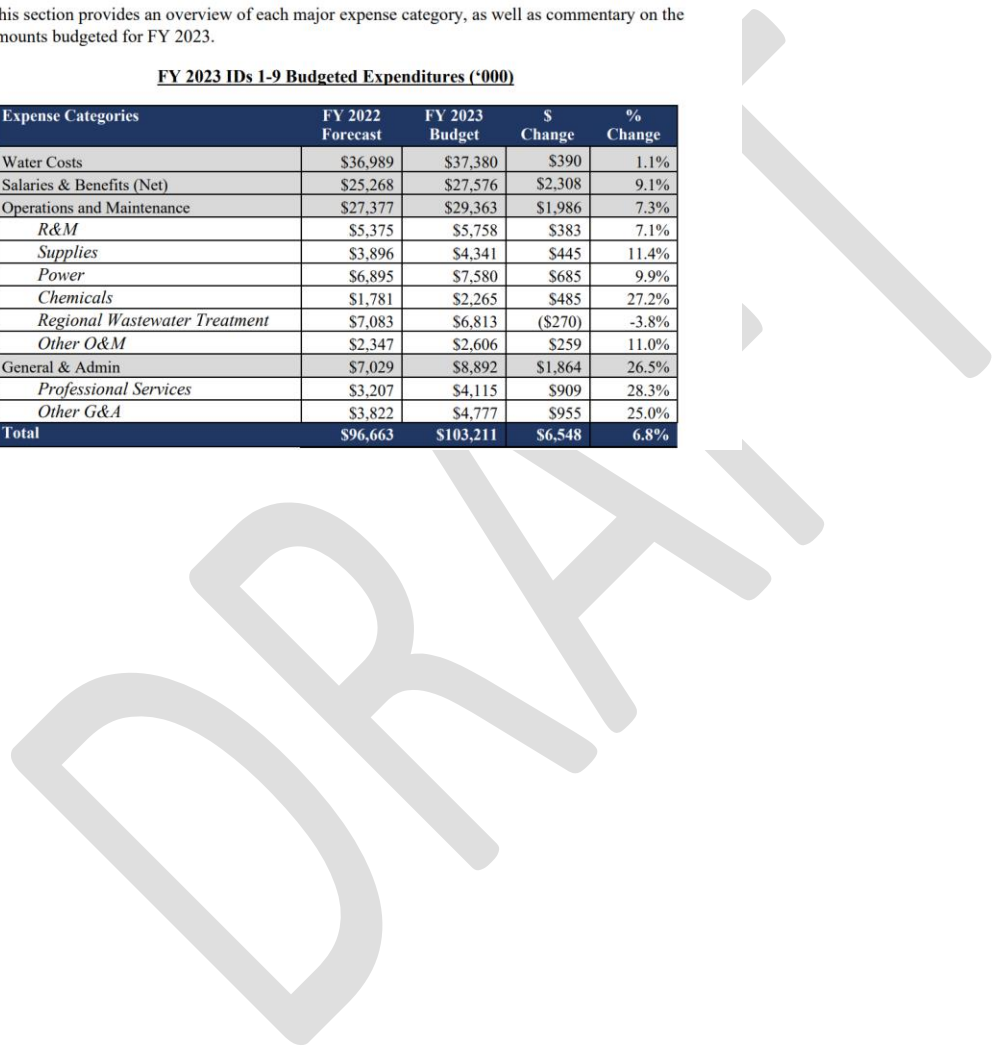
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FY 2023 Expenses

This section provides an overview of each major expense category, as well as commentary on the amounts budgeted for FY 2023.

FY 2023 IDs 1-9 Budgeted Expenditures ('000)

Expense Categories	FY 2022 Forecast	FY 2023 Budget	\$ Change	% Change
Water Costs	\$36,989	\$37,380	\$390	1.1%
Salaries & Benefits (Net)	\$25,268	\$27,576	\$2,308	9.1%
Operations and Maintenance	\$27,377	\$29,363	\$1,986	7.3%
<i>R&M</i>	\$5,375	\$5,758	\$383	7.1%
<i>Supplies</i>	\$3,896	\$4,341	\$445	11.4%
<i>Power</i>	\$6,895	\$7,580	\$685	9.9%
<i>Chemicals</i>	\$1,781	\$2,265	\$485	27.2%
<i>Regional Wastewater Treatment</i>	\$7,083	\$6,813	(\$270)	-3.8%
<i>Other O&M</i>	\$2,347	\$2,606	\$259	11.0%
General & Admin	\$7,029	\$8,892	\$1,864	26.5%
<i>Professional Services</i>	\$3,207	\$4,115	\$909	28.3%
<i>Other G&A</i>	\$3,822	\$4,777	\$955	25.0%
Total	\$96,663	\$103,211	\$6,548	6.8%



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Appendix C - Funding in compliance with §6.3.5.7.4

CSC

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MNWD

Include the CIP Tables from MNWD pdf

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South Coast Water District FY 2023 Budget

	FY 2021 Actuals	FY 2022 Revised Budget	FY 2022 Actuals YTD (April 29, 2022)	FY 2022 Projected Expenditures	FY 2023 Proposed Expenditures
Professional/Outside Services	2,023	2,000	1,610	2,235	4,000
Repairs	5,637	50,000	988	41,000	75,000
	591,477	828,287	516,877	678,586	681,012
SOCWA					
Maintenance & Operations	4,132,638	4,855,268	4,186,642	4,186,642	4,239,614
	4,132,638	4,855,268	4,186,642	4,186,642	4,239,614

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SOCWA

Line	Code	Account Type	Department	Agency	Rate	Rate Category	Description	Start Date	End Date	Quantity	Unit Price	Total Price	Rate Code	Rate Description	Rate Effective Date	Rate Expiration Date	Rate Type	Rate Status	Rate Change	Rate Comment	Rate Action	Rate Status	Rate Change	Rate Comment	Rate Action
154	0000	0000	0000	0000	0000	0000	0000																		
155	0000	0000	0000	0000	0000	0000	0000																		
156	0000	0000	0000	0000	0000	0000	0000																		
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