January 23, 2023

Board of Directors
South Orange County Wastewater Authority (SOCWA)
34156 Del Obispo Street
Dana Point, CA 92629

Subject: **South OC Wastewater Optimization Blueprint: A Plan for South Orange County's Present and Future Needs**

Dear South Orange County Wastewater Authority (SOCWA) Member Agencies:

We are excited to share this **South OC Wastewater Optimization Blueprint** to optimize service delivery, streamline operations, and implement a long-term vision for safe, reliable, and efficient wastewater treatment in South Orange County for generations to come.

We recognize changing something that has been in place for many decades takes courage and vision. Just as those before us who boldly created this Joint Powers Authority, we look for this Board to being receptive to this new approach to meeting the challenges of today. We believe that this **South OC Wastewater Optimization Blueprint** lays out a path that addresses both the current regional needs, while aligning us all for important strategic opportunities in the future.

Solutions for Today & Tomorrow

To resolve expiring Operating Agreements, the **South OC Wastewater Optimization Blueprint** includes a timely and efficient transition of the operation and maintenance of SOCWA's wastewater treatment facilities in the following manner:

1) All member agencies retain desired capacity rights, under new project agreements.
2) SOCWA maintains all necessary permits, provides regulatory reporting and compliance, and administers the regional pre-treatment program.
3) Santa Margarita operates the J.B. Latham Treatment Plant.
4) Moulton Niguel operates the Joint Regional Treatment Plant & Effluent Transmission Main.
5) Santa Margarita or Moulton Niguel serve as contract operator at the Coastal Treatment Plant.

Significant Benefits to South Orange County

The **South OC Wastewater Optimization Blueprint** will better meet the needs of our communities by optimizing operations in a cost-effective and efficient manner – while at the same time creating new opportunities to address our region's current and future water demands.

- **Resolves June 29th Deadline for J.B. Latham Wastewater Treatment Plant:** SOCWA's operating agreements will begin to expire on June 29, 2023, with the expiration of the J.B. Latham Wastewater Treatment Plant Agreement.
- **Proven Operational Experience**: Both agencies have the resources to develop and implement complex capital improvement projects and are experienced in operating wastewater and advanced water treatment facilities.
- **Safe & Reliable Continuity of Service**: 100% of all represented SOCWA employees will be offered positions within the operating agencies.
- **Creates Potential Opportunities for Expanded Water Recycling and Reuse**: Effective water reuse requires seamless integration and constant monitoring of each water, wastewater, and recycled system – best delivered by a local water agency.

Aligning Resources Today for South Orange County's Future

South Orange County faces numerous challenges with historic drought conditions, severe reductions in drinking water supplies from the State Water Project and the Colorado River, rising inflation, and increasing imported water costs. This is happening while Californians are watching atmospheric river storms flood our parched landscape with billions of gallons of water, which tragically is flowing directly to the ocean.

SOCWA, which is built upon agreements dating back to the 1970s, could not have foreseen the technological advancements and opportunities that would make water reuse a viable and cost-effective option for wastewater disposal. Moreover, even if it had the technological capabilities to effectively implement water reuse, SOCWA, as an individual entity that does not provide water or recycled water service, lacks facilities necessary to integrate into the existing water supply infrastructure that serves the homes and businesses in South Orange County. Without some type of change, our region will miss the opportunity to recapture 17.8 million gallons a day of valuable water supplies that could be re-used from our wastewater treatment facilities. This represents nearly one-quarter of the amount of water our region imports.

On behalf of our Boards of Directors, we cordially invite our fellow SOCWA member agencies to join us in working collaboratively to address South Orange County's present and future wastewater needs.

Sincerely,

Frank Ury
Board President
Santa Margarita Water District

Duane D. Cave
Board President
Moulton Niguel Water District

South OC Wastewater Optimization Blueprint

Submitted By:

Moulton Niguel Water District
and
Santa Margarita Water District

January 23, 2023

Background

In the early 1970s, the Aliso Water Management Agency ("AWMA") and the South-East Regional Reclamation Authority ("SERRA") were formed to obtain Clean Water Act funding to construct wastewater treatment and conveyance infrastructure on behalf of its member agencies with the expressed purpose of developing reclamation opportunities. Since formation, AWMA and SERRA have served as owner, and at times, the operator of wastewater treatment facilities and ocean outfalls in South Orange County, specifically the J.B. Latham Treatment Plant ("JBLTP"), the Coastal Treatment Plant ("CTP"), the Joint Regional Treatment Plant ("JRTP"), the San Juan Creek Ocean Outfall ("SJCOO"), and the Aliso Creek Ocean Outfall ("ACOO").

In 1994, the South Orange County Reclamation Authority ("SOCRA") was formed as a regional permitting agency to obtain a waste discharge permit from the San Diego Regional Water Quality Control Board and coordinate recycled water permitting for the member agencies. In 2001, the South Orange County Wastewater Authority ("SOCWA") was formed to combine AWMA and SERRA, along with SOCRA. The primary charge of SOCWA is the treatment and disposal of wastewater from its member agencies in compliance with the regulatory discharge permits.

Each facility, under SOCWA, has a governing agreement and subsequent amendments, collectively referred to as the Project Committee ("PC") Agreements, which identify the member agencies involved, the capacity ownership, the term of the facility, among other terms and conditions that govern the operation. The member agencies with capacity rights in a facility are often referred to as "Participating Member Agencies". As the Joint Powers Authority, SOCWA facilitates the execution of the Project Committee Agreements and, since the 1990s, has provided the operation of the facilities. Many of these facilities are reaching ~50 years of age, which also mirrors the expiration timeline for the PC Agreements. Expiration of the PC Agreements requires the Participating Member Agencies to consider and develop the next phase of facility use and operations.

As the SOCWA member agencies consider this evolving future of wastewater operations, it is critical to acknowledge the role that wastewater currently serves (and will continue to serve) as a resource for water supplies. No longer can sewage be considered as simply a waste product to be treated and disposed. It is imperative to look at options to further expand reuse into local water supplies. South Orange County agencies are evaluating and implementing programs to increase recycled water production, enhance treatment technologies to improve recycled water quality, incorporate urban runoff and first flush storm flows into the water supply, and develop indirect and direct potable reuse projects consistent with existing and emerging regulatory guidelines. Implementation of these programs integrates directly into the agencies'

management of water supply and quality to support the needs of the agencies' customers, also in compliance with regulatory requirements. As the water purveyors who are currently charged with delivering a reliable and high-quality water supply, it is incumbent upon the member agencies to assume full responsibility and complete accountability for the collection, conveyance, treatment, and development of alternative water sources for advanced wastewater treatment programs.

With this proposal, Moulton Niguel Water District ("MNWD") and Santa Margarita Water District ("SMWD") are presenting their preferred approach to governing, administering, and managing the facilities that are currently operated by SOCWA. Specifically, MNWD is proposing to assume responsibility for the operation of the JRTP and the Effluent Transmission Main ("ETM"). SMWD is proposing to assume responsibility for the operation of the JBLTP. Additionally, both MNWD and SMWD are offering to assume responsibility for the operation of the CTP. This proposal outlines an administrative approach, operating budgets, and proposed agreement terms, in addition to identifying the services to remain with SOCWA to support regional wastewater and reuse permitting functions on behalf of its member agencies. The proposal will present the reuse programs and activities that the operating agencies are considering, to reduce reliance on imported water, reduce ocean discharges of treated wastewater, and improve local creeks and beaches. Utilizing the memorandum prepared by the SOCWA Task Force, this proposal will address the various issues and questions required to understand and consider the implementation of this preferred approach.

Scope of the Proposal

The primary goal of MNWD and SMWD is to enhance opportunities and improve operational efficiencies to support the development of advanced wastewater reuse programs with the integration into existing potable water and recycled water distribution systems, while providing administrative efficiencies and associated cost reductions. The approach involves transferring the ownership of the treatment plants and land outfall assets to the designated responsible agencies with the remaining Participating Member Agencies retaining capacity rights under updated Project Agreements, similar to the Joint Regional Water Supply System, the Baker Water Treatment Plant, and the Upper Chiquita Reservoir. As the regional permitting authority for the ocean outfalls, SOCWA would remain the responsible party for the San Juan Creek and Aliso Creek Ocean Outfalls.

The following table provides a summary of the facilities and the proposed responsible party.

Facility or Asset	Responsible Party (1)
J.B. Latham Treatment Plant	SMWD
Joint Regional Treatment Plant	MNWD
Coastal Treatment Plant	MNWD or SMWD (2)
San Juan Creek Ocean Outfall	MNWD or SMWD (3)
Aliso Creek Ocean Outfall	MNWD or SMWD (3)
Effluent Transmission Main	MNWD
San Clemente Land Outfall	City of San Clemente (4)
North Coast Interceptor	City of Laguna Beach (4)

(1) All Participating Member Agencies would retain capacity rights as desired under updated project agreements.

(2) MNWD and SMWD are proposing to operate the Coastal Treatment Plant as a contract operator on behalf of the Participating Member Agencies for a duration acceptable to and at the discretion of those agencies. It is understood that the PC-15 agencies may elect to select a different operator; regardless of the operator at the Coastal Treatment Plant, the other elements of this proposal remain valid.

(3) SOCWA will retain the ownership of the ocean outfalls consistent with the regulatory permits that SOCWA holds on behalf of its member agencies. MNWD or SMWD will provide the engineering, operations, and administrative support for the operation and maintenance of these facilities in coordination with SOCWA.

(4) SOCWA is currently the owner of these two land outfalls on behalf of the Cities of San Clemente and Laguna Beach. Both outfalls are currently operated by the responsible party, and the ownership of the pipelines could be transferred, if desired.

1. Operations and Maintenance ("O&M") Approach

The proposed approach to current operation and maintenance is not expected to be substantially modified given the operational successes of the facilities. The benefits of the proposed operational adjustments will be realized through increased implementation of water reuse programs, enhanced operational integration within a larger pool of resources, and reduced costs through improved administrative efficiencies.

1.1. Permit Compliance

Currently, the operation and maintenance of the treatment plants is executed to meet compliance with the NPDES permit requirements as issued by the San Diego Regional Water Quality Control Board ("SDRWQCB"). Various other permits also provide specific requirements and recommended guidelines for the operation of the facilities, including, but not limited to:

SDRWQCB 97-52 Recycled Water Permit:

This permit governs the quality of the recycled water produced by the treatment plants, as well as providing guidelines for permitting use sites (such as irrigation customers). Both MNWD and SMWD are listed as Dischargers under the permit and are eligible to operate facilities governed by the permit.

Department of Occupational Safety and Health Pressure Vessel Permits:

These permits are issued for pressurized containers, such as air compressors or stationary propane tanks, which require inspection every five years.

Orange County Health Care Agency ("OCHCA") Hazardous Material and Waste:

Facilities that use hazardous materials or petroleum products, operate an underground storage tank, or produce hazardous wastes are required to enter the type and quantities of materials into the CERS database, along with Emergency Response Plans and Spill Prevention and Control and Countermeasure Plans, if needed. The OCHCA inspects these facilities biannually to verify the information provided and storage protocols.

Orange County Fire Authority ("OCFA") Permits and Certificates of Occupancy:

The Orange County Fire Authority requires inspection of facilities that house hazardous materials, similar to the OCHCA. The OCFA typically inspects facilities on a biannual basis.

South Coast Air Quality Management District ("SCAQMD") Permits to Operate:

These permits govern air emissions from the treatment plants and related equipment including, but not limited to flares, boilers, odor scrubbers, and co-gen engines. Depending on the specifics of the permits, equipment may require periodic source testing and submittal of results to the SCAQMD.

State Water Resources Control Board ("SWRCB") Stormwater Pollution Prevention Plan ("SWPPP"):

The SWRCB requires industrial facilities with exposure potential to maintain a SWPPP to control the quality of stormwater runoff from the facilities. This typically includes maintaining best management practices and/or sampling stormwater runoff during storm events to monitor quality.

USEPA Biosolids Reporting:

This information is part of NPDES permitting, however, the quantity and quality of biosolids are reported directly to the EPA each year. The number of samples collected and reported to the EPA is contingent upon the tonnage of biosolids produced by the facility.

Other permits associated with surrounding jurisdictional agencies

Operational compliance will continue to be met through required permit reporting to the regulatory agencies, including SOCWA, similar to the operation of the treatment plants currently operated by SOCWA and the other plants currently operated by other member agencies.

It is proposed that SOCWA will retain responsibility for the discharge permits and will continue to serve as the vehicle for collecting and reporting regulatory compliance activities. The additional responsibility of meeting the regulatory requirements will be borne by the operating entity. Both MNWD and SMWD already have established a significant track record with achieving regulatory compliance and the same proven procedures will be applied to the operation of the added treatment plants. This history of permit compliance was documented by an independent third party in the Orange County Local Agency Formation Commission San Juan Capistrano Municipal Services Review.

1.2. Operations and Maintenance Staffing Overview

Currently, SOCWA has a combined staff of 40 individuals that are dedicated to the operation and maintenance ("O&M") of the three treatment plants and related pipelines (e.g., outfalls, etc.). This is what SOCWA considers to be their "Department 1" employees. MNWD and SMWD are proposing to offer positions to 39 of those 40 staff members to continue the successful operation of those facilities. The current staffing levels will be supplemented by the available resources of MNWD and SMWD and the opportunities for growth for those 39 employees will also be significantly enhanced. The only position supporting "Department 1" O&M that will not be offered a position is the Director of Operations, as both MNWD and SMWD have similar positions within their respective agencies. The following table provides a summary of proposed staffing assignments to support the treatment facilities:

Position Category	No. of Employees	JBLTP (SMWD)	JRTP (MNWD)	CTP (MNWD or SMWD)
Operators	18	7	6	5
Mechanics	13	4	5	4
Electrical & Instrumentation	5	2	2	1
Other	3	1 (a)	2 (a)	-
TOTAL	**39**	**14**	**15**	**10**

(a) Other includes Support Services Manager, O&M Inventory/Purchasing Specialist, and Truck Driver/Mechanic II

The proposed operating agencies also have resources to supplement the transitioned O&M staff. The resources consist of wastewater treatment plant operators, mechanics, and electrical and instrumentation staff. These additional staff have experience working within wastewater treatment plants, including advanced water treatment production facilities. The following table provides a summary of the additional O&M staff that will immediately be available to support the transitioned staff from SOCWA in operating the three facilities.

Position	MNWD	SMWD
Wastewater Treatment Operators (Grade III or higher)	6	12
Wastewater Treatment Operators (Grade II or lower) *	1	0
Mechanics	14	13
Electrical & Instrumentation	9	11
TOTAL	**30**	**36**

*Both agencies strive to have all operators at Grade III and above to respond and troubleshoot issues independently and make operational changes in an expeditious manner.

Key staff from MNWD includes Jesus Garibay, Superintendent of Wastewater Operations, and Jessey Cordero, Senior Operations Engineer. Mr. Garibay is a Grade V operator with nearly 20 years' experience in the field of wastewater treatment. Mr. Garibay is experienced in nearly all areas of wastewater treatment. Prior to assuming his current role at MNWD, Mr. Garibay was the Assistant Superintendent of Treatment Plant Operations at Los Angeles County Sanitation District, overseeing multiple unique facilities over a large geographical area. Mr. Cordero is also a Grade V operator with nearly 10 years' experience in the field of wastewater treatment. In addition, Mr. Cordero possesses an Advanced Water Treatment Operator Grade IV certification. Mr. Cordero's studies include a BS in Biology, minor in Chemistry, as well as an MS in Civil

Engineering. Integrated wastewater treatment operations are overseen by Rod Woods, Director of Engineering, and David Larsen, Assistant Director of Engineering. Mr. Woods and Mr. Larsen are both registered engineers in the State of California and have about 25 years of experience in the water and wastewater industry, both in the private and public sectors.

Key staff from SMWD includes Mr. Ron Johnson, Treatment Manager, who has 29 years of experience, a degree in Chemical Engineering from MIT and is a Grade V Operator, heads both water and wastewater treatment facilities including the Lake Mission Viejo Advanced Water Treatment Plant. Mr. Khoa Nguyen, Lead Operator, with 17 years of experience, along with service in the United States Navy and is a Grade V Operator, manages day to day operations of SMWD's wastewater plants. The Treatment Division is overseen by Mr. Don Bunts, Deputy General Manager, who has over 40 years of experience in design, engineering and operations of water and wastewater facilities and supported by Ms. Tricia Butler, Chief Engineer who has over 35 years' experience in design, engineering and operations of water and wastewater facilities. Mr. Bunts and Ms. Butler are registered engineers in the State of California. In addition to engineering degrees, Ms. Butler has a master's degree in International Management from Thunderbird School of Global Management.

The facilities will be fully staffed from 7:00 am to 5:00 pm on Monday through Friday with reduced staffing on weekends and holidays. Standby personnel will be available to respond at all times to emergency situations and alarms at the facilities. Both agencies maintain responsive standby personnel including wastewater treatment operators, electrical and instrumentation staff, facility maintenance and mechanics, information technology, construction, wastewater collection, etc. In addition, both agencies maintain a comprehensive fleet of specialty vehicles and equipment such as vactor trucks, backhoes, dump trucks, portable bypass pumps, portable generators, etc. Both agencies actively participate in mutual aid programs with neighboring agencies to make their personnel and equipment available to others when needed.

The agencies will ensure that all staff are appropriately trained and certified to work at wastewater treatment facilities consistent with current responsibilities and duties. Staff are encouraged to expand on certifications, knowledge, and training to allow for career development and advancement, including automatic promotional opportunities.

In-house and on-call contracts are utilized to supplement the operation and maintenance staff, as needed and appropriate. Services that are currently utilized by MNWD and SMWD include, but are not limited to:

Services	In-house	On-call
Engineering	X	X
Construction Management and Inspection	X	X
Construction and major repairs	X	X
Geotechnical Services		X
Collection System Support Services	X	X
Laboratory testing services	X	X
SCADA Integration	X	X
Recycled water support services	X	X
FOG consulting services	X	X
Hauling and disposal of grit, screenings and biosolids	X	X
Source testing services		X
Condition assessment specialists		X

1.3. Wastewater Reuse Approach and Objective

Both MNWD and SMWD have extensive wastewater reuse programs that have been in place for more than four decades. Currently, both agencies' governing bodies have adopted policy objectives or strategic plans to maximize wastewater reuse as a water reliability investment and good stewards of the environment. The integration of wastewater operations for the JRTP and the JBLTP will further the wastewater reuse opportunities for the South Orange County region. Additionally, there are opportunities to incorporate available wastewater from other regional facilities, such as the Coastal Treatment Plant, to further expand regional partnerships in advanced reuse programs and to share in the benefits throughout South Orange County.

Last year, more than 20,000 acre-feet of treated wastewater, which represents almost 25% of the water imported into South Orange County, was discharged through the ACOO and SJCOO from the SOCWA member agencies. This is a combination of treated secondary effluent and brine discharges from the various permitted facilities within the SOCWA service area. The wastewater reuse programs identified for the various facilities present an opportunity to reduce those discharges and reduce imported potable water by an equivalent amount, further enhancing the water reliability for the South Orange County region.

J.B. Latham Treatment Plant

The JBLTP is currently a secondary treatment facility for ocean discharge of effluent. Currently about 6,000 acre-feet of secondary effluent is disposed of through the SJCOO annually. This amount is anticipated to be reduced to 4,500 AF with expansion of the SMWD Oso Creek Water Reclamation Plant. Of that amount, SMWD anticipates approximately 3,000 AF will be available for its reuse and up to the full 4,500 AF with additional participation by participating members.

In three to five years, SMWD anticipates the construction of recycled water facilities at the plant to provide for irrigation demands in its service area, particularly in the City of San Juan Capistrano, for groundwater recharge in the San Juan Watershed and in the future, potential potable reuse. The proposed addition of facilities will be coordinated with South Coast Water District ("SCWD") and MNWD to determine their respective interest in participation including the potential to supplement proposed ocean desalination.

Joint Regional Treatment Plant

The JRTP currently provides approximately 6,000 acre-feet of tertiary treated wastewater for non-potable uses, i.e., irrigation and construction. There remains approximately 2,500 acre-feet of available wastewater that could be utilized to expand MNWD's reuse programs. Based on a recent recycled water optimization study, MNWD has identified approximately 500 acre-feet of available irrigation demands that could be met through an expansion of the recycled water system. In order to maximize the remaining available wastewater, MNWD is developing a pilot program for a direct potable reuse project that could be constructed at or adjacent to the JRTP in three to four years.

In addition to a direct potable reuse project, MNWD is partnering with the County of Orange to investigate the feasibility of diverting urban runoff flows and capturing first-flush storm flows from the Aliso Creek watershed to supplement the recycled water system. MNWD is also interested in collaborating with its regional partners to incorporate available wastewater from the CTP or the El Toro Water District Treatment Plant to supplement the recycled water system. Enhancing recycled water supplies from other available sources would allow for a larger direct potable reuse facility and create greater opportunities for regional partnerships in that program.

Other components that are being evaluated as a part of the overall wastewater reuse program at the JRTP are the existing Laguna Niguel Lake as a storage for storm flows and urban runoff and source for the recycled water system, a natural treatment system to improve water quality before diversion into the lake, and a community watershed

education center to support regional watershed initiatives for local schools and organizations.

Coastal Treatment Plant

The CTP currently provides approximately 1,100 acre-feet per year of recycled water to SCWD for non-potable uses. The advanced water treatment facility that produces recycled water for SCWD is operated by SOCWA. To supplement the recycled water system and improve water quality within that system, SCWD constructed the Aliso Creek Water Harvesting Facility. With these water reuse facilities in place, the CTP has available approximately an additional 1,900 acre-feet per year of wastewater from the City of Laguna Beach, Emerald Bay Services District, and SCWD that could be utilized for additional water reuse programs.

Both MNWD and SMWD believe there are opportunities to increase the recycled water production from the CTP that could supplement existing recycled water programs in the region. As noted above, supplementing recycled water flows with additional sources could allow for direct and indirect potable water reuse projects to be scaled larger to further increase regional water reliability and reduce imported water flows into the region through a cooperative partnership.

1.4. Safety and Risk Management

In assuming responsibility for the operation of the wastewater treatment facilities, MNWD and SMWD will provide appropriate insurance coverage for workers compensation, property, and liability. MNWD utilizes Joint Powers Insurance Authority ("JPIA") as its insurance provider and SMWD utilizes California Sanitation Risk Management Authority ("CSRMA") as its insurance provider. Both agencies have been recognized by their insurance providers for their excellent safety and risk management performance. As operators of the identified facilities, and the entities responsible for the implementation of worker safety programs, MNWD and SMWD would assume full responsibility for any workers compensation claims at the respective facilities. Third-party claims for liability and property claims would be allocated amongst the Participating Member Agencies for each facility based on ownership unless it was determined to be an operator error or negligence, at which point MNWD and SMWD would assume full responsibility.

1.5. Energy Consumption

Energy consumption is one of the most significant elements of an operations and maintenance budget. The first thing to ensure is that each facility is signed up for the most cost-effective rate structure with the appropriate utility. Since rate structures periodically change, it is important to have at least annual meetings with the utility provider to ensure that the current rate structure is still the most advantageous for the facilities. Another consideration would be

to ensure that electrical demands are continually optimized. This is particularly relevant on the liquids side of treatment since flows have significantly decreased over time. When feasible, implementing variable frequency drives on direct-driven motors can also result in significant electrical cost savings, pacing the air feed to match the daily varying of the liquid flows and strength of the wastewater. Although usually not as significant as the impact of installing high efficiency blowers or perhaps a smaller sized jockey blower to optimize aeration, secondary clarifier optimization is another area to explore for reduced energy consumption – specifically, reducing RAS pumping, WAS volume, and the overall hydraulic load. Another possible energy savings approach is to evaluate modifying or adding screening or primary filtration to reduce the oxygen demands required for downstream treatment processes. Finally, evaluating the cost effectiveness of utilizing facilities' biogas for beneficial reuse can result in partial or complete energy neutrality.

A more progressive trend in the wastewater industry involves comprehensive and overall process optimization that is accomplished using technology that digitally clones an entire plant. The calibrated and automated models are connected to live data streams from the plant and configured to execute simulations to continuously emulate the physical plant. These models provide real-time decision support tools for operators and engineering staff to optimize processes from an efficiency and energy perspective. The basic feature of these models is the ability to compare measured and modeled data to develop an understanding of how the activated sludge process is impacted by changes to influent and operating conditions. Although machine learning is currently not a common practice in the United States for plant operations, we have worked with international partners very familiar with this approach and it can certainly be an effective tool for staff to use to evaluate and revise current operational practices.

Both MNWD and SMWD are experienced with the energy consumption practices described above. Regardless, the highest priority immediately following the proposed transition of operations will be to ensure operational reliability and redundancy of the facilities to maintain appropriate treatment in compliance with permit requirements and agency expectations.

1.6. Emerging Technologies

The evaluation and implementation of emerging technologies creates opportunities to enhance system operations and efficiencies but requires the appropriate level of analysis to determine the effectiveness of a new technology. This requires agencies to have adequate staff resources available to stay current on the latest technology trends and case studies, follow-up with vendors, engage with the wastewater treatment community for potential collaboration opportunities, and develop pilot programs. One effective approach in tracking new technologies is through a professional organization that screens, vets, and summarizes new technologies for a group of public agencies that comprise the professional organization. For

example, MNWD has been a member of Isle's Technology Approval Groups (TAG) for both the water and wastewater industries for the last 5+ years. By participating in a group of this type, agencies can hear the firsthand experiences of other public agencies that have researched or piloted emerging technologies of interest by reviewing printed materials and participating in quarterly meetings.

When something is of interest and shows promise, another technique employed by MNWD and SMWD is to pilot the new technology at a small scale to test its effectiveness. Emerging companies are often willing to pay for a portion of the pilot costs, hoping that the project will eventually go full scale. These also make great opportunities for grant applications. Both MNWD and SMWD work with grant consultants to monitor and help secure grants for qualifying projects. SMWD is currently working with vendors to construct a pilot project at the Chiquita Water Reclamation Plant to optimize secondary treatment and solids handling to substantially eliminate the need to truck biosolids off-site for disposal. SMWD previously piloted treatment technology at its Oso Creek Water Reclamation Plant to determine the optimum system for its ongoing reconstruction.

1.7. Preventative Maintenance Planning and Execution

Preventative maintenance is a critical component of any well-functioning asset management program. These efforts are necessary to maximize the useful life of assets. Please see Section 2.3 for more on asset management. MNWD and SMWD utilize workorder tracking systems to drive their respective preventative maintenance programs. MNWD recently implemented NexGen as its new Computerized Maintenance Management Solution ("CMMS") that integrates with its Geographic Information System ("GIS") solution to allow for tracking of work orders and preventative and corrective maintenance activities for all assets. SMWD utilizes Mainstar as its CMMS for the management of its preventative maintenance program. Operational reports are available from respective CMMS systems to track the execution of work orders. The existing asset management programs that are employed at the three SOCWA facilities will continue to be used as the individual operating agencies implement their respective CMMS/asset management systems.

1.8. Software Solutions Available to Support O&M

In addition to the CMMS and GIS solutions discussed above, other software solutions that will help to support the O&M functions for the treatment plants include:

- Supervisory Control and Data Acquisition System ("SCADA")
  - Ignition
  - Pi (SCADA historian)
  - Factory Talk
  - Win 911

- HachWIMS
- Microsoft Suite
- AutoCad
- R Studio (data analytics software)

Similar to the Preventative and Maintenance programs, SMWD and MNWD will integrate the respective treatment plants into the SCADA software that they use throughout the remainder of their systems. Refer to Section 4 for more information regarding the SCADA approach.

1.9. O&M Performance Metrics

Performance metrics are useful to track long-term trends associated with wastewater flows and loadings, permit compliance, quantity of water that is put to beneficial reuse, costs associated with treatment, and opportunities to enhance operational efficiencies. Some of the specific items that will be tracked include, but are not limited to:

- Average Influent Flow
- Average Recycled Water Produced
- Average Wet Tonnage of Biosolids Hauled
- Average Dryness of Biosolids Hauled
- Chemical $ / MG of Treated Influent
- Power $ / MG Treated
- Power kW*h / MG Treated
- Annual number of permit violations
- Preventative work orders completed
- Corrective work orders completed
- Capital budgeting and spending
- Change order management

In addition, the wastewater treatment plant operators track their time associated with capital projects, plant rounds, SCADA monitoring, lab samples/analyses, general maintenance, alarm troubleshooting, reporting, and scheduling/coordinating. MNWD and SMWD will work with its partner agencies in each facility to identify other areas of operational and financial data trends that would be beneficial.

2. Engineering Approach

Collaboration is critical when developing and executing the Capital Improvement Programs ("CIP") of any organization. MNWD and SMWD work collectively within their organizations to define the capital needs of a facility or asset (Operations), to determine the appropriate timing and approach for addressing those capital requirements (Engineering), to ensure adequate funding is available through long-range financial planning (Finance), and to communicate the impacts and successes to our local stakeholders (Communications and Outreach). Additionally,

for jointly owned facilities, MNWD and SMWD work with their partners to develop and ultimately present well thought out capital plans to ensure the goals for the facilities and agencies are being delivered. For these efforts to be successful, it is critical to maintain and update a 10-year projection of capital improvement projects. As part of an annual review, the 10-year capital program is refined based on:

- work that has been completed,
- feedback from operations and engineering staff for those projects that have previously been identified for completion,
- reprioritization of previously identified projects following additional investigations or condition assessments and,
- addition of any new projects that may have been determined over the course of the previous year.

Ultimately, an annual fiscal year budget is presented for approval for the upcoming capital year spending and funds are appropriated for the fiscal year and may be expended in compliance with the Board adopted purchasing policies. Capital projections for subsequent years provide a snapshot of the assets requiring replacement, refurbishment, or potentially a condition assessment to allow for appropriate financial planning.

2.1. Capital Planning

The development of the CIP is an on-going process. Assets that need replacement and refurbishment ("R&R") are identified through a continuous process of inspections, assessments, and review of CMMS outputs. Annually, all projects are compiled into one budget document to provide a complete picture of projected CIP projects identified during that fiscal year. The proposed CIP budget document would identify the proposed projects with a brief description, summary of the anticipated project costs based on best available information, and the expected timing for implementing each project. Each Participating Member Agency would have the opportunity to review and comment on the proposed capital improvement program prior to approval.

The CIP prepared by SOCWA staff has undergone significant changes over the last several years. During the last 3-4 years, there have been four different individuals that have overseen the development of the CIP for the treatment plants. Regardless of the individual, the common theme has been that the CIP was developed considering traditional and conventional wastewater treatment only, with limited regard for future reuse objectives of the member agencies, or consideration of new processes and technologies that would enhance treatment and reuse objectives. The CIP primarily contains projects that are based on rehabilitating and replacing existing facilities in kind.

Upon assuming operation of the treatment plants and pipelines, the approach would be to initially utilize the SOCWA-developed CIP budgets for the first fiscal year. During that initial year, comprehensive 10-year capital improvement programs will be reviewed and updated for each of the facilities to ensure a reliable and resilient treatment operation to address aging infrastructure, wet weather flows, and power outages. Further, the CIP will consider input from the Participating Member Agencies to ensure alignment with agencies' goals and with consideration for the following:

- JBLTP:
  - Develop facilities to provide for wastewater reuse based on the goals of the Participating Member Agencies
- JRTP:
  - Enhance the primary and secondary treatment to provide reliable recycled water and support advanced wastewater treatment
  - Implement salinity management for Title 22 water
- CTP:
  - Work with the Participating Member Agencies to develop a 10-year capital improvement program based on the work prepared by Hazen & Sawyer
  - Consider opportunities for enhancing the reuse of secondary effluent
- ETM:
  - Consider pipe stabilization or protection projects adjacent to Aliso Creek
  - Perform an appropriate condition assessment to identify targeted preventative repair work
- ACOO and SJCOO:
  - Support SOCWA in updating the current capital improvement program

2.2. Unanticipated and Emergency Projects

The goal of a good asset management program is to minimize the potential for unanticipated and emergency projects and to mitigate the impacts of an emergency should it develop. However, it is impossible to eliminate unanticipated or emergency projects that could be the result of a natural disaster, operational wear and tear, or some other factor. Emergency projects require immediate action to ensure that operations continue or to mitigate a negative financial impact. These projects will be addressed by appropriate staff of either MNWD or SMWD and reported to the Participating Member Agencies at the earliest possible opportunity. Unanticipated projects are evaluated when they come up and prioritized against the current fiscal year CIP to ensure appropriate financial resources are available to manage the unanticipated project. Both MNWD and SMWD have available technical support teams and cash reserves to address any emergency situations that may arise to ensure that immediate actions required are implemented. Monthly or quarterly updates will be provided to the

Participating Member Agencies and although not typical, fiscal year budget amendments would be proposed if deemed absolutely necessary.

2.3. Asset Management

The goal of any asset management program is to maximize the useful life of all assets while ensuring a reliable and cost-effective operation. MNWD's and SMWD's approach to asset management was recently provided to SOCWA and its member agencies to comply with the requirements of the new NPDES permits. In summary, the horizontal asset (i.e., pipeline) approach varies substantially from the vertical asset (i.e., treatment plant) approach to managing assets. In general, and considering the relative age and condition of facilities, the most cost-effective approach for the treatment plants to ensure reliability includes a comprehensive assessment of all aspects of the facility, including sitework, structures, mechanical systems, electrical, and instrumentation, with all required improvements being addressed under a single project. Following completion, both MNWD and SMWD will rely heavily on their respective CMMS systems to maximize the useful lives of assets in the most cost-effective manner.

2.4. Capital Project Execution

Capital projects are defined and developed in a collaborative manner amongst operations, engineering, and finance staff at MNWD and SMWD. Ultimately, as noted above, all capital projects will be presented to the Participating Member Agencies for review and approval. Simple and straightforward projects within the treatment plants will be executed by District staff. Specialized and more complex projects will be designed in-house and/or by consultants and constructed by third party contractors utilizing either a traditional design-bid-build process or a progressive-design-build process (depending on the nature of the project). In addition to experienced staff, comprehensive and sophisticated contract documents are needed to protect agencies against unanticipated changes during construction. MNWD and SMWD have staff that are experienced in the successful development and execution of large capital projects (greater than $20 million). These staff include engineers, construction managers, and inspectors.

2.5. Capital Program Staffing

SOCWA currently has three full-time positions identified to support the execution of its capital improvement program and to support the operations staff. All three positions will be offered positions with either MNWD or SMWD to support the execution of the capital improvement program. Additionally, MNWD currently employs ten registered civil engineers in the State of California and eight full-time employees dedicated to construction management and inspection functions. SMWD currently employs nine registered engineers and six construction management and inspection professionals. Both agencies also rely on senior operations staff to review plans and specifications, particularly electrical and mechanical. Depending on

workloads, as well as the size and complexity of a contemplated project, contract services may be utilized to perform construction management and inspection services. All third-party consultants will be managed closely by MNWD or SMWD staff. Other contract services that may be utilized include surveying, geotechnical, environmental services, specialized inspection such as coatings during construction, and commissioning.

2.6. Software Solutions Available to Support the Capital Program

Software utilized to support capital engineering will include, but is not limited to:

- Microsoft Suite
- GIS system
- CMMS system
- SCADA
- AutoCAD
- Various construction management and scheduling software

3. Management and Administrative Support

The proposal includes full-scale management and administrative services to support high-level operations, maintenance, and engineering functionality of the facilities. Those services include finance and accounting, human resources, information technology, purchasing and procurement, and administrative support. Where appropriate and necessary, as directed by the Participating Member Agencies in the various facilities, the MNWD and SMWD proposal includes a full suite of administrative support including financial planning, grant procurement, and legislative support, as well as community outreach and communication.

3.1. Finance Structure

Each facility would have its own account structure to appropriately and accurately account for costs associated with the operation and maintenance activities. For MNWD, the account structure is established through Business Units. This allows for budgets to be developed, costs to be allocated, and reporting to be generated specific to each business unit. With that structure, regular budget-to-actual reports can be generated for presentation to other partner agencies as requested, but at a minimum, during Participating Member Agency meetings. This is consistent with the financial structure used for other multi-partner facilities that MNWD manages, such as Plant 3A.

In 2019, SMWD implemented a new ERP system with multiple dimensions to be able to capture accurate reporting of costs for both operations and maintenance by facility and by project. SMWD's Enterprise Resource Planning (ERP) is currently utilized to track costs associated with jointly owned facilities. Similar to MNWD, regular budget-to-actual reports would be generated for review as requested, and at a minimum during Participating Member Agency meetings.

3.2. Management and Administrative Staffing

The following SOCWA staff will be offered positions with either MNWD or SMWD to support the administrative operations of the facilities:

- Accounting (3)
- Safety and Risk Management (1)
- Procurement and Contract (1)
- Human Resources (1)
- Information Technology (1)

The only positions supporting management and administrative services not proposed to be offered positions are the General Manager and the Finance Controller, as both MNWD and SMWD have similar positions within their respective agencies. In addition to the staff identified above, the following table shows the additional staff at MNWD and SMWD that will be immediately available to support the administration of the facilities.

Function	**MNWD**	**SMWD**
Accounting and Finance	11	13
Procurement and Contracts	3	2
Human Resources	3	3
Information Technology	6	5
Administrative Support, including outreach	7	7

The proposal is for the identified support staff to provide support for the operations of the facilities and also to be integrated into the various departments within MWND and SMWD to support the rest of the ongoing operations and activities. In addition, MWND and SMWD will continue the practice of shared purchasing where it currently exists for chemicals and solids disposal and will also look for other opportunities that could benefit the South Orange County region.

3.3. Software Solutions Available to Support Administrative Functions

The primary software solution to support the various administrative functions for MNWD is the Enterprise Resource Planning (ERP) software solution, JD Edwards. This supports the financial budgeting, accounting structure, purchasing, and human resources functions. For the tracking of contracts, utilizing macro functions in Excel has been more than sufficient to ensure that no exceedances and contract expirations occur. MNWD is currently implementing Planet Bids in select areas. For construction management functions, it has really depended on the size and

complexity of the project. For simple projects, Microsoft Suite with e-mail will often suffice. However, for more complex projects, both MNWD and SMWD have experience utilizing platforms such as Procore or Oracle products.

The primary software solution to support the various administrative functions for SMWD is the Enterprise Resource Planning (ERP) solution software, Tyler Munis, which was implemented in 2019. This supports the financial budgeting, accounting structure, purchasing, contracts, and human resources functions, similar to MNWD's ERP. SMWD uses Project Primavera for construction management along with other platforms mentioned above.

4. SCADA Approach

MNWD has standardized on Ignition SCADA software. Since SOCWA does not use Ignition, the transition would be implemented similar to when MNWD assumed operations at Plant 3A. MNWD's SCADA Communications wireless network would be used for communicating with the treatment plants remotely. This network already has a connection to the JRTP; however, MNWD plans to add a secondary connection so that there would be redundancy for communication. MNWD is currently able to operate the JRTP Advanced Water Treatment facility from both Plant 3A and remotely. Since CTP is currently not connected to MNWD's SCADA Communications wireless network, the appropriate antenna(s) would be installed at CTP to connect with the existing network.

As far as the integration and translation process, MNWD would likely operate using the existing SCADA for a defined time period, while an Ignition-based SCADA system was built. At which point, the two operating SCADA systems will be compared to make sure the new system was reliable. This is the same process utilized at Plant 3A. Ignition is a full featured software, so it will be able to handle any integration or translation that is happening now.

SMWD has a full-service in-house SCADA team with the capability to build control centers, fully program and integrate facilities as well as establish a communication network. The District utilizes Factory Talk for its SCADA Software. With the recent integration of the City of San Juan Capistrano ("CSJC"), the District rebuilt the entire SCADA system as well as the backbone network for 40% of the cost the CSJC had received from a competitive proposal. SMWD will work closely with the SOCWA SCADA professional and the existing operators to review the existing system and the requirements for operations to develop a transition plan and install a new SCADA system that is integrated into the SMWD network. The SMWD system allows for complete remote operation of its facilities with 100% back-up. The operators at each of the existing treatment plants and the standby operators have access to data, alarms and control at all the plants.

Alarm response and communications would be handled in a manner consistent with current practices. Alarms are received by the entire team on a 24-7 basis and responded to as appropriate. Initial investigation is completed by the treatment plant operators, and, depending on the nature of the alarm, the operators may call in individuals from maintenance, electrical and instrumentation, or engineering as needed. Standby coverage is provided by all departments on a 24-7 basis and individuals are required to respond within 30 or 60 minutes, depending on the nature of the issue. Communications are maintained through telephone calls, texts, e-mails, and hand radios as appropriate.

5. Regulatory Compliance & Lab Services

SOCWA will continue to provide regulatory compliance and regional permitting services to its member agencies. As a part of these services, SOCWA staff will continue to support its members through industry organizations, advocates and regulators. Lab services in support of the treatment plants will either be provided by the laboratory at the JRTP or at the SMWD Chiquita Water Reclamation Plant ("CWRP") and supplemented with third-party contract laboratory services as required.

SOCWA will retain the employment of necessary staffing to support regional permitting and regulatory compliance services under the existing Joint Powers Agreement. It is anticipated that three staff members will be required to support those functions:

- Environmental Compliance (1)
- Source Control (1)
- Administrative Support (1)

Additionally, SOCWA may continue to contract for outside support and research services through consultants, universities and member agencies.

5.1. NPDES Discharge Requirements

SOCWA holds the NPDES Discharge permits for both the SJCOO and the ACOO. Each of those permits contains the discharge requirements for the various treatment facilities that discharge to the outfalls. SOCWA will retain compliance oversight of the discharge permits, including supporting its member agencies, as necessary.

SOCWA will continue to contract the appropriate ocean monitoring and testing as required per the discharge permits and regulatory compliance. Compliance reporting for the individual treatment plants will be accomplished in a manner consistent with the current reporting protocols for the treatment plants that are not currently operated by SOCWA. MNWD or SMWD will provide the resources necessary to support the operation, maintenance, and

engineering services as required. No additional resources are anticipated to support the current compliance reporting protocols.

5.2. Recycled Water Use Permit

SOCWA currently holds the recycled water use permit on behalf of some of its member agencies, specifically SMWD, MNWD, SCWD, and Trabuco Canyon Water District ("TCWD"). TCWD is currently considering obtaining its own recycled water use permit from the San Diego Regional Water Quality Control Board. SOCWA will retain the recycled water use permit and compliance oversight of that program consistent with the current program protocols. No additional resources are anticipated to support the current compliance reporting protocols.

5.3. Air Quality Permits

For the operation of the treatment plants, MNWD and SMWD will be responsible for ensuring compliance with the applicable air quality permits in the operation of various equipment, e.g., flares, boilers, co-generation engines. Sampling protocols and source testing will be accomplished in a manner similar to the protocols at the treatment plants currently operated by MNWD or SMWD. Existing resources and programs are in place to accomplish the necessary sampling, testing, and reporting, and no additional resources are anticipated.

5.4. Pretreatment/Industrial Dischargers and Diversions

SOCWA will continue to administer the pre-treatment and industrial waste discharge program in support of its member agencies. The administration of the program will be consistent with protocols currently in place. SOCWA will continue to provide the necessary staffing to administer the program.

5.5. Lab Services

SOCWA currently employs seven (7) individuals to provide laboratory services for the three treatment plants that SOCWA currently operates. The existing laboratory staff currently employed by SOCWA will be offered positions at MNWD to provide lab services primarily for the JRTP and Plant 3A. Lab services for the JBLTP will be provided by SMWD's laboratory at the CWRP. Lab services for the CTP will be provided by the laboratories at the JRTP with backup from the lab at the CWRP. Reporting will be provided in a manner consistent with the current reporting protocols in place for the treatment plants that are not currently operated by SOCWA.

6. Budgeting and Finance

Both MNWD and SMWD possess a strong financial position with high credit ratings, sufficient reserves, and available debt capacity that will allow both agencies to support the needs of the existing treatment facilities while also providing the ability to advance the capital improvements and reuse programs necessary for the South Orange County region. Appropriate budgeting and financial forecasting help to ensure the financial stability of MNWD and SMWD while providing adequate funding to provide a high-level of service. This approach will help to provide predictability for our partners and simplify the budgeting and invoice process as well.

Both agencies currently support jointly owned facilities and provide budgeting and financial reporting services including the Upper Chiquita Reservoir, the South County Pipeline, San Juan Basin Authority, Fenner Valley Water Authority, Plant 3A, Eastern Transmission Main, and Upper Oso Reservoir.

6.1. Proposed Budget for Wastewater Treatment Operation

MNWD and SMWD have developed the draft budgets below based on projections building from SOCWA's current FY budget. Going forward, MNWD and SMWD will develop a budget in collaboration with the Participating Member Agencies for each of the facilities. The primary anticipated savings are through economy of scale in the administration, information technology, engineering services and financial support through two agencies with significantly more resources to provide in each of these areas and resulting reductions from SOCWA's costs.

The following table shows the current FY 2022-23 SOCWA budget for each facility and the additional services (Recycled Water Program and Pre-Treatment Program), as well as the proposed budget based on the change of responsible agency as identified in this proposal.

Facility	SOCWA FY 2022-23 Budget	Proposed O&M Budget
J.B. Latham Treatment Plant	$7,386,475	$6,127,177
Joint Regional Treatment Plant	$8,810,840	$7,798,995
Coastal Treatment Plant	$3,263,109	$3,067,966
Effluent Transmission Main	$25,371	$19,814
San Juan Creek Ocean Outfall	$829,030	$799,966
Aliso Creek Ocean Outfall	$818,301	$781,561
Pretreatment Program	$285,853	$264,050
Water Reclamation Permits	$402,769	$274,375
Unfunded Liabilities (1)	$1,849,069	$1,849,069
Total (2)	**$23,670,816**	**$20,982,974**

(1) Unfunded liabilities are tracked as a separate expense at SOCWA. The methodology for addressing this expense is defined further below.
(2) Totals may not foot due to rounding.

The table above includes the allocated administration, management, and engineering costs for each facility based on SOCWA's adopted budget and the proposed budget. A breakdown of the budget for each of the treatment plants is provided in the table below. The proposed budgets are broken down into the major cost categories.

Cost Category	JBLTP	JRTP	CTP
Salaries & Benefits	$2,345,503	$2,824,271	$1,736,365
Repairs & Maintenance	$1,211,504	$1,521,850	$577,145
Utilities	$760,976	$658,101	$244,331
Biosolids	$685,125	$905,380	$23,345
Lab Services	$40,600	$48,103	$34,510
Chemicals	$554,190	$1,245,405	$210,105
Administration (1)	$373,959	$475,995	$187,247
Other (2)	$155,321	$119,890	$54,918
Total (3)	**$6,127,177**	**$7,798,995**	**$3,067,966**

(1) Administration is based on a 6.5% administration rate of the O&M expenses for the facility.
(2) Other includes various miscellaneous expenses, including certifications, training, conferences, etc.
(3) Totals may not foot due to rounding.

Using the current split of the SOCWA FY 2022-23 budget, MNWD and SMWD have identified the allocation of expenses and anticipated savings for each of SOCWA's member agencies. The allocation of the proposed budget is subject to adjustment based on discussions with the SOCWA member agencies and development of updated Project Agreements. Table 6-1 shows the allocation to each member agency and the anticipated annual O&M savings. The table includes a value for the assumed expenses by MNWD and SMWD that are not allocated to the member agencies. These expenses are related to the proposed staffing positions that will be offered to existing SOCWA staff that will support the operation of the treatment plants, as well as other functions and services within MNWD and SMWD.

Table 6.1 - Allocation of Expenses and Anticipated Savings by Member Agencies

Facility Name	City of Laguna Beach	City of San Clemente	El Toro Water District	Emerald Bay Service District	Irvine Ranch Water District	Moulton Niguel Water District	Santa Margarita Water District	South Coast Water District	Trabuco Canyon Water District	Total (1)
JBLTP						$1,271,870	$3,558,273	$1,297,034		**$6,127,177**
JRTP	$482,972		$635,480	$28,758		$6,280,566		$371,219		**$7,798,995**
CTP	$1,238,583			$87,418		$227,760		$1,514,205		**$3,067,966**
ETM			$7,690		$8,941	$3,183				**$19,814**
SJCOO		$145,130				$120,836	$435,832	$98,168		**$799,966**
ACOO	$83,733		$126,150	$8,491	$141,774	$328,274		$93,139		**$781,561**
Pretreatment	$10,225	$46,191	$8,430	$9,495	$34,946	$39,446	$72,644	$42,673		**$264,050**
Water Reclamation						$80,113	$116,762	$35,826	$41,674	**$274,375**
Unfunded Liabilities	$197,968	$12,629	$64,254	$8,608	$14,025	$823,690	$380,395	$347,148	$353	**$1,849,070**
Assumed Expenses						$1,087,469	$688,701			**$1,776,170**
Proposed Budget	$2,013,481	$203,950	$842,004	$142,770	$199,686	$10,263,207	$5,252,607	$3,799,412	$42,027	**$22,759,144**
Current SOCWA Budget	$2,159,704	$213,038	$933,235	$153,244	$211,743	$10,327,930	$5,371,699	$4,238,696	$61,528	**$23,670,817**
Anticipated Savings	**$146,223**	**$9,088**	**$91,231**	**$10,474**	**$12,057**	**$64,723**	**$119,092**	**$439,284**	**$19,501**	**$911,673**

(1) - Totals may not foot due to rounding

6.2. Five Year Forecast of Costs

There are two categories of expenses that will influence the five-year forecast of future expenses associated with the operation of the treatment plants. The projection of salaries and associated benefits is stable and predictable, however the labor hours anticipated will vary based on facility maintenance needs. Consumables at the treatment plants, such as electricity, chemicals, and biosolids costs will vary based on purchasing contracts and established utility rates. The five-year forecast is not expected to vary substantially from the historical increases experienced at SOCWA. As noted above, budgets will be developed annually in conjunction with the Participating Member Agencies for review and approval.

In Section 2, a summary of the capital engineering and budget approach was provided. The 10-year capital forecast of expenses will be reviewed during the first year of facility operations and updated in collaboration with the Participating Member Agencies based on their needs and goals. With the expected capital investments currently planned and those that are also anticipated to support future wastewater reuse goals, appropriate financial forecasting and planning is necessary to support those investments. Both MNWD and SMWD are highly rated agencies by Fitch and S&P Global, providing an opportunity to smooth out sizable capital needs over decades through debt financing should agencies be interested in options beyond PAYGO. MNWD and SMWD have the necessary financial expertise, can meet the reserve requirements, and have available debt capacity to support financing programs for needed capital investments including low-interest loans or bonds.

6.3. Agency Historical Budgeting and Transparency

For the past three years, MNWD and SMWD have met the budgets approved by their respective Boards of Directors while maintaining a high level of service and strong financial position. MNWD maintains a 10-year financial forecast to help provide consistency in its expense and revenue projections for its customers and partners. Those projections are updated annually to address any changing conditions, such as increased imported water and utility costs.

Both SMWD and MNWD publish annual budgets for their service areas. Each agency has numerous financial transparency accolades from the Government Financial Officers Association. As previously noted, budgets will be prepared and presented for each of the facilities to the Participating Member Agencies for review and approval. Invoices will be based on actual expenses and reporting will be made available to show expenses compared to budgets. Finally, annual audits will be developed to provide an independent review of financial activity. At year end, MNWD and SMWD will work with its partners to provide necessary financial data and reporting to appropriately account for their capacity rights in the various facilities. Both MNWD and SMWD operate and maintain jointly owned assets on behalf of

different partners and have experience supporting the budgeting, invoicing, and accounting for jointly owned assets in a multi-party capacity, such as those considered with this proposal.

6.4. CalPERS Pension & Other Post-Employment Benefits Liabilities

The SOCWA Fiscal Year 2022-23 budget is $1.8 million for its unfunded pension and Other Post-Employment Benefits ("OPEB") liabilities. SOCWA has adopted a methodology for allocating these unfunded liabilities to its member agencies. This methodology was based on the allocation of labor across the various facilities and services and has been used in the most recent budgets to allocate expenses for SOCWA's annual Unfunded Accrued Liability ("UAL") payment to CalPERS and the normal costs associated with its retiree medical program (OPEB). With the implementation of this proposal, the growth of those liabilities is expected to significantly be reduced. MNWD and SMWD are proposing to lock in that allocation for on-going liabilities associated with unfunded pension and OPEB expenses. As SOCWA will remain as a regional Joint Powers Authority, it will continue to be invoiced by CalPERS for UAL and OPEB expenses and annually can allocate those expenses to agencies based on the table below, which is the calculated allocation of expenses by SOCWA.

Agency Name	Allocation of Unfunded Liabilities (%)	FY 2022-23 Budget ($)
City of Laguna Beach	10.71%	$197,968
City of San Clemente	0.68%	$12,629
El Toro Water District	3.47%	$64,254
Emerald Bay Service District	0.47%	$8,608
Irvine Ranch Water District	0.76%	$14,025
Moulton Niguel Water District	44.55%	$823,690
Santa Margarita Water District	20.57%	$380,395
South Coast Water District	18.77%	$347,148
Trabuco Canyon Water District	0.02%	$353

7. Governance

Each facility or asset operated by MNWD or SMWD on behalf of the Participating Member Agencies will have a separate project agreement to define the relationship between the parties and the terms and conditions for that facility and associated operation. With the expiration of the current Project Committee Agreements, new agreements are required regardless of the proposal. The SOCWA Joint Powers of Authority ("JPA") Agreement would remain to govern the on-going regional permitting, regulatory compliance, and regulatory and legislative advocacy in support of the region, however, the JPA Agreement is proposed to be updated.

The project agreements for each of the facilities will be developed and managed similar to the Baker Water Treatment Plant Agreement operated by the Irvine Ranch Water District or the Joint Regional Water Supply System Agreement operated by SCWD. A collaborative effort will be undertaken to develop the proposed agreements for each of the facilities by the Participating Member Agencies. Some of the proposed elements of the agreements include, but are not limited to, the following:

- Capacity Rights: The capacity rights of each Participating Member Agency would remain as is currently defined.
- Governance:
    - An Administrative Committee would be formed consisting of a representative of each Participating Member Agency.
    - Each agency would have an equal vote.
    - Meetings would be held quarterly or as needed to review facility operations, financial reports, construction progress, and capital planning.
- Budget:
    - A budget for the upcoming fiscal year would be presented annually to the Administrative Committee for review, comment, and approval.
    - The budget will include the anticipated expenses to operate and maintain the facilities, the proposed capital improvements, and an updated projection for the 10-year capital program.
    - Administration expenses to support the operation of the facilities will be charged as a fixed 6.5% rate of total O&M expenses.
    - Approval of the budget requires a majority vote of the Participating Member Agencies; schedule will include time for Participating Member Agencies to review with their governing board as desired.
    - Expenditure of funds within the approved O&M budget will be carried out in compliance with the purchasing policy for the responsible agency.
- Capital Project Approval:
    - Capital projects will be presented to the Administrative Committee for review, comment, and approval.
    - Contracts will be awarded by the Board of Directors for the responsible agency following presentation to the Administrative Committee and will be subject to the provisions of the purchasing policy for the responsible agency.
- Designated Operator:
    - The responsible agency identified in the proposal will assume operational responsibility for the facilities.
    - The Participating Member Agencies may change the designated operator with the following voting thresholds:
        - A 2/3 vote of the Participating Member Agencies, and;

        - A minimum of 50% of the capacity rights for the facility.
- Liabilities:
    - Responsible agency would provide insurance coverage for the facilities. The cost of coverage is included in the administration fee.
    - Insurance will include property, liability, and workers compensation. The responsible agency would propose the levels of coverage for review by the Participating Member Agencies.
    - The responsible agency would assume full responsibility for any workers' compensation claims at the facility.
    - For property or liability claims:
        - The responsible agency would assume full responsibility for claims or fines if determined to be operator error or negligence.
        - The Participating Member Agencies would be responsible for claims or fines under normal course of business and would be allocated based on capacity ownership.

Additional terms and conditions may be incorporated into draft agreements as necessary and appropriate. The summary above is intended to provide a high-level overview of some key terms. MNWD and SMWD welcome the opportunity to work with our partners in developing, refining, expanding, or adjusting provisions to achieve the successful execution and implementation of new project facility agreements.

Next Steps

MNWD and SMWD are proposing to work with its partner agencies to execute the concepts and framework contained within this proposal. To do so, the next steps necessary to implement these provisions include, but are not limited to:

- Develop the necessary project agreements. MNWD and SMWD would propose to meet with the Participating Member Agencies and work with corresponding legal counsel to develop and finalize project agreements. A draft project agreement, similar to the Baker Water Treatment Plant, will be provided by MNWD and SMWD as a starting point for those discussions.
- Meet with the SOCWA employees and their representatives to discuss the process for transitioning staff to either MNWD or SMWD.

We anticipate there are additional steps necessary to advance these efforts forward, and we look forward to working with our partner agencies to identify and complete those steps. Additionally, we are happy to meet with the Participating Member Agencies to discuss any questions, concerns or considerations to facilitate moving the implementation of this proposal forward.