City of San Clemente

Recycled Water Quality Improvement Construction Project

WaterSMART: Drought Response Program: Drought Resiliency Projects for FY 2025
No. R25AS00013

Prepared For:
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Executive Summary

Date: October 7, 2024
Applicant Name: City of San Clemente
Applicant Category: A
Funding Group: Group 2
City: San Clemente
Project Length of Time: 24 months
County, State: Orange County, CA
Estimated Completion Date: 8/31/2027
Task: A
Located on a Federal Facility: No

The City of San Clemente (City) is a local municipality with water delivery authority and owns and operates an urban water system, which provides retail water services to approximately 65,000 people within a 14.3 square mile area located in Orange County in southern California. The City's water supplies have been subject to shortages because of recent and prolonged drought conditions which have severely impacted imported surface water supplied from the Sierra-Nevada Mountain range and Colorado River, due to the highly variable annual precipitation and snowpack. Recycled water makes for a great alternative source of water that is locally produced and takes advantage of already available wastewater that is otherwise lost to discharge into water bodies, resulting in wasting a valuable resource and polluting precious water bodies. The City currently produces 1,165 acre-feet per year (AFY) of recycled water that is used for landscaping irrigation purposes, which offsets 14% in potable water. However, the City is unable to produce more recycled water because it would exceed the Total Dissolved Solids (TDS) permit requirements. This funding request will provide for the installation of new microfiltration and reverse osmosis systems (MF/RO) at the City of San Clemente's Water Reclamation Plant (WRP) to meet the regulatory permit limits and triple the City's recycled water production to **3,360 AFY**. This locally sourced water will replace the need for imported supplies by the same amount and provide drought resiliency to the City as surface water supplies continue to become more vulnerable because of more frequent, prolonged and severe droughts that are resulting in unprecedented shortages in water deliveries. This amount of recycled water will allow the City to meet its existing demand of recycled water of 1,165 AFY, while also selling 2,195 AFY to Santa Margarita Water District's (SMWD).

As a retail water supplier, the City serves customers with potable with nearly 18,000 municipal connections for a population of approximately 65,000 people. The City primarily relies on imported water from the Metropolitan Water District of Southern California (MWD) delivered through its regional wholesaler, Municipal Water District of Orange County (MWDOC). MWD obtains its water from the Colorado River via the Colorado River Aqueduct (CRA) and from Northern California through the State Water Project (SWP). Imported treated water from MWD made up for 68% of the City's total supply in Fiscal Year 2019-20. The City also purchases imported water from Irvine Ranch Water District, which amounts to 13% of the total water supply. In addition, the City owns and operates two groundwater wells that account for 5% of its water portfolio. In FY2019-20, the City's total water production was 7,099 AF of potable

water (groundwater and imported) and 1,165 AF of direct recycled water for landscape irrigation and the 2014-2023 10-year annual average is 8,413.2 AF.

SMWD serves approximately 161,000 people within a 97.9 square mile are and 57,550 municipal water connections. The service area covers portions of the Cities of Mission Viejo, Rancho Santa Margarita, San Clemente, and the communities of Coto de Caza, Esencia, Ladera Ranch, Las Flores, Trabuco Canyon, Sendero, and Wagon Wheel. The City of San Clemente is located directly south of SMWD's service area. SMWD imports 80% of its total water supply and supplements the remaining 20% with recycled water for landscaping irrigation purposes. In FY2019-20, SMWD's total water production was 30,083 AF.

The City of San Clemente owns and operates a collection system and wastewater treatment facilities. Wastewater collected by the City is conveyed to its WRP, where the wastewater is treated and recycled or treated and disposed of in collaboration with South Orange County Waste Authority (SOCWA). Wastewater services provided by the City comprise approximately 84% of the area of the City boundaries. Since December 2017, the City has been receiving approximately 650,000 gallons per day of raw wastewater from SMWD's Talega service area through an interim Agreement with SMWD, which was finalized into a Long Term Agreement in September of 2022. The Long Term Agreement requires the City to provide wastewater treatment for 30 years and provide a minimum of 1,000 acre feet per year of recycled water with a TSD below 800 parts per million.

Table 1. 10-Year Average Water Supply

Year	Surface Water Total (Acre feet)	Agency Groundwater (Acre feet)	Recycled M&I Water (Acre feet)	Other (Acre feet)	Total (Acre feet)
2014	9,623.00		214.60	0	9,837.60
2015	7,436.40	363.40	709.20	0	8,509.00
2016	6,606.60	537.40	1,165.30	0	8,309.30
2017	6,781.60	454.40	1,414.10	0	8,650.10
2018	7,172.80	413.30	1,198.30	0	8,784.40
2019	6,490.50	528.40	930.80	0	7,949.70
2020	7,087.20	122.50	1,112.50	0	8,322.20
2021	7,210.30		1,111.60	0	8,321.90
2022	7,238.80		1,319.40	0	8,558.20
2023	6,186.50		702.60	0	6,889.10
Total Average Annual Water Supply for 2014-2023 in AFY					**8,413.2**

Project Location

The City of San Clemente spans 18.45 square miles in South Orange County, bounded to the south by San Diego County, to the west by the Pacific Ocean and to the north and east by the Cities of Dana Point and San Juan Capistrano and portions of unincorporated area of Orange County. The Recycled Water Quality Improvement Construction Project will be located at the City's WRP at 380 E. Avenida Pico, San Clemente, CA 92672. The Project latitude is 33°26'08.50"N, and longitude is 117°37'37.60"W. **Figure 1** and **Figure 2** depict the City of San Clemente and SMWD water service areas. **Figure 3** shows the WRP and Project location.

Figure 1. City of San Clemente's Service Area

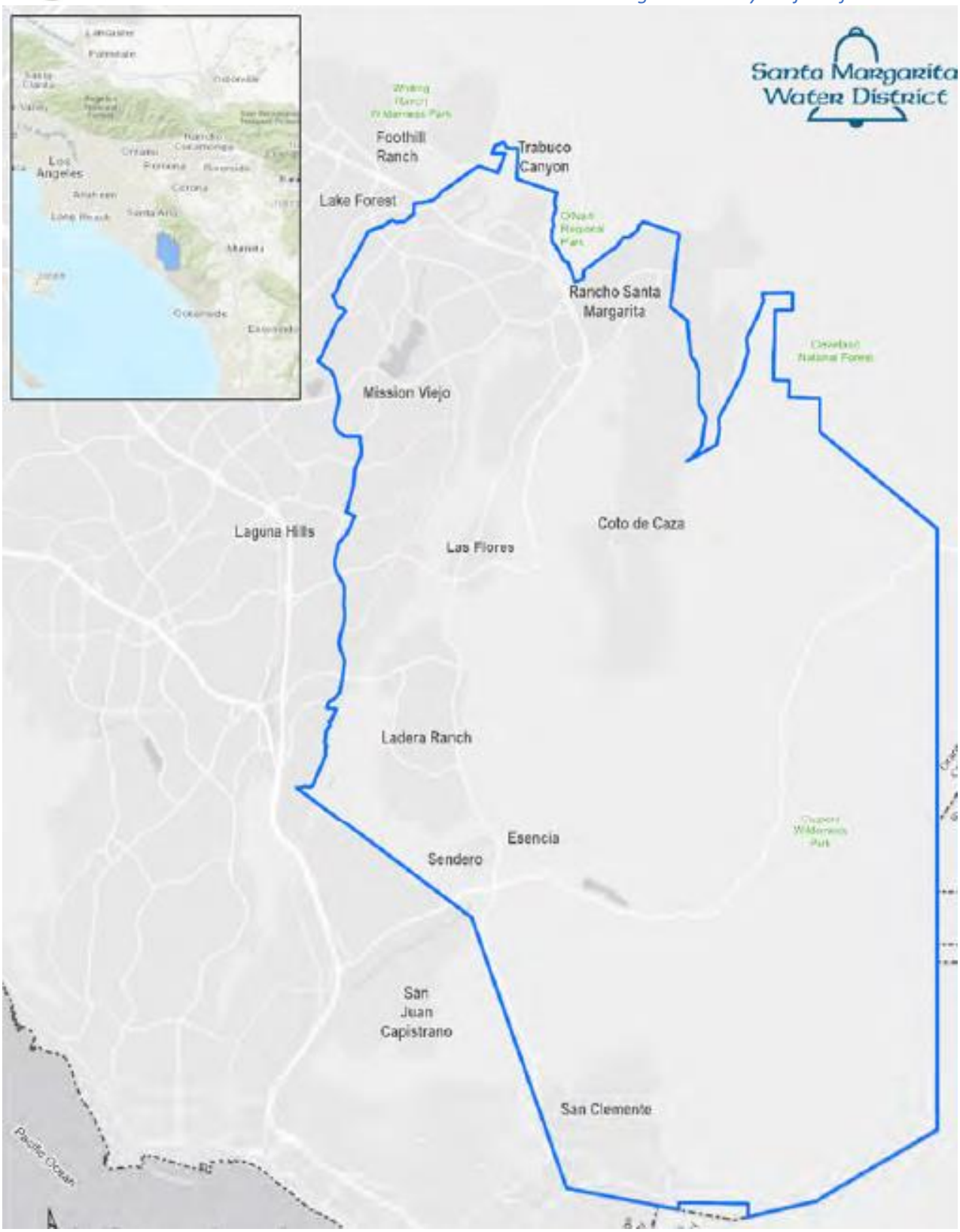

Figure 2. SMWD's Service Area

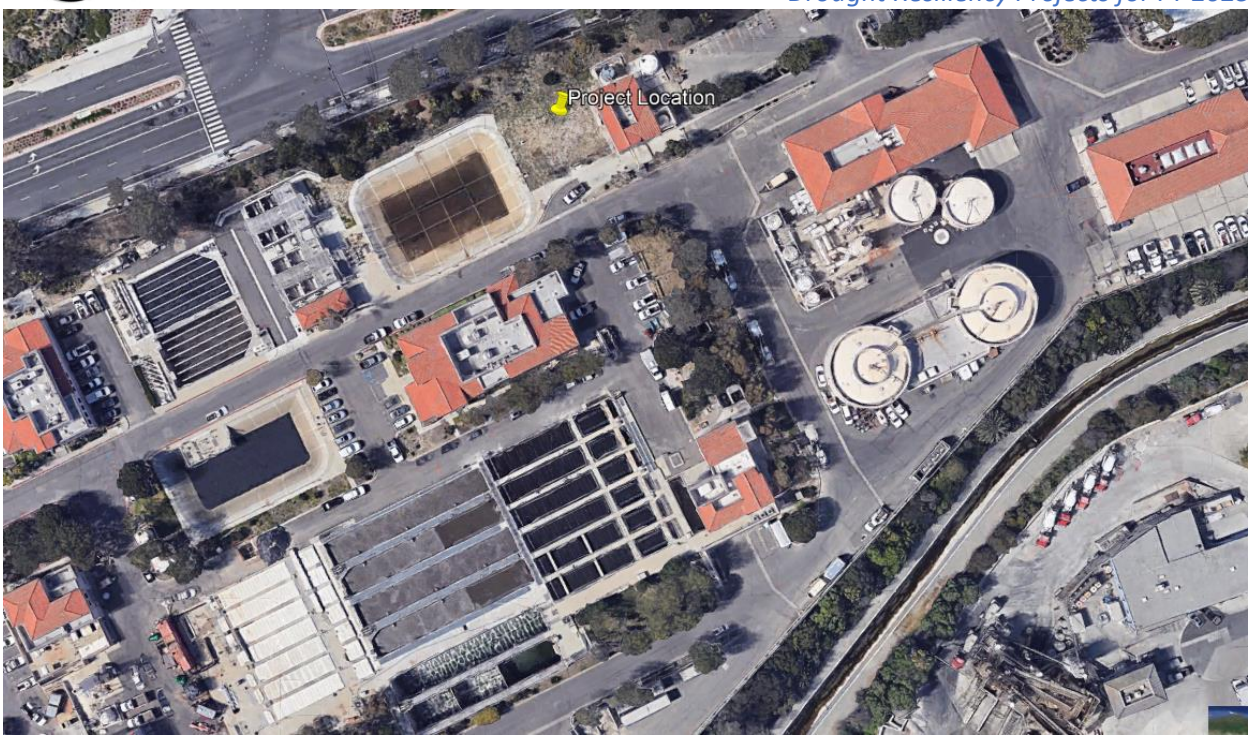

Figure 3. WRP and Project Location

Project Description

The City owns its sewer collection and distribution systems, which is composed of over 17,000 service laterals, 180 miles of gravity sewer mains, 12 pump stations, and 5 miles of pressure force mains. Wastewater is delivered to the City's WRP from two pump stations situated near the WRP. When wastewater is conveyed to the WRP, it first enters the headworks building for metering, screening, and grit removal. Flows are screened through bar screens to remove debris that can clog downstream piping and equipment, then conveyed to grit tanks to remove coarse and inorganic materials. Wastewater then goes through primary clarification followed by the secondary process. Most of the secondary effluent then flows through the land outfall to SOCWA Ocean Outfall for disposal.

The remaining portion of secondary effluent is diverted and pumped to the reclamation process to create recycled water. Reclamation provides further treatment beyond secondary and is commonly referred to as Tertiary Treatment. The process includes a chemical addition to promote the formation of floc. Flocculation is the aggregation of secondary effluent suspended solids into larger particles. The flocculated effluent is then filtered and disinfected by chlorine. The tertiary effluent (recycled water) is used within the plant and distributed offsite to City customers.

The City's WRP is capable of producing well over the needed volume of recycled water for City demands. In light of persistent and recuring drought conditions where imported water is continually becoming more vulnerable, the City would like to capitalize on the WRP's capacity

to produce more recycle water to sell a its neighboring agency, SMWD. However, the effluent currently being produced from the WRP surpasses Title 22 Recycled Water standards for total dissolved solids (TDS), and therefore exceeds both the City's and SMWD's permit requirements. In addition, the City entered into a Long Term Agreement with SMWD in September of 2022. The Long Term Agreement requires the City to provide wastewater treatment for 30 years and provide a minimum of 1,000 acre feet per year of recycled water with a TDS below 800 parts per million. Currently, excess recycled water is discharged into San Juan Creek Outflow, which is impacting ocean water quality.

To meet water contamination standards and offset the use of imported water, the Project will construct an MF/RO facility at the City's existing WRP. The quality of the recycled water will be improved regulatory levels by blending 1.2 million gallons per day (MGD) of MF/RO product water with 2.2 MGD of recycled water for a total product water of 3.0 MGD. This will allow the City to meet its recycled water demand of 1,165 AFY, while also importing up to 2,195 AFY of additional supply to SMWD. Therefore, the projected AFY capacity with the MF/RO Facility (meeting an 800 TDS level) will be 3,360 AFY.

The construction of the Project generally consists of the following improvements. The Project's cost estimate, included as **Appendix B**, contains an exhaustive list of the Project's construction items. Please also see **Figure 4** below for a site plan.

1. Construction contractor mobilization and demobilization.
2. Civil siter work, which includes demolition, clearing and grubbing, excavation, grading and yard piping.
3. Structural work to construct concrete pads, a retaining wall and a canopy.
4. Mechanical work, which includes all mechanical equipment, piping, fittings, valves and meters.
5. Electrical and instrumentation.

Figure 4. Project Site Plan

Applicant Category and Eligibility of Applicant

The City of San Clemente is a Public Water System and is regulated by the California State Water Resources Control Board – Division of Drinking Water that provides water services to 65,000 people within the City. The City has water delivery authority within its service area and is therefore a Category A applicant.

Evaluation Criteria

Evaluation Criterion A-Severity of Drought or Water Scarcity and Impacts (15 points)

Describe the severity of the impacts that will be addressed by the project:

- *Describe recent, existing, or potential drought of water scarcity conditions in the project area.*
  - *Is the project in an area that is currently suffering from drought or water scarcity, or which has recently suffered from drought or water scarcity? Please describe existing conditions, including when and the period of time that the area has experienced drought or water scarcity conditions. Include information to describe the frequency, duration, and severity of current or recent conditions. You may also provide information relating to historical conditions. Please provide supporting documentation (e.g., Drought Monitor, droughtmonitor.unl.edu).*

The City of San Clemente and its neighboring SMWD are located in semi-arid Southern California, which has been enduring frequent and intense drought conditions since the early 2000's, with the most intense drought (large portion of the region being in Category D3-Extreme Drought and Category D4-Exceptional Drought) being in early 2021 spanning until late 2022. In October 2021, Governor Gavin Newsom issued an executive order that extended the state of emergency due to severe drought conditions to Orange County. The Governor found that these conditions "caused by the drought, by reason of their magnitude, are or are likely to be beyond the control of the services, personnel, equipment, and facilities of any single local government and require the combined forces of a mutual aid region or regions to appropriately respond." The City is located in a hot-summer Mediterranean climate whose rain deficits have led to alarming droughts.

Although heavy snow and rainfall as of late 2022 and early 2023 improved drought conditions for the State, in the beginning of the 2023 Water Year (September 2022), 100% of Orange County was experiencing Category D-2 Severe Drought and some portions of the county are still abnormally dry. Prior to the 2023 wet season, Orange County, where the City of San Clemente is located, experienced a Category D2 – Severe Drought status. Please see **Figure 5** below for a map of the U.S. Drought Monitor from 11/8/2022. The most recent drought began in January 2020 with a low precipitation rainy season and worsened over the next couple of years to the Category D2 – Severe Drought designation for the region in 2022.

In addition to the most recent drought, the prior drought was only a few years before, between 2012 and 2017. The years 2012 to 2015 marked the driest four-year period in 120 years of historical records in California, along with historic high temperatures (California Department of Water Resources, 2015). The U.S. Drought Monitor (www.drought.gov) indicates that the longest duration of drought (D1-D4) in California since 2000 lasted 376 weeks beginning on December 27, 2011 and ending on March 5, 2019. The most intense period of drought was in July 2014 where D4 status affected 58% of California land. Additionally, between 1976 and 2021, California's population has almost doubled, from 22 million to 40 million, increasing pressure and demand on limited existing resources. Given the trend of recurrence, intensity and duration of droughts brought on by climate change, it is inevitable that the region will regularly experience severe droughts. Therefore, investing in alternative sources of water that are less vulnerable to drought such as groundwater is a crucial component in resiliency.

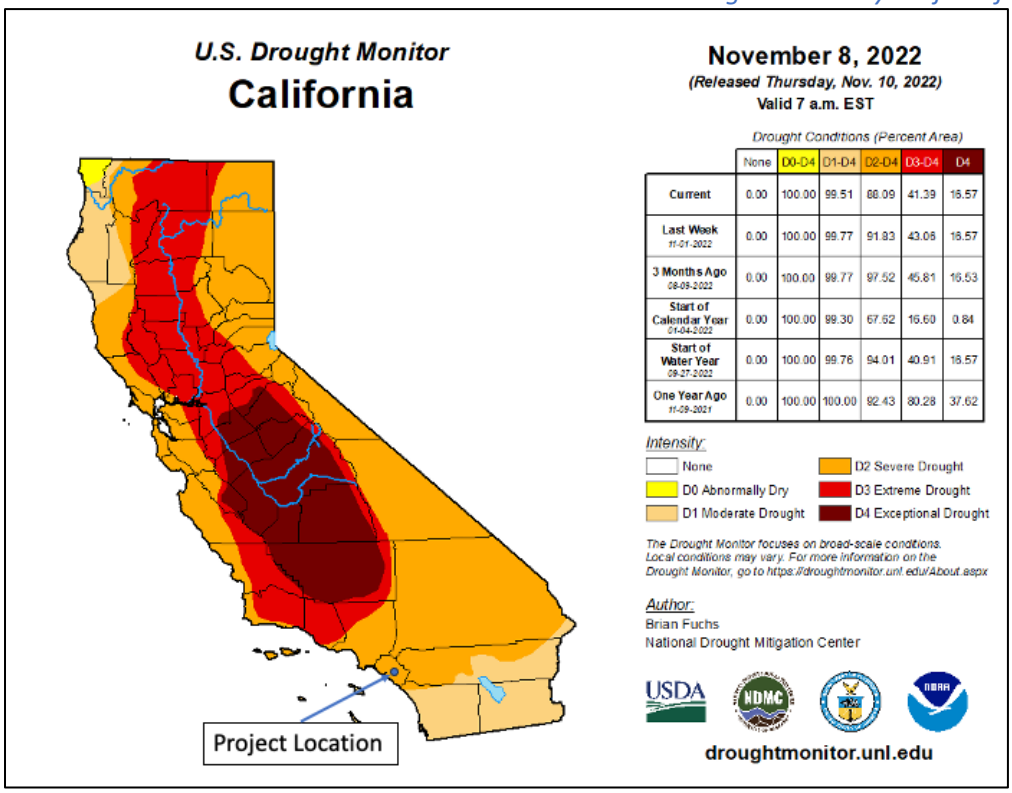

Figure 5. Region's Drought Status

- *Describe any projected increases to the severity or duration of drought or water scarcity in the project area resulting from changes to water supply availability and climate change. Provide support for your response (e.g., reference a recent climate informed analysis, if available).*

As shown in **Figure 5**, Orange County has endured several intense and long-lasting droughts since the early 2000's with the intensity increasing in the latest drought as the impacts of climate change became evident. Although the area is not currently impacted by severe drought conditions, given the historical patterns of drought and scientific data that shows that negative impacts of climate change are progressing faster than expected, future droughts are anticipated and must be prepared for.

Prior to the 2023 wet season, the entire western United States was in one of the categories of drought. Approximately 46% of California was classified as experiencing Exceptional Drought conditions. Although the 2023 wet season brought record setting precipitation and snowpack levels which lifted the City out of current drought conditions, climate scientists predicts that precipitation in the western United States will occur in shorter durations, but more intense when it occurs. This is exhibited by the 2023 wet season which had high intensity rain events, but receiving adequate precipitation and snowfall is always an uncertainty in the Western U.S. In fact, scientists predict that prolonged drought periods will continue to plague the Western U.S. as the impacts of climate change intensify.

Therefore, water sustainability projects that bolster the water management agencies' drought resiliency are critical to ensure an uninterrupted water supply.

- *What are the ongoing or potential drought or water scarcity impacts to specific sectors in the project area if no action is taken (e.g., impacts to agriculture, environment, hydropower, recreation, tourism, forestry), and how severe are those impacts? Impacts should be quantified and documented to the extent possible. For example, impacts could include, but are not limited to:*

  According to the U.S. Drought Monitor, the City experienced a Category D2 – Severe Drought until 11/8/2022. The previous drought gripped all of California with many parts designated at the highest level of Category D4 – Exceptional Drought, including the Sierra Nevada region where 30% of the state's water supplies originate. The last drought in the state was only a few years before that and took place between 2012 and 2017. Water forms the basis for many aspects of life such as drinking, cooking, hygiene, irrigation for agriculture, industry, and many other functions.

  During the 2014 drought was one of the driest time periods on record, where Category D4 drought conditions affected 58% of California land. California went through another abnormally dry period. Temperatures in various parts of the state have been at least 15 degrees above average since June 2020.

  The recent 2020-2022 severe drought in California has put tremendous pressure on the State's water allocation systems and shown that they are simply not capable of adapting to a sustained drought cycle. Statewide droughts have severely impacted both local water supplies as well as imported supplies from the Colorado River and the SWP, from which the City currently relies on for 68% of its water supply. Although the past two years saw significant amounts of rain and snow fall in California, the signs of climate change and its impact on droughts are abundantly evident. According to the National Oceanic and Atmospheric Administration (NOAA), California saw its hottest summer in 130 years in 2024. Climate projections by the Scripps Institution of Oceanography indicate that historical hot days will increase from just four now to 17 in Orange County by mid-century. Therefore, the impacts of climate on various aspects of life, the environment, recreation and other sectors are only anticipated to intensify.

  The past California drought has had a devastating impact on all aspects of the state. The economic impact of the drought to agriculture in California was an estimated **$2.7 billion and 21,000 total job losses in 2015 alone**. The loss of hydropower between October 2011 and October 2014 cost Californians **$1.4 billion**, as hydropower in the state was roughly cut in half. This lost hydropower was made up with the purchase and combustion of additional natural gas. The electricity ratepayers spent an additional $1.7 billion to purchase natural gas over the drought period, which resulted in an additional 13 million tons of CO2 emitted

into the air — about a 10 percent increase in total annual CO2 emissions from California power plants, thus having a detrimental impact on the state's air quality.

The California drought severely affected forestry and the wildlife that inhabit that environment. Of the 85 million acres in California classified as wildlands, nearly 17 million are commercial forest land, approximately half of which are owned by the government. New research using high-tech tools to measure the moisture in trees found that 120 million trees across nearly every part of California are at risk of dying. The California Department of Forestry and Fire Protection (CAL FIRE) reported 29 million confirmed dead trees. Governor Jerry Brown had issued a state of emergency in California because trees are dying, creating more fuel for wildfires. CAL FIRE has determined that trees and vegetation play an important role in the vitality of California urban communities, affecting property values, energy consumption, air quality, noise pollution, and wildlife.

Drought resiliency for the City and the region can be best provided by becoming less reliant upon imported water and improving operational flexibility. By expanding its recycled water supply, the City will get substantially closer to the goal of water supply reliability and sustainability. Without the Project, the City will continue to contribute to the demands on the limited and vulnerable supply of imported water that has already been severely compromised.

Additionally, the City is one of the premier surf spots on the West Coast, the City is a travel destination to visitors from worldwide. In addition to surfing, many visitors to the city enjoy 25 parks, 6.8 miles of ridgeline trails, 2.3 miles of coastal trails, several championship golf courses, and over 20 acres of beautiful beaches. All aspects of life and business rely on water. The presence of a sustainable and reliable source of water is needed for basic life functions, as well as for industry and manufacturing to run. If water supplies are drastically reduced during droughts, the economic impacts may be severe to businesses as evidenced in the massive losses resulting from the 2012-2017 drought.

The service areas for the City and SMWD are an integral part of the economy and livelihoods of many people that rely on this important source of income. The area is rich with historic missions, ranches operated as businesses that are open to the public and two large wilderness parks (Thomas F. Riley Wilderness Park & Ronald W. Caspers Wilderness Park). The area is also home to beaches that attract locals, regional visitors and international travelers. All of this tourism and recreation industry is critically dependent on the availability of a reliable source of water. Drastic cuts in water in drought times may have a detrimental impact on these industries and potentially a complete loss of these valuable resources along with the related jobs.

- *Whether there are public health concerns or social concerns associated with current or potential conditions (e.g., water quality concerns including past or potential violations of drinking water standards, increased risk of wildfire, or past or potential shortages of*

drinking water supplies; does the community have another water source available to them if their water service is interrupted?).

The Project will construct an MF/RO facility at the City's existing WRP. The quality of the regulatory levels of recycled water will be significantly improved by blending 1.2 million gallons per day (MGD) of MF/RO product water with 2.2 MGD of recycled water for a total product water of 3.0 MGD. The City of San Clemente is a coastal town and reduction of treated water discharge will be an improvement to the water quality of the beaches along the City and its residents and many visiting tourists.

According to the Centers for Disease Control and Prevention (CDC), severe drought conditions can negatively affect air quality. During droughts, there is an increased risk for wildfires and dust storms. Particulate matter suspended in the air from these events can irritate the bronchial passages and lungs. This can make chronic respiratory illnesses worse and increase the risk for respiratory infections like bronchitis and pneumonia. Some drought-related health effects are experienced in the short-term and can be directly observed and measured. However, the slow rise or chronic nature of drought can result in longer term, indirect health implications that are not always easy to anticipate or monitor.

The public health and social concerns associated with drought conditions include the following: 1) Compromised quantity and quality of drinking water, 2) Increased recreational risks, 3) Effects on air quality, 4) Diminished living conditions related to energy, air quality, and sanitation and hygiene, 5) Compromised food and nutrition, 6) Increased incidence of illness and disease due to impacts on sanitation and hygiene, and 7) reduce fire suppression capabilities.

As mentioned above, temperatures in the region are getting hotter with summer 2024 being the hottest in 130 years. Climate projections by the Scripps Institution of Oceanography indicate that historically hot days will increase from just four now to 17 by mid-century in Orange County.

The water supply from the SWP and Colorado River is the most vulnerable because of the high demand and the recurring droughts brought on by climate change. The City relies on 68% of its water from imports, that is subject to reduction by MWD. Yet, in the 2019 State Water Project Delivery Capability Report, the member agencies could only receive up to 58% of their maximum allowable deliveries of water, although 2019 was a normal, non-drought year. Recycled water is a great alternative to other sources of water that are vulnerable to climate conditions and droughts as recycled water can always be available since its source is wastewater that is continually generated. The Project capitalizes on this valuable opportunity and triples the City's production of recycled water to meet its own demand and import to its neighboring water agency twice that amount to reduce reliance on imported water and build resiliency to droughts.

- *Whether there are ongoing or potential environmental impacts (e.g., impacts to endangered, threatened or candidate species or habitat).*

The City and SMWD receive their surface water imports primarily from the SWP and CRA. SWP transports water that originates in the Sierra Nevada Mountains, flows through a network of rivers and streams and is stored in lakes and reservoirs. The water from the lakes and reservoirs then flows down natural river channels into the Delta. The Delta is a complex network of channels and reclaimed islands at the confluence of the Sacramento and San Joaquin Rivers. The SWP and the federal Central Valley Project (CVP) use Delta channels to convey water to the southern Delta for diversion, making the Delta a focal point for water distribution throughout the state. According to the Lessons From California's 2012-2016 Drought article published by the American Society of Civil Engineers (ASCE) in 2018, California supports 129 species of freshwater fish. Approximately two-thirds of these species are found only in California. Most of these species are either currently endangered or at risk of becoming endangered (Moyle et al. 2011, Hanak et al. 2015b). Low flows and high temperature from the drought reduced water quality impaired habitat for native fish species. The Delta is an ecologically sensitive habitat, which is home to various species listed under the Federal and State Endangered Species Acts.

Project implementation will reduce the amount of water used that originates from Northern California stream systems. Covering an area of approximately 1,600 square miles, the Delta provides a habitat for more than 500 species of fish and wildlife. In 2013, the Bay Conservation Plan was released and identified over 30 species that are not federally listed that are potentially impacted by withdrawals from the Delta system through the SWP. These species are impacted by the operation of the SWP. Pumping from the Delta for SWP deliveries can reverse the flow of the Delta, capture fish species in pumping equipment, and increase saltwater intrusion. Decreasing reliance on the importation of Delta water could help alleviate these impacts on the Delta's ecosystem and help restore habitat for all species within the Delta's ecosystem.

- *Whether there are local or economic losses associated with current water conditions that are ongoing, occurred in the past, or could occur in the future (e.g., business, agriculture, reduced real estate values).*

In 2015, the drought in California cost the state's economy **$2.7 billion and nearly 21,000 jobs** according to a study from the University of California-Davis. During the recent drought, the state issued mandatory water restrictions. The water rationing measures imposed by the state ironically made the per-unit cost of water higher since the "fixed costs" of the pipes and pumps did not change, but the amount of water sold went down. In order for water districts to recover their costs, they needed to charge the ratepayers more per unit for water.

The Project area, which encompasses the City of San Clemente and SMWD, is primarily residential with light industry and manufacturing done in Rancho Santa Margarita Business Park and Talega Business Park. All aspects of life and business rely on water. The presence of a sustainable and reliable source of water is needed for basic life functions, as well as for industry

and manufacturing to run. If water supplies are drastically reduced during droughts, the economic impacts may be severe to businesses as evidenced in the massive losses resulting from the 2012-2017 drought.

The service areas for the City and SMWD are an integral part of the economy and livelihoods of many people that rely on this important source of income. The area is rich with historic missions, ranches operated as businesses that are open to the public and two large wilderness parks (Thomas F. Riley Wilderness Park & Ronald W. Caspers Wilderness Park). The area is also home to beaches that attract locals, regional visitors and international travelers. All of this tourism and recreation industry is critically dependent on the availability of a reliable source of water. Drastic cuts in water in drought times may have a detrimental impact on these industries and potentially a complete loss of these valuable resources along with the related jobs.

- *Whether there are other water-related impacts not identified above (e.g., tensions over water that could result in a water-related crisis or conflict).*

Water is a precious commodity in naturally semi-arid southern California where the Project area is located. Over the past 100 years, the "Lower Basin" states of the Colorado River Compact (which include Nevada, Arizona, and California) have long battled over water rights to the Colorado River. As water becomes more scarce tensions such as these are expected to escalate. Several agencies in Central Valley started a lawsuit against the SWRCB in 2020 and the California Department of Water Resources (DWR) for curtailment of surface water and groundwater resources, respectively.

Additionally, the Bureau of Reclamation declared a Tier 2 shortage for 2023 Colorado River allocations which prompted the Biden Administration to distribute the cuts across the upper and lower basin states. The imposed cuts were not agreed to by all the states as California for months resisted the amount imposed and was in fierce negotiations in trying to reduce them, but finally agreed. This is just one recent example that demonstrates the sensitivity of the water issue in the U.S. Southwest and how the scarcity of this precious resource almost automatically triggers disputes. There are also numerous lawsuits in recent years brought on by farm growers, advocacy groups, environmental organizations and others, some arguing for more water allocations and some for cuts.

During drought times, when the water supply from the SWP and the Colorado River is at its lowest, agencies that do not have sufficient locally produced, sustainable water are likely to experience tensions and potential conflict amongst them. The Project will result in the tripling of a locally sourced, sustainable source of water for improving resiliency to droughts and shortages aims to reduce or eliminate such tensions and conflicts over water and the Project is a substantial part of the solution.

Evaluation Criterion B- Project Benefits (30 points)

Sub-criterion B.1. Project Benefits (Task A, B, D only)

This section of the criterion is to assess the significance of the project in advancing drought resiliency or mitigating water scarcity through augmenting and diversifying water supplies, thus improving water supply reliability.

- *What is the estimated quantity of additional supply the project will provide and how was this estimate calculated? Clearly state this quantity in AFY as the average annual benefit over ten years (e.g., if the project captures flood flows in wet years, state this and provide the average benefit over ten years or longer including dry years).*

The Project will produce 3.0 MGD of treated recycled water, which translates into **3,360 AFY**.

- *What percentage of the total water supply does the project's water yield represent? How was this estimate calculated? It is recommended to use your 10-year average that was presented in the Executive Summary to calculate this percentage. It is recommended to use the following chart:*

The total project yield is 3,360 AFY based on the treatment system's daily production. The portion of the recycled water production that the City will keep is 1,165 AFY. Therefore, the Project's percentage yield for the City is 13.8%. However, the City will sell 2,195 AFY of new recycled water to SMWD. The average annual water supply is 32,086 AFY. Therefore, the Project's percentage yield for SMWD is 6.8%.

Table 2. City Project Yield

Total Project Water Yield in AFY	1,165
Average Annual Water Supply in AFY	8,413.2
Percentage Yield	13.8%

Table 3. SMWD Project Yield

Total Project Water Yield in AFY	2,195
Average Annual Water Supply in AFY	32,086
Percentage Yield	6.8%

- *How will the project build long-term resilience to drought or other water reliability issues? Include factors such as the predictability of supply, variability in availability, and the likelihood of interruptions or failures.*

The Colorado River, which originates in the Colorado Rocky Mountains has been a very consistent source of water for seven Western U.S. states and Mexico until recently. There has been a prolonged 21-year warming and drying trend that is pushing one of the nation's largest water supplies to record lows. Due to the low levels of water, in August 2021, the Federal Government declared a Tier 1 water shortage in the Colorado River for the first time ever. This

declaration means an actual reduction in the amounts of water that Arizona, Nevada and Mexico can claim from the river. This was followed by a Tier 2 declaration in 2022 and most recently in August 2024 another Tier 1 declaration that required states to agree to additional cuts in water deliveries from the Colorado River.

The water in the SWP originates in the snowpack in the Sierra Nevada Mountain range. The snowpack, which gradually melts in the spring and summer flows down rivers and aqueducts and into lakes and reservoirs around the state where the water gets treated for human use. However, the once reliable Sierra Nevada Mountains in Northern California with consistent rain and snow fall have experienced regular droughts in the last decade. The last longest severe drought to affect California occurred between 2012-2017 with 2013-2014 having extraordinarily dry conditions. In the 2021 State Water Project Delivery Capability Report, the SWP member agencies could only receive up to 56% of their maximum allowable deliveries of water, which is a 2% decrease from the maximum allowable deliveries of water reported in the 2019 State Water Project Delivery Capability Report (58%).

All scientific research, as well as actual drought patterns in recent years, indicate the frequency, severity and duration of droughts are increasing. Severe droughts affecting California have been occurring more often starting with severe droughts of 2012-2017 with 2013-2014 having extraordinarily dry conditions and repeating again from 2021-2023. In the 2019 State Water Project Delivery Capability Report, the member agencies could only receive up to 58% of their maximum allowable deliveries of water, although 2019 was a normal, non-drought year.

The high demand for imported water supplies by member agencies and the variability in the availability of this precious resource makes it unreliable, especially during droughts. Therefore, water agencies must take concrete actions towards a sustainable water future to ensure that the critical water resource, which people rely on for their health, wellbeing and livelihoods, is reliably available in all years. Recycled water makes for a great alternative source of water that is locally produced and takes advantage of already available wastewater that is otherwise lost to discharge into water bodies, resulting in wasting a valuable resource and polluting precious water bodies. The Project is exactly in line with this objective, which shifts the City and SMWD towards a local water source that is more resilient, reliable and sustainable. This gives the two agencies much more operational flexibility and enhances water management to enable the appropriate response during droughts.

- *How many years will the project continue to provide benefits?*

The Project has an expected useful life of 50 years.

- *Provide a qualitative description of the degree/significance of the benefits associated with the additional water supplies.*

The implementation of the Project will allow the City to make available a substantial amount of sustainable, locally sourced water for the City and SMWD service areas regardless of any

conditions affecting the availability of imported SWP / CRA water. This increase in operational flexibility assists the City and SMWD in addressing ongoing water shortages during prolonged drought conditions that limit imported water deliveries from the SWP / CRA. imported water from the SWP / CRA is received from the Delta and the Colorado Rive, which are subject to increasing shortages in the future as droughts worsen and become more frequent. The growing threat of losing imported water supplies has prompted the City to pursue alternative water supply projects, such as the Project, to ensure sustainable local water is available in droughts.

Pursuant to DWR, an urban water supplier that anticipates participating in or receiving water from a proposed project (or "covered action") such as a multi-year water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water from the Delta should provide information in their 2015 and 2020 UWMPs for use in demonstrating consistency with Delta Plan Policy WR P1: "Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance". In addition, California Code of Regulations Title 23, § 50 partially states: "Included in the Plan, commencing in 2015, the expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance". The Project directly contributes to the State of California's goal of reducing reliance on SWP water and building local and sustainable resources to provide water.

Below is a qualitative summary of the Project benefits:

1. Help the City and SMWD further their goal of building resiliency to droughts by providing a reliable and sustainable source of a large amount of water, particularly in dry years.
2. Reduce community exposure to water contaminants through the Project's MF/RO water treatment component.
3. The additional source of water gives the City and SMWD more flexibility in supplying water during droughts, thereby enabling it to better manage its water resources.
4. Partially mitigate for increased regulatory/environmental flow requirements for the Sacramento - San Joaquin Delta.
5. Reduce the need to purchase expensive imported water supplies during exceptionally dry periods when this resource is at the lowest available quantity.
6. The Project supports the state's goal of shifting to more reliable and sustainable sources of water, which gives water agencies more operational flexibility in how to allocate and supply water during droughts.

- *How will the project supply help buffer against water shortages, reduce the need for emergency responses, and enhance the resilience of water systems?*

The Project will source water from a local resource that is sustainable and consistent in its availability even during dry years, when water from the SWP / CRA is at its most vulnerable and scarce. During an intense drought when the SWP / CRA deliveries will inevitably be drastically

cut, the Project will make the City and SMWD reliant on the imported water in a substantially less proportion. By increasing the local water supply by 13.8%, SWP / CRA water cuts will have minimal impact on the City and SMWD's operations and will greatly reduce the need for emergency responses such as steep cuts in water supply to the service area's customers and the pressure to search for other sources of water.

Sub-criterion B.3. Additional Project Benefits (All tasks)

Sub-criterion B.3.a. Climate Change

- *In addition to drought resiliency measures, does the proposed project include other natural hazard risk reductions for hazards such as wildfires or floods?*

Wildfires constitute a major hazard and pose a serious risk to life and property in California. With droughts becoming more intense and frequent in recent years, so are wildfires. Dry years, when water is at its scarcest, witness more wildfires. Therefore, any additional water resources, such as what the Project will produce, are critical for fighting wildfires and minimizing their spread and the associated risk to human life and property.

- *Will the proposed project establish and use a renewable energy source?*

Not applicable.

- *Will the proposed project reduce greenhouse gas emissions by sequestering carbon in soils, grasses, trees, and other vegetation?*

Not applicable.

- *Does the proposed project include green or sustainable infrastructure to improve community climate resilience?*

Importing water through the SWP / CRA involves conveyance for long distances using mechanical equipment that runs on electricity or fossil fuels. The Project will make a local water source available, traveling only a short distance to reach the service area's customer, which will require significantly less energy to convey.

In addition, the SWP / CRA provides a substantial source of water for many agencies in California but has been subject to shortages in recent years. The implementation of the Project will institute a locally sourced supply of water that is always available regardless of drought conditions and the resulting pressures on water agencies, which ultimately provides the City and SMWD operational flexibility and drought resilience. Therefore, the Project can be classified as sustainable infrastructure improving the two agencies' community climate resilience.

- *Does the proposed project seek to reduce or mitigate climate pollution such as air or water pollution?*

According to the CDC, severe drought conditions can negatively affect air quality. During droughts, there is an increased risk for wildfires. Particulate matter suspended in the air from these events can irritate the bronchial passages and lungs. This can make chronic respiratory illnesses worse and increase the risk for respiratory infections like bronchitis and pneumonia. Some drought-related health effects are experienced in the short-term and can be directly observed and measured. However, the slow rise or chronic nature of drought can result in longer term, indirect health implications that are not always easy to anticipate or monitor. The Project provides a reliable source of water even during droughts, which enables the irrigation of important vegetation to continue. Vegetation cover is critical to keeping soil pollutants from contaminating the air in dry conditions.

Temperatures in the region are getting hotter with summer 2024 being the hottest in 130 years. Climate projections by the Scripps Institution of Oceanography indicate that historically hot days will increase from just four now to 17 by mid-century in Orange County. The Project area is located in a dry climate, which is naturally arid and is susceptible to high winds that cause dust to rise up and cause air pollution. Therefore, it is especially important to maintain healthy vegetation to mitigate the effects of dust and pollutants in the air.

- *Does the proposed project have a conservation or management component that will promote healthy lands and soils or serve to protect water supplies and its associated uses?*

The proposed Projects will provide a buffer against drought and climate change, and contribute to reliable water supplies regardless of weather patterns. The significance of reliable water supplies that buffer the community against drought are numerous. The Project replaces a vulnerable water source that diverts water from ecologically sensitive lands across California. This creates substantial environmental impacts to important ecosystems. Instead, the Project takes advantage of a local water source that is sustainable, and conserves imported surface water in the same amount, which can remain for beneficial uses in the Delta and Colorado River.

- *Does the proposed project contribute to climate change resiliency in other ways not described above?*

By implementing the Project, the City and SMWD will improve their ability to meet the demands during drought events with increased use of local water. This will result in reduced water demand from imported water, improve operational efficiency and transfers, increase local water supply, improve water quality, enhance resource stewardship, support regional water management resiliency during drought events, and aggressively increase resource efficiency by using water that is otherwise wasted.

Sub-criterion B.3.b. Ecological Benefits

- *Does the project seek to improve the ecological resiliency of a wetland, river, or stream in the face of climate change? Provide a narrative discussion, quantification, and metrics to support the anticipated improvements in ecological resilience.*

The City and SMWD receive their surface water imports primarily from the SWP and Colorado River. SWP transports water that originates in the Sierra Nevada Mountains, flows through a network of rivers and streams and is stored in lakes and reservoirs. The water from the lakes and reservoirs then flows down natural river channels into the Delta. The Delta is a complex network of channels and reclaimed islands at the confluence of the Sacramento and San Joaquin Rivers. The SWP and the federal Central Valley Project (CVP) use Delta channels to convey water to the southern Delta for diversion, making the Delta a focal point for water distribution throughout the state. The Delta is an ecologically sensitive habitat, which is home to various species listed under the Federal and State Endangered Species Acts. The Project directly offsets the use of 3,360 AFY from the SWP and Colorado River, thus retaining that amount of water in the Delta to support this critically sensitive habitat and its species.

- *Identify ecological benefits expected to result from project implementation. Provide a narrative discussion, quantification, and metrics addressing, as applicable, the types and status of species benefited, acreage of habitat improved, restored, or protected, the amount of additional stream flow added, and the improvements in relevant water quality metrics? Support all metrics and quantifications with appropriate calculations.*

In 2008, the Fish and Wildlife Service issued a biological opinion which determined that the continued operation of the SWP was likely to jeopardize the continued existence of the Delta Smelt, a small fish that lives in the Delta and adversely modify its critical habitat. Delta Smelt, among other endangered species, are adversely affected by exportation of fresh water from the Delta. Delta water salinity levels continue to increase, without sufficient freshwater replenishment, thus recent population samples, in an area which typically yielded 50 to 100 smelt fish, now present only six fish, with increased water salinity cited as a major contributing factor.

The Project will provide 3,360 AFY of local water supply, which in turn reduces the amount of imported water by the same amount when the demand is at its highest-level during drought periods. Any amount of water not diverted from the Delta is crucial and reduced reliance on imported water from the SWP will contribute to preserving the Delta Smelt habitat. There are also other species in the San Joaquin River Basin that are either threatened or endangered such as the steelhead fish and the spring-run Chinook salmon.

- *Will the proposed project reduce the likelihood of a species listing or otherwise improve the species status? Identify the species of interest, explain how the project will positively impact the species and potential contribute to delisting.*

The Project contributes to reducing the diversion of water from the Delta and any savings in Delta water is crucial to sustaining sensitive and listed habitat, especially in the current dire conditions of water resources in California. Supporting projects such as the Project, which use local sustainable water that reduce diverting water away from sensitive water bodies will ultimately result in substantial benefits to the survival and recovery of endangered species. Many of the endangered species need higher volumes of water and lower temperatures to survive. Any incremental increase of water helps provide these necessary conditions for the endangered species.

Sub-criterion B.3.c. Other Benefits

This sub-criterion will be scored based on any additional project contributions to addressing water sustainability. For example (but not limited to):

- *Will the project benefit multiple sectors and/or users (e.g., agriculture, municipal and industrial, environmental, recreation, or others)? Describe the associated sector benefits.*

The City and SMWD serve a population of nearly 230,000 people that reside and work within their service area. The service areas include residential, commercial, industrial, institutional, governmental, and recreation/tourism uses with an overall total of over 75,550 connections. The Project will allow the two agencies to optimize the use of local water supplies. The Project will benefit all users by ensuring water is available, especially during droughts when reliability of imported supplies is uncertain. Water is the essential component for basic human health and safety including drinking, cooking, hygiene, and recreation. It is also a critical ingredient in operating businesses and enabling industrial uses, thus preserving the residents' livelihoods.

- *Will the project benefit a larger initiative to address sustainability?*

The State of California has been planning for drought resiliency for many years. The latest initiative is Executive Order Number N-10-19 issued by Governor Gavin Newsom. Specifically, the initiative aims to develop resiliency to droughts and manage the state's water resources in a sustainable manner into the future. The action plan that builds upon the Governor's Executive Order is the California Water Resilience Portfolio dated July 2020. The Portfolio establishes policies and objectives to prepare the state for a water secure future. Three of the four objectives of the Portfolio are: 1) Maintain and diversify water supplies; 2) Protect and enhance natural ecosystems; and 3) Be prepared. The Project gives a reliable source of water to the City and SMWD, adding a substantial proportion of water to the agencies' supply, reducing reliance on the Delta water to save the ecosystem at source. Therefore, the Project contributes to all three of the above objectives, furthering this larger initiative.

- *Will the project help to prevent a water-related crisis or conflict? Is there frequently tension or litigation over water in the basin?*

Water is a precious commodity in naturally semi-arid southern California where the City and SMWD service areas are located. Over the past 100 years, the "Lower Basin" states of the Colorado River Compact (which include Nevada, Arizona, and California) have long battled over water rights to the Colorado River. As water becomes more scarce tensions such as these are expected to escalate. Several agencies in Central Valley have started a lawsuit against the SWRCB in 2020 and DWR for curtailment of surface water and groundwater resources, respectively.

Additionally, the Bureau of Reclamation declared a Tier 2 shortage for 2023 Colorado River allocations which prompted the Biden Administration to distribute the cuts across the upper and lower basin states. The imposed cuts were not agreed to by all the states as California for months resisted the amount imposed and was in fierce negotiations in trying to reduce them, but finally agreed. This is just one recent example that demonstrates the sensitivity of the water issue in the U.S. Southwest and how the scarcity of this precious resource almost automatically triggers disputes. There are also numerous lawsuits in recent years brought on by farm growers, advocacy groups, environmental organizations and others, some arguing for more water allocations and some for cuts.

The above examples demonstrate the ongoing tensions over the precious water resource. During drought times, when the water supply from the SWP and the Colorado River is at its lowest, agencies that do not have the flexibility to provide water from other sustainable water sources are likely to experience tensions and potential conflict amongst them. Since the two agencies rely on imported water to meet demands, the Project contributes to the goal for increased water distribution flexibility, which in turn aims to reduce or eliminate such tensions and conflicts over water.

Evaluation Criterion C-Planning and Preparedness (15 points)

- *Plan Description and Objective: Is your proposed project supported by a specific planning document? If so, identify the plan by name and describe the plan, including:*
  - *When was the plan developed? How often is it updated?*
  - *What is the purpose and objective of the plan?*
  - *What is the geographic scope of the plan?*
  - *Explain how the applicable plan addresses drought.*
  - *For Tasks A-C, describe the plan's drought-focused elements (e.g., a system for monitoring drought, drought projections that consider climate change, vulnerability assessments, identification of drought mitigation projects, drought response actions, and an operational and administrative framework).*

The San Clemente's 2020 Urban Water Management Plan (UWMP) is the result of the latest comprehensive planning efforts carried out by the City. The 2020 UWMP is a detailed document that gets updated every five years and evaluates water resources for the next 30 years. The Plan's projections for water supply and demand center around anticipated future

droughts as evidenced by the recent change in climate patterns, current water use factors and total population projections based on land use trends within the service area. Chapter 8 of the UWMP encompasses the City's 2020 Water Shortage Contingency Plan (WSCP), which outlines a specific response to droughts and the Water Service Reliability and Drought Risk Assessment, which outlines the proactive measures to mitigate threats to the City's water supplies in the case of an actual water shortage contingency. The City's plan for water usage during periods of shortage is designed to incorporate six standard water shortage levels corresponding to progressive ranges from up to a 10, 20, 30, 40, and 50 percent shortage, and greater than a 50 percent shortage. The WSCP details water shortage action planning as it provides real-time water supply availability assessment and structured steps designed to respond to actual conditions. This level of detailed planning and preparation will help maintain reliable supplies and reduce the impacts of interruptions. The WSCP contains a water supply reliability analysis, annual water supply and demand assessment procedures, six standard water shortage levels, shortage response actions, communication protocols, compliance and enforcement, financial consequences of WSCP, WSCP refinement procedures, and special water feature distinction.

Section 7 of the UWMP contains a Water Service Reliability and Drought Risk Assessment (WSRDRA) which identifies threats to the City's water supplies and provides proactive steps to mitigate threats to the City's water supply. Specifically, it provides an overview of the City's water service reliability, factors that affect the City's water service reliability (such as climate change, regulatory restrictions, water quality issues, and others), and drought management tools that address the identified factors. Section 7 of the UWMP provides an overview of the actual and potential threats to the City's water supplies and how those threats can be mitigated against, which water supply flexibility is identified as a proactive solution. Section 7.4 states one of the strategies as "Increased use of recycled water: MWDOC partners with local agencies in recycled water efforts, including OCWD to identify opportunities for the use of recycled water for irrigation purposes, groundwater recharge and some non-irrigation applications. OCWD's GWRS and Green Acres Project (GAP) allow Southern California to decrease its dependency on imported water and create a local and reliable source of water that meet or exceed all federal and state drinking level standards. Expansion of the GWRS is currently underway to increase the plant's production to 130 MGD, and further reduce reliance on imported water."

- *Plan Development Process: Was the plan(s) developed through a collaborative process? Describe the process including the following:*
  - *Who was involved in developing the plan? Identify specific entities or organization and describe their involvement.*
  - *Was the plan was prepared with input from stakeholders with diverse interests (e.g., water, land, or forest management interests; and agricultural, municipal, Tribal, environmental, and recreation uses)? Describe the process used for interested stakeholders to provide input during the development of the plan.*

- *If the plan was prepared by an entity other than the applicant describe whether and how the applicant was involved in the development of the plan or why they were not part of the planning process.*

The City, as a retail water supplier, coordinated this UWMP preparation effort with other key entities, including MWDOC (regional wholesale supplier for Orange County), MWD (regional wholesaler for Southern California and the direct supplier of imported water to MWDOC), and SOCWA (agency that assists in the collection and disposal of the City's wastewater). The City also developed this Plan in conjunction with other MWDOC led efforts such as population projection from the Center for Demographic Research at California State University Fullerton (CDR).

Some of the key planning and reporting documents that were used to develop this UWMP are:

- MWDOC's 2020 UWMP provides the basis for the projections of the imported supply availability over the next 25 years for the City's service area.
- MWDOC's 2020 WSCP provides a water supply availability assessment, and structured steps designed to respond to actual conditions that will help maintain reliable supplies and reduce the impacts of supply interruptions.
- 2021 OC Water Demand Forecast for MWDOC and OCWD Technical Memorandum (Demand Forecast TM) provides the basis for water demand projections for MWDOC's member agencies as well as Anaheim, Fullerton, and Santa Ana.
- MWD's 2020 Draft Integrated Water Resources Plan (IRP) is a long-term planning document to ensure water supply availability in Southern California and provides a basis for water supply reliability in Orange County.
- MWD's 2020 UWMP was developed as a part of the 2020 IRP planning process and was used by MWDOC as another basis for the projections of supply capability of the imported water received from MWD.
- MWD's 2020 WSCP provides a water supply assessment and guide for MET's intended actions during water shortage conditions.
- Local Hazard Mitigation Plan provides the basis for the seismic risk analysis of the water system facilities.
- Orange County Local Agency Formation Commission's 2020 Municipal Service Review for MWDOC Report provides comprehensive review of the municipal services provided by MWDOC.
- Water Master Plan and Sewer Master Plan of the City provide information on water infrastructure planning projects and plans to address any required water system improvements.

The City also encouraged community and public interest involvement in the plan update through a public hearing and inspection of the draft document on June 15, 2021. As part of the public hearing, the City discussed adoption of the UWMP, SBx7-7 baseline values, compliance

with the water use targets (Section 5), implementation, and economic impacts of the water use targets (Section 9). Copies of the draft Plan were available on the City's website and in hardcopy format by appointment with the Utilities Director. Public hearing notifications were published in local newspapers and mailed to neighboring water agencies.

- *Plan Support for Project: Describe to what extent the proposed project is supported by the identified plan, including:*
  - *Does the plan identify the proposed project by name and location as a potential mitigation or water management action?*
  - *Explain how the proposed project was prioritized in the plan over other potential projects/measures.*
  - *If the proposed project is not specifically identified in the plan, does implementing the proposed project achieve a goal or need identified in the plan? Is the supported goal or need prioritized within the plan? If so, how is it prioritized?*

Chapter 6 of the UWMP discusses the optimization of recycled water use and specifically identifies the agreement with SMWD as a component of the plan. Please see language from Section 6.6.6 cited below and **Appendix C** for this section of the plan.

"The City has advocated the use of recycled water since 1957 and requires recycled systems where applicable and feasible. Using recycled water also provides customers with a more reliable supply of water that is not subject to water supply allocations imposed by MET or MWDOC. The City will conduct future cost/benefit analyses for recycled water projects and seek creative solutions to facilitate the conversion of dedicated irrigation accounts from potable to recycled water, in coordination with MWDOC, MET and other cooperative agencies. These include solutions for funding, regulatory requirements, institutional arrangements, and public acceptance.

The City and Santa Margarita Water District (SMWD) are currently developing an agreement for the sale and purchase of recycled water between the agencies. The proposed interconnection will allow for the distribution of recycled water through a jointly owned recycled water pump station and pressure reducing station. SMWD may have an option to purchase unused recycled water from the City, and the City would have access to store water in Trampas Canyon Recycled Water Reservoir for use during WRP outages or peak demand periods."

Evaluation Criterion D-Readiness to Proceed and Project Implementation (15 points)

- *Describe the implementation plan of the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates for completing the project within the applicable timeframe. Milestones may include but are not limited to preliminary and/or final design, environmental and cultural resources compliance, permitting, and construction/installation.*

The Recycled Water Quality Improvement Construction Project is shovel ready with final plans, specifications and estimate completed. The CEQA environmental documentation for the Project is also complete. Once funding is awarded and the City enters into a financial assistance agreement with Reclamation, the NEPA environmental documentation will be completed and all permits for the Project will be obtained. These two tasks are planned to be completed in a three-month period. **Table 4** is the detailed Project schedule.

Table 4. Project Schedule

Milestone/Task/Activity	Planned Start Date	Planned Completion Date
Task 1 Project Management	October 2025	August 2028
Task 2 Environmental Compliance (NEPA)	October 2025	July 2026
Task 3 Advertising Project for construction	July 2026	September 2026
Task 4 Construction Contract Award	October 2026	November 2026
Task 4 Construction	January 2027	June 2028
Task 5 Project Close Out	June 2028	August 2028

- *Describe any permits or approvals that will be required (e.g., water rights, water quality, stormwater, other regulatory clearances). Include information on permits or approvals already obtained. For those permits and approvals that need to be obtained, describe the process, including estimated timelines for obtaining such permits and approvals.*

The following permits will be obtained for the Project:

1. Division of Drinking Water Amended Operating Permit.
2. National Pollutant Discharge Elimination System (NPDES) Stormwater Pollution Prevention Plan (SWPPP) & General Construction Permit.
3. Coastal Commission Permit.
4. Orange County Health Department.
5. California State Health Department.

- *Identify and describe any engineering or design work performed specifically in support of the proposed project. If design work has commenced, what phase of design is the project current in (e.g., preliminarily or final and percentage-30%, 60%, 90%, or complete). If additional design is required, describe the planned process and timeline for completing the design. Projects that are further in design will receive more points.*

Final design plans, specifications and estimate have been completed for the Project.

- *Describe any land purchases that must occur before the project can be implemented, and the status of the purchase. (While land purchases are not allowable costs under this NOFO, this information is still important to assess the readiness to proceed.)*

The Project will occur on the existing WRP site owned by the City and no additional land is required for Project implementation.

- *If the project is completely or partially located on Federal land or at a Federal facility, explain whether the agency supports the project and has granted access to the Federal land or facility, whether the agency will contribute toward the project, and why the Federal agency is not completing the project?*

Not applicable.

- *Describe any new policies or administrative actions required to implement the project.*

There are no new polices or policy amendments that need to take place to implement the Project. On the administrative side, the above indicated permits need to be issued. In addition, the City Council will take formal action to award a construction contract to the lowest, responsible and responsive bidder in accordance with existing local, state and federal regulations and policies.

Evaluation Criterion E-Presidential and Department of the Interior Priorities (15 points)
Benefits for Disadvantaged Communities

- *Use the White House Council on Environmental Quality's CEJST, available online at Explore the map – Climate & Economic Justice Screening Tool (https://screeningtool.geoplatform.gov) to identify the disadvantaged communities that will benefit from your project. Points can only be awarded under this criterion by using CEJST. Please provide a map overlay displaying both the project area and CEJST tool.*

As depicted in Figure 6 below, there is only one census tract designated as a disadvantaged community as per the CEJST within the SMWD's service area (CT 06059042312).

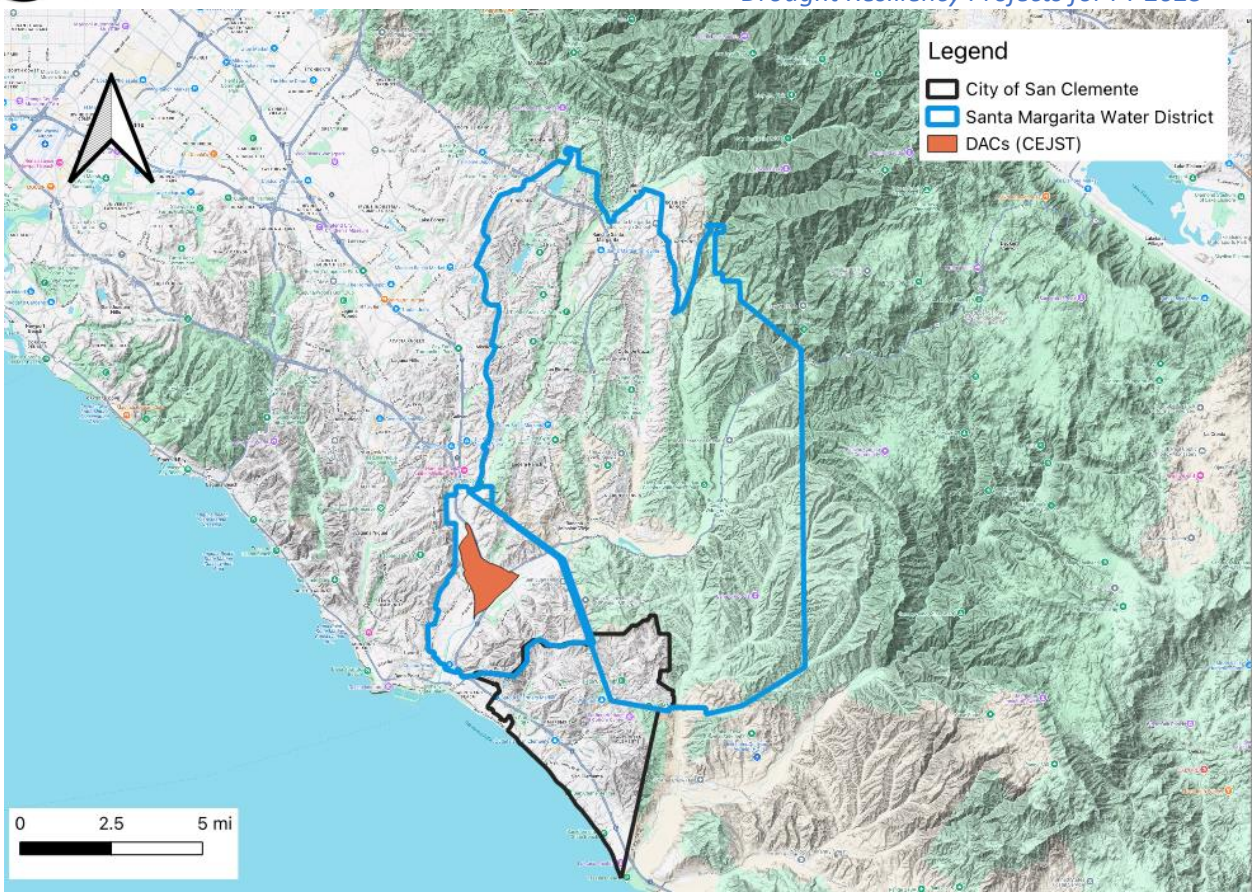

Figure 6. Service Area DAC Map (CEJST)

- *If applicable, describe how the proposed project will directly serve and/or benefit a disadvantaged community. For example, will the project improve public health and safety by addressing water quality, add new water supplies, provide economic growth opportunities, or provide other benefits in a disadvantaged community?*

As shown in Figure 6, the Project will provide benefits to census tract 06059042312, served by SMWD, which is classified as disadvantaged per the Climate and Economic Justice Screening Tool (CEJST) due to the following criteria:

- Having income less than or equal to twice the federal poverty level, and
- Having disproportional exposure to at least one other socioeconomic burden (climate change, energy, health, housing, legacy pollution, transportation, water, and wastewater, and/or workforce development). Each census tract varies on the socioeconomic burden it is enduring and having income less than or equal to twice the federal poverty level.

This census tract is disproportionally exposed to several socioeconomic burdens, however, is in the 97th and 94th percentile for projected wildfire risk (projected risk to properties from wildfire from fire fuels, weather, humans, and fire movement in 30 years) and wastewater discharge

(modeled toxic concentrations at parts of streams within 500 meters). The Project will help alleviate the public health and safety threats caused by these burdens by treating effluent from the City's WRP to concentrations that meet regulatory permit limits. The Project will allow the City to meet its recycled water demands and import up to 2,195 AFY of additional supply to SMWD. The additional recycled water will offset potable water use for irrigation and provide additional firefighting capacity given the region's vulnerability to wildfires. Additionally, the Project will reduce impacts to surface waters caused by wastewater discharges as additional water that is currently being discharged to the San Juan Creek Outfall, will be treated to higher quality and stored at SMWD's Trampas Reservoir. Overall, the Project will create additional recycled water supply and storage, provide system reliability during peak demand and outages, and reduce impacts to ocean water quality associated with wastewater discharges, especially for the disadvantaged communities in SMWD.

Tribal Benefits

- *Does the proposed project directly serve and/or benefit a Federally Recognized Tribe? Describe the Tribal benefits. Benefits can include, but are not limited to, public health and safety by addressing water quality, new water supplies, economic growth opportunities, or improving water management.*
- *Does the proposed project support Reclamation's Tribal trust responsibilities or a Reclamation activity with a Tribe?*

Not applicable.

Evaluation Criterion F-Nexus to Reclamation (5 points)

- *Does the applicant have a water service, repayment, or O&M contract with Reclamation?*
  No.
- *If the applicant is not a Reclamation contractor, does the applicant receive Reclamation water through a Reclamation contractor or by any other contractual means?*

The City of San Clemente currently receives approximately 68% of its water supply through MWD while SMWD imports 80% of its total water supply. MWD is a designated Reclamation contractor for the Colorado River and the SWP. The Project will produce 3,360 AFY of local water, which will offset demand from the SWP and CRA by the same amount. The Bureau of Reclamation has general oversight over water resources in the Delta and the Colorado River including coordinated operations. In 1986, DWR and Reclamation signed the Coordinated Operation Agreement (COA) for management of the Central Valley Project and the SWP. The agreement was amended in December 2018 to update operational criteria for the projects.

- *Will the proposed work benefit a Reclamation project area or activity?*

The Project will benefit Reclamation by improving operational efficiency and access to local water supplies, which will reduce reliance on surface water from the SWP and CRA, which are resources that Reclamation manages.

- *Is the applicant a Tribe?*

No.

Evaluation Criterion G-Stakeholder Support for Proposed Project (5 points)

- *Describe the level of stakeholder support for the proposed project. Are any stakeholders providing support for the project through cost-share contributions or through other types of contributions to the project?*

Recycled Water Quality Improvement Construction Project is aligned with the priorities identified within the 2020 UWMP, which was created through an extensive stakeholder involved process. The stakeholders within the City's water system include residential, commercial, industrial, institutional, governmental, and recreation/tourism. The Project is also identified in the City's Capital Improvement Program (CIP), which was posted for public comment. The CIP was adopted during a regularly scheduled City Council meeting that is open to the public.

The City has received 2 letters of support from the Santa Margarita Water District and U.S. Congressional District-49.

Performance Measures

The Project offers three significant and specific performance measures that will quantify its benefits once implemented. In doing so, the relative efficiency of the water management effort can be evaluated. These performance measures are as follows:

1. **MF/RO Treatment Facility Production.** The new treatment facility is designed to produce a total of 3.0 MGD of treated recycled water, which translates into 3,360 AFY. The City will track the operating and annual facility production to measure against these metrics.
2. **Reduction of Reliance on Imported Water.** Producing locally available recycled water is aimed at shifting away from vulnerable SWP / CRA imported water. The City will calculate the percentage that the Project is offsetting the need for imported water on an annual basis.
3. **Contamination Level.** One of the primary water quality goals of the Project is to produce recycled water that meets regulatory permit requirements of TSD below 800 parts per million. The City will continually monitor the quality of the water produced at the site to ensure contaminants are below this limit.

SECTION 2: BUDGET NARRATIVE

The budget narrative has been included as a separate attachment as required under this NOFO.

SECTION 3: ENVIRONMENTAL AND CULTURAL RESOURCES AND COMPLIANCE

To allow Reclamation to assess the probable environmental and cultural resources impacts and costs associated with each application, all applicants must respond to the following list of questions focusing on NEPA, ESA, and NHPA requirements. Please answer the following questions to the best of your knowledge. If any question is not applicable to the project, please explain why. The application should include the answers to:

- *Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.*

Based on the nature of the Project and location of Project site, it is anticipated that the Project would not involve "unusual circumstances" that would result in potentially significant environmental impacts. Therefore, the Project received a Notice of Exemption under CEQA (a Categorical Exemption since the Project falls into the Exemption for New Construction or Conversion of Small Structures – Class 3 as construction will occur on a previously disturbed project site and the installation of a limited number of new and small facilities or structures). It is anticipated that the NEPA environmental documentation will be similar.

- *Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?*

No, the City is not aware of any species listed or proposed to be listed as a Federal threatened or endangered species or designated critical habitat.

- *Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "Waters of the United States?" If so, please describe and estimate any impacts the proposed project may have.*

No, there are no wetlands or other surface waters inside the Project boundaries that would be under CWA jurisdiction.

- *When was the water delivery system constructed?*

The majority of the City's water delivery system was constructed in the 1961.

- *Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.*

The Project will not result in any modification of individual features of an irrigation system.

- *Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.*

There are no buildings, structures, or features in the Project area that are listed or eligible for listing on the National Register of Historic Places within this project area.

- *Are there any known archeological sites in the proposed project area?*

There are no known archeological sites in the Project area.

- *Will the proposed project have an adverse and disproportionate effect on communities with environmental justice concerns (as discussed in E.O. 14096)?*

The Project will not have a negative or adverse effect on communities with environmental justice concerns. As mentioned above, the Project will provide benefits directly to disadvantaged communities within SMWD's service area.

- *Will the proposed project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?*

The Project will not limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands.

- *Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?*

The Project will not contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species.

City of San Clemente

Recycled Water Quality Improvement Construction Project Budget Narrative

WaterSMART: Drought Response Program: Drought Resiliency Projects for FY 2025
No. R25AS00013

Prepared For:
Bureau of Reclamation
Financial Assistance Support Section
Attn: Applied Science NOFO
P.O. Box 25007, MS 84-27133
Denver, CO 80225
SHA-DRO-FAFOA@usbr.gov
303-445-2906

Submitted By:
City of San Clemente
910 Calle Negocio
San Clemente, CA 92673
David Rebensdorf
General Manager
RebensdorfD@san-clemente.org
949-361-6130

October 7, 2024

Budget Proposal

This funding is request is for the construction phase of the Project. The Project will be funded through a combination of local funding and BOR (if this application is selected). The City is committing $16,604,960 to cover the remainder of the construction cost of the Project.

Table 1. Non-Federal and Federal Funding Sources Summary

FUNDING SOURCES	AMOUNT
Non-Federal Entities	
City Local Funding	$16,604,960
Non-Federal Subtotal	$16,604,960
REQUESTED RECLAMATION FUNDING	**$3,000,000**

The below detailed budget is an estimate of all of the construction items for the Project**.**

Table 2. Proposed Project Budget

BUDGET ITEM DESCRIPTION	COMPUTATION		QUANTITY TYPE	TOTAL COST
	$/Unit	Quantity		
Salaries and Wages				
N/A				
Fringe Benefits				
N/A				
Travel				
N/A				
Equipment				
N/A				
Supplies/Materials				
N/A				
Contractual/Construction				
Construction Support	$1,781,360	1	LS	$1,781,360
Construction Contractor				**$17,813,600**
Mobilization / Demobilization	$881,500	1	LS	$881,500
Construction Trailers	$112,800	1	LS	$112,800
Demolition	$82,300	1	LS	$82,300
General Earthwork	$211,400	1	LS	$211,400

MF Feed Wet Well & Process Waste We Well	$18,700	1	LS	$18,700
Pipe Trench	$49,200	1	LS	$49,200
Retaining Wall	$85,300	1	LS	$85,300
Yard Piping	$73,200	1	LS	$73,200
Yard Paving	$240,400	1	LS	$240,400
Concrete for all structures	$1,002,300	1	LS	$1,002,300
Metals (Slide Gate, Hatch, Metal Deck, etc.)	$1,313,700	1	LS	$1,313,700
Equipment	$7,798,200	1	LS	$7,798,200
Piping, Fittings, and Valves	$1,569,100	1	LS	$1,569,100
Coupling & Joints	$69,400	1	LS	$69,400
Misc. Mechanical	$312,400	1	LS	$312,400
Electrical Equipment	$2,374,300	1	LS	$2,374,300
Contingency	$1,619,400	1	LS	$1,619,400
Other				
Environmental Review by Reclamation	$10,000			$10,000
TOTAL DIRECT COSTS				**$19,604,960**
Indirect Costs				
N/A				
TOTAL ESTIMATED PROJECT COSTS				**$19,604,960**

Budget Narrative

Personnel

Not Applicable. The City is not seeking reimbursement on any City personnel time.

Fringe Benefits

Not Applicable. The City is not seeking reimbursement on any City personnel time.

Travel

Not Applicable. The City is not seeking reimbursement on any City personnel time.

Equipment

The Project will require the purchase of a substantial amount of equipment as detailed in Table 6 above. The construction contract will include the purchase of equipment by the selected contractor.

Supplies

Similar to the above, materials and supplies for the Project will be part of the construction

contract.

Contractual / Consultant

A professional construction management company will be retained to oversee the Project starting with the bid process through completion of the construction.

Contractual / Construction

Through a competitive bid process in compliance with all applicable local, state and federal requirements, a qualified contractor will be selected to construct the Project. The construction contract will include all relevant equipment, supplies and materials, construction, labor, and management needed to construct the project as detailed in Table 6. Please see Appendix B for a more detailed cost estimate.

Other

All Project construction costs are captured in the above Table.

Environmental and Regulatory Compliance Costs

The cost to prepare the NEPA environmental document will be borne by the City. All costs that will be incurred in acquiring permits and any required mitigation measures will be borne by the contractor as shown in the above Table.

Indirect Costs

None.

SECTION 4: REQUIRED PERMITS OR APPROVALS

The following permits will be obtained for the Project:

1. Division of Drinking Water Amended Operating Permit.
2. National Pollutant Discharge Elimination System (NPDES) Stormwater Pollution Prevention Plan (SWPPP) & General Construction Permit.
3. California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) Discharge Permit and Master Reclamation Permit.
4. Coastal Commission Permit.
5. Orange County Health Department.
6. California State Health Department.

SECTION 5: OVERLAP OR DUPLICATION OF EFFORT STATEMENT

The City of San Clemente confirms there is no overlap between the proposed project and any other active or anticipated proposals or projects in terms of activities, costs, or commitment of key personnel.

SECTION 6: CONFLICT OF INTEREST DISCLOSURE STATEMENT

The City is not aware of any actual or potential conflict of interest that exists at the time of submission of this application.

SECTION 7: UNIFORM AUDIT REPORTING STATEMENT

The City of San Clemente acknowledges it will submit a Single Audit report for the relevant year through the Federal Audit Clearinghouse Internet Data Entry System in accordance with 2 CFR §200 subpart F.

SECTION 8: CERTIFICATION REGARDING LOBBYING

Please see attached for the executed SF-424 as required.

SECTION 9: SF-LLL - DISCLOSURE OF LOBBYING ACTIVITIES

Please see attached for the completed SF-LLL.

SECTION 10: LETTERS OF SUPPORT

Letters of support are included in Appendix A as required in the NOFO.

SECTION 11: LETTER OF PARTNERSHIP AND APPLICANT ELIGIBILITY DOCUMENTATION

Not applicable. The City of San Clemente is a Category A applicant.

SECTION 12: OFFICIAL RESOLUTION

The City of San Clemente provide an official resolution adopted by City Council detailing an authorized to commit the City to the *financial and legal obligations associated with receipt of a financial assistance award under this NOFO, verifying:*

- The identity of the official with legal authority to enter into an agreement;
- The City Council official who has reviewed and supports the application submitted; and

- That the City will work with Reclamation to meet established deadlines for entering into a grant or cooperative agreement.

SECTION 13: LETTERS OF FUNDING COMMITMENT

Not applicable.

APPENDICES

APPENDIX A: LETTERS OF SUPPORT

Santa Margarita Water District

October 7, 2024

U.S. Bureau of Reclamation
Attn: Ms. Sheri Looper Mail Code:P-400
2800 Cottage Way
Sacramento, CA 95825

RE: Letter of Support for City of San Clemente Recycled Water Quality Improvement Construction Project

Dear Ms. Looper:

As the General Manager, I am writing on behalf of the Santa Margarita Water District in strong support of the City of San Clemente's grant application for the WaterSMART Drought Response Program: Drought Resiliency Projects for Fiscal Year 2025.

As the Santa Margarita Water District and recycled water regional partner, our goal is to provide high-quality, reliable drinking water, recycled water, and wastewater services to over 200,000 South Orange County, California residents. The Recycled Water Quality Improvement Construction Project (Project) will increase recycled water treatment capacity for the City's Water Reclamation Plant through the implementation of Membrane Filtration Reverse Osmosis (MFRO) which will create a new water supply in the form of recycled water to offset potable water use. Specifically, this Project will allow the City to meet its recycled water demand of 1,165 AFY, while also exporting up to 2,195 AFY of additional supply to SMWD. Therefore, the projected AFY capacity with the MF/ RO Facility (meeting an 800 TDS level) will be 3,360 AFY. Without Project implementation, any recycled water that is not used by the City, would continue to be discharged to the San Juan Creek Ocean Outfall, which wastes a valuable irrigation resource and impacts ocean water quality.

The increased use in recycled water in the City will also allow the City to conserve potable water resources for potable water uses. This Project is in alignment with our goals as the project helps to improve water sustainability because, through recycled water development, groundwater will remain in the underlying basin and surface water diversions will be reduced. Further, availability of local water supplies has become increasingly important as reliability of imported supplies has been impacted by California's recurring droughts and climate change.

The City's application to participate in the Bureau of Reclamation's funding opportunity, which would increase drought resiliency, demonstrates the City's commitment to providing a sustainable

Santa Margarita Water District • 26111 Antonio Parkway, Rancho Santa Margarita, CA 92688
www.SMWD.com • (949) 459-6420

and safe water supply by investing in recycled water supply expansion infrastructure.

On behalf of the Santa Margarita Water District please accept this letter of strong support for the City's MFRO project and the continuing efforts of the City of San Clemente.

Sincerely,

Robert S. Grantham
General Manager

HOUSE OF REPRESENTATIVES
WASHINGTON, D.C. 20515

October 7, 2024

U.S. Bureau of Reclamation
Attn: Ms. Sheri Looper Mail Code:P-400
2800 Cottage Way
Sacramento, CA 95825

Dear Ms. Looper,

I write to request full and fair consideration for the City of San Clemente's Water SMART Drought Response Program: Drought Resiliency Projects for Fiscal Year 2025.

The Recycled Water Quality Improvement Construction Project (Project) will increase recycled water treatment capacity for the City's Water Reclamation Plant through the implementation of Membrane Filtration Reverse Osmosis (MFRO) which will create a new water supply in the form of recycled water to offset potable water use. This Project will allow the City to meet its recycled water demand of 1,165 AFY, while exporting up to 2,195 AFY of additional supply to the Santa Margarita Water District (SMWD). The projected AFY capacity with the MF/ RO Facility (meeting an 800 TDS level) will be 3,360 AFY. Without Project implementation, recycled water that is not used by the City, would continue to be discharged to the San Juan Creek Ocean Outfall, wasting a valuable irrigation resource and impacting ocean water quality.

The increased use in recycled water will allow the City to conserve potable water resources for potable water uses. The Project aligns with the City's goal of improving water sustainability through increased drought resiliency. Recycled water expansion infrastructure will reduce the use of groundwater and surface water diversions, preserving the local water supply. Availability of local water supplies has become increasingly important as reliability of imported supplies has been impacted by California's recurring droughts and climate change.

I appreciate the Bureau of Reclamation's attention to this grant submission. Please contact me or my staff if you have any questions.

Sincerely,

Mike Levin
Member of Congress

APPENDIX B: DETAILED COST ESTIMATE

LEE · RO

100% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE	PROJECT TITLE & LOCATION: CITY OF SAN CLEMENTE Recycled Water Quality Improvements Project	JOB #: 1233	PREPARED BY: C. TRUONG/S. SONG	DATE: 9/29/24
		FILE: N Cost Estimates	CHECKED BY: J. JUNG	DATE: 10/3/24

LINE ITEM	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		MATERIAL AND LABOR	
		NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
0	**General Requirements**								
	Mobilization and Demobilization	1	LS	$ -	$ -	$ -	$ -		$ 750,000
	Temporary Facilities								
	Construction Trailers	24	MO	$ 4,000	$ 96,000	$ -	$ -	$ 4,000	$ 96,000
								Subtotal	**$ 846,000**
1	**Civil - Site Work**								
	Demolition								
	Site Demolition	1	LS	$ -	$ -	$ -	$ -	$ 50,000	$ 50,000
	Clearing and Grubbing	1	LS	$ -	$ -	$ -	$ -	$ 20,000	$ 20,000
	General Earthwork								
	Process Area								
	Excavation	1,500	CY	$ -	$ -	$ 30	$ 45,000	$ 30	$ 45,000
	12" Class 2 Aggregate Base	230	CY	$ 60	$ 13,800	$ 20	$ 4,600	$ 80	$ 18,400
	Backfill	700	CY		$ -	$ 30	$ 21,000	$ 30	$ 21,000
	12" Compacted Base	230	CY		$ -	$ 20	$ 4,600	$ 20	$ 4,600
	Haul	570	CY	$ -	$ -	$ 50	$ 28,500	$ 40	$ 22,800
	Sheet Piling for Wet Wells	1,800	SF	$ 10	$ 18,000	$ 8	$ 14,400	$ 18	$ 32,400
	Sheet Piling for Trench	3,960	SF	$ 5	$ 19,800	$ 4	$ 15,840	$ 9	$ 35,640
	MF Feed Wet Well & Process Waste Wet Well								
	Excavation	200	CY	$ -	$ -	$ 30	$ 6,000	$ 30	$ 6,000
	12" Class 2 Aggregate Base	30	CY	$ 60	$ 1,800	$ 20	$ 600	$ 80	$ 2,400
	Backfill	80	CY		$ -	$ 30	$ 2,400	$ 30	$ 2,400
	12" Compacted Base	30	CY		$ -	$ 20	$ 600	$ 20	$ 600
	Haul	90	CY	$ -	$ -	$ 50	$ 4,500	$ 50	$ 4,500
	Pipe Trench								
	Excavation	500	CY	$ -	$ -	$ 30	$ 15,000	$ 30	$ 15,000
	Crushed Aggregate Bedding	133	CY	$ 60	$ 7,980	$ 20	$ 2,660	$ 80	$ 10,640
	Backfill	264	CY		$ -	$ 30	$ 7,920	$ 30	$ 7,920
	7" Crushed Base	40	CY	$ 60	$ 2,400	$ 30	$ 1,200	$ 90	$ 3,600
	4" AC Base Course	22	CY	$ 60	$ 1,320	$ 30	$ 660	$ 90	$ 1,980
	1 1/2" AC Cap	180	SF	$ 10	$ 1,800	$ 5	$ 900	$ 15	$ 2,700
	Retaining Wall								
	Excavation	350	CY	$ -	$ -	$ 30	$ 10,500	$ 30	$ 10,500
	Backfill	50	CY		$ -	$ 30	$ 1,500	$ 30	$ 1,500
	CLSM	200	CY	$ 200	$ 40,000	$ 20	$ 4,000	$ 220	$ 44,000
	Pea Gravel	20	CY	$ 60	$ 1,200	$ 20	$ 400	$ 80	$ 1,600
	Haul	300	CY	$ -	$ -	$ 50	$ 15,000	$ 50	$ 15,000
	Yard Piping								
	1" PVC SCH 80	95	LF	$ 6	$ 570	$ 5	$ 475	$ 11	$ 1,045
	1.5" PVC SCH 80	80	LF	$ 8	$ 640	$ 5	$ 400	$ 13	$ 1,040
	4" PVC C900	52	LF	$ 15	$ 780	$ 10	$ 520	$ 25	$ 1,300
	6" DIP CL 350	10	LF	$ 100	$ 1,000	$ 30	$ 300	$ 130	$ 1,300
	6" PVC C900	276	LF	$ 20	$ 5,520	$ 12	$ 3,312	$ 32	$ 8,832
	8" PVC C900	552	LF	$ 30	$ 16,560	$ 15	$ 8,280	$ 45	$ 24,840
	10" PVC C900	400	LF	$ 40	$ 16,000	$ 18	$ 7,200	$ 58	$ 23,200
	16" PVC C905	10	LF	$ 50	$ 500	$ 25	$ 250	$ 75	$ 750

LEE+RO

100% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE	PROJECT TITLE & LOCATION: CITY OF SAN CLEMENTE Recycled Water Quality Improvements Project	JOB #: 1233	PREPARED BY: C. TRUONG/S. SONG	DATE: 9/29/24
		FILE: N Cost Estimates	CHECKED BY: J. JUNG	DATE: 10/3/24

LINE ITEM	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		MATERIAL AND LABOR	
		NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
	Yard Paving								
	AC Paving	8,300	SF	$ 10	$ 83,000	$ 5	$ 41,500	$ 15	$ 124,500
	Concrete Paving	2,210	SF	$ 20	$ 44,200	$ 7	$ 15,470	$ 27	$ 59,670
	Side Walk	1,200	SF	$ 12	$ 14,400	$ 5	$ 6,000	$ 17	$ 20,400
								Subtotal	**$ 647,057**
2	**Structural**								
	Concrete								
	Process Area								
	House Keeping Pads	267	CY	$ 1,050.00	$ 279,869	$ 400.00	$ 106,617	$ 1,450	$ 386,485
	5 ft Wide Trench	61	CY	$ 1,050.00	$ 64,407	$ 400.00	$ 24,536	$ 1,450	$ 88,943
	Wetwell Structure	78	CY	$ 1,050.00	$ 81,848	$ 400.00	$ 31,180	$ 1,450	$ 113,028
	Concrete Stairs	1	LS	$ 1,100.00	$ 1,100	$ 400.00	$ 400	$ 1,500	$ 1,500
	Concrete Ramp	4	CY	$ 1,050.00	$ 4,001	$ 400.00	$ 1,524	$ 1,450	$ 5,525
	Chemical Containment Area								
	Slab Extention	12	CY	$ 1,050.00	$ 12,600	$ 400.00	$ 4,800	$ 1,450	$ 17,400
	Tank & Purrp Pads	18	CY	$ 1,050.00	$ 18,900	$ 400.00	$ 7,200	$ 1,450	$ 26,100
	Containment Curb	4	CY	$ 1,050.00	$ 4,200	$ 400.00	$ 1,600	$ 1,450	$ 5,800
	Sump	2	CY	$ 1,050.00	$ 2,100	$ 400.00	$ 800	$ 1,450	$ 2,900
	Concrete Step	1	LS					$ 600	$ 600
	Retaining Wall								
	8 ft Tall Retaining Wall	58	CY	$ 1,050.00	$ 60,900	$ 400.00	$ 23,200	$ 1,450	$ 84,100
	V-Ditch	5	CY	$ 1,400.00	$ 7,000	$ 400.00	$ 2,000	$ 1,800	$ 9,000
	Canopy Structure								
	Canopy Footing	32	CY	$ 1,050.00	$ 33,600	$ 400.00	$ 12,800	$ 1,450	$ 46,400
	Fill Containment Area								
	Slab	3	CY	$ 1,050.00	$ 3,150	$ 400.00	$ 1,200	$ 1,450	$ 4,350
	Misc. Structures								
	316 SST Wet Well Ladders	2	EA	$ 5,000.00	$ 10,000	$ 1,000	$ 2,000	$ 6,000	$ 12,000
	7' x 3' Door	1	EA	$ 2,000.00	$ 2,000	$ 600	$ 600	$ 2,600	$ 2,600
	Catch Basin w/ cover	2	EA	$ 5,000.00	$ 10,000	$ 2,000.00	$ 4,000	$ 7,000	$ 14,000
	3' SQ Containment Vault	2	EA	$ 12,000	$ 24,000	$ 4,000.00	$ 8,000	$ 16,000	$ 32,000
	Metals								
	Slide Gate	2	EA	$ 12,000.00	$ 24,000	$ 5,000	$ 10,000	$ 17,000	$ 34,000
	Metal Canopy Structures	1	LS	$ 500,000	$ 500,000	$ 150,000	$ 150,000	$ 650,000	$ 650,000
	10'-6" Roof Access Hatch	3	EA	$ 26,000	$ 78,000	$ 10,000	$ 30,000	$ 36,000	$ 108,000
	16'-9" Roof Access Hatch	1	EA	$ 70,000	$ 70,000	$ 20,000	$ 20,000	$ 90,000	$ 90,000
	Metal Deck	6,400	SF	$ 10	$ 64,000	$ 5	$ 32,000	$ 15	$ 96,000
	Galv Steel Handrails	200	LF	$ 100	$ 20,000	$ 30	$ 6,000	$ 130	$ 26,000
	2" Aluminum Grating	830	SF	$ 100	$ 83,000	$ 30	$ 24,900	$ 130	$ 107,900
	3' SQ Algrrinum Hatch w/ Safety Grate Access Panel	2	EA	$ 2,200	$ 4,400	$ 700	$ 1,400	$ 2,900	$ 5,800
								Subtotal	**$ 1,970,430**
3	**Mechanical**								
	Equipment								
	MF Feed Pump	3	EA	$ 70,000	$ 210,000	$ 35,000	$ 105,000	$ 105,000	$ 315,000
	MF Feed Wet Well & Process Waste Wet Well Radar Level Sensor	2	EA	$ 3,000	$ 6,000	$ 3,000	$ 6,000	$ 6,000	$ 12,000

LEE+RO

100% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE	PROJECT TITLE & LOCATION: CITY OF SAN CLEMENTE Recycled Water Quality Improvements Project	JOB #: 1233	PREPARED BY: C. TRUONG/S. SONG	DATE: 9/29/24
		FILE: N Cost Estimates	CHECKED BY J. JUNG	DATE: 10/3/24

LINE ITEM	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		MATERIAL AND LABOR	
		NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
	Horizontal Centrifugal End Suction Pump	7	EA	$ 50,000	$ 350,000	$ 30,000	$ 210,000	$ 80,000	$ 560,000
	Chemical Skid Units (Dosing and Transfer Pumps, 1/2" PVC Piping, 1/2" Ball Valves, PRVs, Pressure Gauge	1	LS	$ 220,000	$ 220,000	$ 100,000	$ 100,000	$ 320,000	$ 320,000
	405 Gallon Chemical Tanks	4	EA	$ 3,000	$ 12,000	$ 1,500	$ 6,000	$ 4,500	$ 18,000
	3000 Gallon HDPE Tank	2	EA	$ 30,000	$ 60,000	$ 5,000	$ 10,000	$ 35,000	$ 70,000
	5000 Gallon HDPE Tank	1	EA	$ 43,000	$ 43,000	$ 7,000	$ 7,000	$ 50,000	$ 50,000
	18,000 Gallon HDPE Tank	1	EA	$ 100,000	$ 100,000	$ 20,000	$ 20,000	$ 120,000	$ 120,000
	CIP Tank Immersion Heater & Control Panel	2	EA	$ 35,000	$ 70,000	$ 20,000	$ 40,000	$ 55,000	$ 110,000
	MF Autostrainers	3	EA	$ 65,000	$ 195,000	$ 20,000	$ 60,000	$ 85,000	$ 255,000
	MF Feed Analyzer Panel	1	LS	$ 30,000	$ 30,000	$ 4,000	$ 4,000	$ 34,000	$ 34,000
	RO Feed Analyzer Panel	1	LS	$ 40,000	$ 40,000	$ 6,000	$ 6,000	$ 46,000	$ 46,000
	6" Static Mixer w/ Injection Quil	1	EA	$ 18,000	$ 18,000	$ 3,000	$ 3,000	$ 21,000	$ 21,000
	8" Static Mixer w/ Injection Quil	2	EA	$ 18,000	$ 36,000	$ 3,000	$ 6,000	$ 21,000	$ 42,000
	10" Static Mixer w/ Injection Quil	2	EA	$ 25,000	$ 50,000	$ 3,000	$ 6,000	$ 28,000	$ 56,000
	Air Compressor Equipment, Valving, Piping, and Appurtenances	1	LS	$ 150,000	$ 150,000	$ 45,000	$ 45,000	$ 195,000	$ 195,000
	Cartridge Filter	1	EA	$ 62,000	$ 62,000	$ 25,000	$ 25,000	$ 87,000	$ 87,000
	MF Unit	1	LS	$ 1,300,000	$ 1,300,000	$ 600,000	$ 600,000	$ 1,900,000	$ 1,900,000
	RO Unit	1	LS	$ 1,270,000	$ 1,270,000	$ 600,000	$ 600,000	$ 1,870,000	$ 1,870,000
	SHB Submersible Pump	2	EA	$ 45,000	$ 90,000	$ 20,000	$ 40,000	$ 65,000	$ 130,000
	SHB Level Floats & Supports	1	EA	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 2,000	$ 2,000
	SHB Pressure Level Transducer & Supports	1	EA	$ 3,000	$ 3,000	$ 2,000	$ 2,000	$ 5,000	$ 5,000
	Pressure Differential Transmitter	2	EA	$ 3,000	$ 6,000	$ 2,000	$ 4,000	$ 5,000	$ 10,000
	Temperature Element for Tanks	2	EA	$ 500	$ 1,000	$ 200	$ 400	$ 700	$ 1,400
	PSH/PIT Combination	9	EA	$ 4,000	$ 36,000	$ 3,000	$ 27,000	$ 7,000	$ 63,000
	Floats	8	EA	$ 300	$ 2,400	$ 300	$ 2,400	$ 600	$ 4,800
	LIT	4	EA	$ 3,000	$ 12,000	$ 2,000	$ 8,000	$ 5,000	$ 20,000
	PIT	6	EA	$ 3,000	$ 18,000	$ 2,000	$ 12,000	$ 5,000	$ 30,000
	PSL	7	EA	$ 500	$ 3,500	$ 300	$ 2,100	$ 800	$ 5,600
	Small drain ball valve and cap	8	EA	$ 100	$ 800	$ 100	$ 800	$ 200	$ 1,600
	Pressure Gauge	11	EA	$ 200	$ 2,200	$ 100	$ 1,100	$ 300	$ 3,300
	1" Combination ARV/V	15	EA	$ 800	$ 12,000	$ 400	$ 6,000	$ 1,200	$ 18,000
	PSH/PI Combo	13	EA	$ 1,000	$ 13,000	$ 500	$ 6,500	$ 1,500	$ 19,500
	Pressure Indicator	11	EA	$ 200	$ 2,200	$ 60	$ 660	$ 260	$ 2,860
	Drain ball Valve and Cap	8	EA	$ 300	$ 2,400	$ 300	$ 2,400	$ 600	$ 4,800
	Pressure Switch (for Low)	7	EA	$ 500	$ 3,500	$ 300	$ 2,100	$ 800	$ 5,600
	Pressure Switch (for High)	6	EA	$ 500	$ 3,000	$ 300	$ 1,800	$ 800	$ 4,800
	Pressure Level Indicating Transmitter for Tanks	4	EA	$ 3,000	$ 12,000	$ 3,000	$ 12,000	$ 6,000	$ 24,000
	Floats Level Switch	10	EA	$ 300	$ 3,000	$ 300	$ 3,000	$ 600	$ 6,000
	Temperature Element for Tanks	2	EA	$ 300	$ 600	$ 500	$ 1,000	$ 800	$ 1,600
	LIT Radar	1	EA	$ 3,000	$ 3,000	$ 3,000	$ 3,000	$ 6,000	$ 6,000
	LE (Pressure Level Transducer)	5	EA	$ 3,000	$ 15,000	$ 2,000	$ 10,000	$ 5,000	$ 25,000
	1" Back Flow Preventer Assembly	1	EA	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 2,000	$ 2,000
	4" Back Flow Preventer Assembly	1	EA	$ 5,000	$ 5,000	$ 3,000	$ 3,000	$ 8,000	$ 8,000
	6" Back Flow Preventer Assembly	1	EA	$ 7,000	$ 7,000	$ 4,000	$ 4,000	$ 11,000	$ 11,000
	Safety Shower Eyewash	1	EA	$ 4,000	$ 4,000	$ 3,000	$ 3,000	$ 7,000	$ 7,000
	Turbidimeter Peristaltic Metering Pump, fittings, external tubing, IO cables.	2	EA	$ 10,000	$ 20,000	$ 2,000	$ 4,000	$ 12,000	$ 24,000
	Turbidimeter and Turbidimeter Transmitter	2	EA	$ 8,000	$ 16,000	$ 1,600	$ 3,200	$ 9,600	$ 19,200

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100% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE	PROJECT TITLE & LOCATION: CITY OF SAN CLEMENTE Recycled Water Quality Improvements Project	JOB #: 1233	PREPARED BY: C. TRUONG/S. SONG	DATE: 9/29/24
		FILE: N Cost Estimates	CHECKED BY: J. JUNG	DATE: 10/3/24

LINE ITEM	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		MATERIAL AND LABOR	
		NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
	Turbidimeter Enclosure	2	EA	$ 12,000	$ 24,000	$ 2,400	$ 4,800	$ 14,400	$ 28,800
	Conductivity Meter and Conductivity Meter Transmitter	1	EA	$ 5,000	$ 5,000	$ 1,000	$ 1,000	$ 6,000	$ 6,000
	Conductivity Meter Enclosure	1	EA	$ 5,000	$ 5,000	$ 1,000	$ 1,000	$ 6,000	$ 6,000
	Mechanical Mixer at CCB Influent Splitter Box (Stand, Cable, Crane, Etc)	1	EA	$ 36,000	$ 36,000	$ 10,800	$ 10,800	$ 46,800	$ 46,800
	Piping, Fittings, and Valves								
	PVC SCH 80								
	4" 45° Bend	2	EA	$ 285	$ 570	$ 86	$ 171	$ 371	$ 741
	6" 45° Bend	1	EA	$ 360	$ 360	$ 108	$ 108	$ 468	$ 468
	8" 45° Bend	2	EA	$ 780	$ 1,560	$ 234	$ 468	$ 1,014	$ 2,028
	10" 45° Bend	7	EA	$ 2,500	$ 17,500	$ 750	$ 5,250	$ 3,250	$ 22,750
	12" 45° Bend	1	EA	$ 3,200	$ 3,200	$ 960	$ 960	$ 4,160	$ 4,160
	3" 90° Bend	8	EA	$ 70	$ 560	$ 21	$ 168	$ 91	$ 728
	4" 90° Bend	2	EA	$ 105	$ 210	$ 32	$ 63	$ 137	$ 273
	6" 90° Bend	40	EA	$ 300	$ 12,000	$ 90	$ 3,600	$ 390	$ 15,600
	8" 90° Bend	33	EA	$ 820	$ 27,060	$ 246	$ 8,118	$ 1,066	$ 35,178
	10" 90° Bend	27	EA	$ 3,700	$ 99,900	$ 1,110	$ 29,970	$ 4,810	$ 129,870
	12" 90° Bend	4	EA	$ 4,800	$ 19,200	$ 1,440	$ 5,760	$ 6,240	$ 24,960
	6" Tee	1	EA	$ 500	$ 500	$ 150	$ 150	$ 650	$ 650
	8"x8"x10" Tee	1	EA	$ 1,071	$ 1,071	$ 321	$ 321	$ 1,392	$ 1,392
	10" x 10" x 8" Tee	1	EA	$ 4,000	$ 4,000	$ 1,200	$ 1,200	$ 5,200	$ 5,200
	10" Tee	7	EA	$ 3,900	$ 27,300	$ 1,170	$ 8,190	$ 5,070	$ 35,490
	3" x 4" Reducer	3	EA	$ 80	$ 240	$ 24	$ 72	$ 104	$ 312
	6" x 8" Reducer	4	EA	$ 260	$ 1,040	$ 78	$ 312	$ 338	$ 1,352
	6" x 10" Reducer	1	EA	$ 1,250	$ 1,250	$ 375	$ 375	$ 1,625	$ 1,625
	8" x 10" Reducer	4	EA	$ 1,250	$ 5,000	$ 375	$ 1,500	$ 1,625	$ 6,500
	10" x 12" Reducer	1	EA	$ 1,450	$ 1,450	$ 435	$ 435	$ 1,885	$ 1,885
	3/4 x 3" Double Containment Pipe	520	LF	$ 33	$ 17,160	$ 10	$ 5,148	$ 43	$ 22,308
	2 x 4" Double Containment Pipe	500	LF	$ 65	$ 32,500	$ 20	$ 9,750	$ 85	$ 42,250
	3" PVC SCH 80	100	LF	$ 130	$ 13,000	$ 65	$ 6,500	$ 195	$ 19,500
	4" PVC SCH 80	40	LF	$ 20	$ 800	$ 10	$ 400	$ 30	$ 1,200
	6" PVC SCH 80	425	LF	$ 35	$ 14,875	$ 18	$ 7,438	$ 53	$ 22,313
	8" PVC SCH 80	205	LF	$ 50	$ 10,250	$ 25	$ 5,125	$ 75	$ 15,375
	10" PVC SCH 80	490	LF	$ 70	$ 34,300	$ 35	$ 17,150	$ 105	$ 51,450
	12" PVC SCH 80	130	LF	$ 95	$ 12,350	$ 48	$ 6,175	$ 143	$ 18,525
	Stainless Steel								
	10" Stainless Steel	10	LF	$ 480	$ 4,800	$ 240	$ 2,400	$ 720	$ 7,200
	12" Stainless Steel	45	LF	$ 600	$ 27,000	$ 300	$ 13,500	$ 900	$ 40,500
	10" 90° Bend	1	EA	$ 2,500	$ 2,500	$ 1,250	$ 1,250	$ 3,750	$ 3,750
	Valves								
	1/2" Degas Valve	10	EA	$ 1,200	$ 12,000	$ 600	$ 6,000	$ 1,800	$ 18,000
	2" Wye Strainer	4	EA	$ 150	$ 600	$ 50	$ 200	$ 200	$ 800
	2" Ball Valve	16	EA	$ 400	$ 6,400	$ 120	$ 1,920	$ 520	$ 8,320
	4" PVC Gate Valve W/ PVC Paddles & 316 SST Hardware	4	EA	$ 100	$ 400	$ 50	$ 200	$ 150	$ 600
	6" Check Valve	2	EA	$ 4,000	$ 8,000	$ 2,000	$ 4,000	$ 6,000	$ 12,000
	8" Check Valve	4	EA	$ 5,000	$ 20,000	$ 2,500	$ 10,000	$ 7,500	$ 30,000
	10" Check Valve	4	EA	$ 6,000	$ 24,000	$ 3,000	$ 12,000	$ 9,000	$ 36,000

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100% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE	PROJECT TITLE & LOCATION: CITY OF SAN CLEMENTE Recycled Water Quality Improvements Project	JOB #: 1233	PREPARED BY: C. TRUONG/S. SONG	DATE: 9/29/24
		FILE: N Cost Estimates	CHECKED BY: J. JUNG	DATE: 10/3/24

LINE ITEM	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		MATERIAL AND LABOR	
		NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
	4" Butterfly Valve with Electric Actuator	3	EA	$ 8,000	$ 24,000	$ 5,000	$ 15,000	$ 13,000	$ 39,000
	6" Butterfly Valve	8	EA	$ 5,200	$ 41,600	$ 2,600	$ 20,800	$ 7,800	$ 62,400
	6" Butterfly Valve with Chain Wheel Operator	2	EA	$ 6,000	$ 12,000	$ 3,000	$ 6,000	$ 9,000	$ 18,000
	6" Butterfly Valve with Electric Actuator	6	EA	$ 10,000	$ 60,000	$ 5,000	$ 30,000	$ 15,000	$ 90,000
	8" Butterfly Valve	9	EA	$ 5,300	$ 47,700	$ 2,650	$ 23,850	$ 7,950	$ 71,550
	8" Butterfly Valve with Electric Actuator	5	EA	$ 13,000	$ 65,000	$ 6,500	$ 32,500	$ 19,500	$ 97,500
	10" Butterfly Valve	6	EA	$ 5,900	$ 35,400	$ 2,950	$ 17,700	$ 8,850	$ 53,100
	10" Butterfly Valve with Chain Wheel Operator	2	EA	$ 6,300	$ 12,600	$ 3,150	$ 6,300	$ 9,450	$ 18,900
	10" Butterfly Valve with Electric Actuator	3	EA	$ 15,000	$ 45,000	$ 7,500	$ 22,500	$ 22,500	$ 67,500
	8" Pressure Relief Backpressure Valve	1	EA	$ 10,200	$ 10,200	$ 5,100	$ 5,100	$ 15,300	$ 15,300
	10" PRV	1	EA	$ 14,000	$ 14,000	$ 7,000	$ 7,000	$ 21,000	$ 21,000
	Miscellaneous Valves	1	LS	$ -	$ -	$ -	$ -	$ -	$ 30,000
	Flow Meter								
	6" Magnetic Flow Meter	1	EA	$ 7,000	$ 7,000	$ 3,500	$ 3,500	$ 10,500	$ 10,500
	8" Magnetic Flow Meter	1	EA	$ 8,000	$ 8,000	$ 4,000	$ 4,000	$ 12,000	$ 12,000
	10" Magnetic Flow Meter	4	EA	$ 12,000	$ 48,000	$ 6,000	$ 24,000	$ 18,000	$ 72,000
	10" Flanged Flow Meter	1	EA	$ 10,000	$ 10,000	$ 5,000	$ 5,000	$ 15,000	$ 15,000
	Couplings & Joints								
	6" Victaulic Coupling	1	EA	$ 225	$ 225	$ 113	$ 113	$ 338	$ 338
	8" Victaulic Coupling	1	EA	$ 250	$ 250	$ 125	$ 125	$ 375	$ 375
	8" Expansion Joint	5	EA	$ 1,300	$ 6,500	$ 650	$ 3,250	$ 1,950	$ 9,750
	10" Expansion Joint	2	EA	$ 1,300	$ 2,600	$ 650	$ 1,300	$ 1,950	$ 3,900
	16" Flexible Coupling	1	EA	$ 1,000	$ 1,000	$ 500	$ 500	$ 1,500	$ 1,500
	6" Flanged Coupling Adapter	2	EA	$ 800	$ 1,600	$ 400	$ 800	$ 1,200	$ 2,400
	8" Flanged Coupling Adapter	2	EA	$ 950	$ 1,900	$ 475	$ 950	$ 1,425	$ 2,850
	20" Flanged Coupling Adapter	2	EA	$ 2,667	$ 5,333	$ 1,333	$ 2,667	$ 4,000	$ 8,000
	8" Restrained Coupling Adapter	2	EA	$ 950	$ 1,900	$ 475	$ 950	$ 1,425	$ 2,850
	Pipe Saddle Clamps	100	EA	$ 200	$ 20,000	$ 60	$ 6,000	$ 260	$ 26,000
	2" Camlock Fitting	4	EA	$ 200	$ 800	$ 80	$ 320	$ 280	$ 1,120
	Miscellaneous								
	Pipe Support System	1	LS		$ -	$ -	$ -	$ 250,000	$ 250,000
	Air Gap Funnel & Support	1	LS		$ -	$ -	$ -	$ 3,500	$ 3,500
	4" Core Drill @ Existing SH Building	2	EA		$ -	$ -	$ -	$ 600	$ 1,200
	4" Core Existing Catch Basin	1	EA		$ -	$ -	$ -	$ 600	$ 600
	Relocation of Existing FDC/Backflow	1	LS		$ -	$ -	$ -	$ 2,500	$ 2,500
	Existing ALS Line Unclogging Work	1	LS		$ -	$ -	$ -	$ 3,000	$ 3,000
	Modification to Existing Piping @ SH Building	1	LS		$ -	$ -	$ -	$ 5,000	$ 5,000
								Subtotal	**$ 8,294,545**
4	**Electrical and Instrumentations**								
	ELECTRICAL EQUIPMENT	1	LS						**$ 2,020,000**
	WRP MF/RO PROJECT - 100% DESIGN COST BREAKDOWN SUMMARY (ROUNDED)								
	General								**$ 846,000**
	Civil								**$ 647,057**
	Structural								**$ 1,970,430**
	Mechanical								**$ 8,294,545**

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100% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE	PROJECT TITLE & LOCATION: CITY OF SAN CLEMENTE Recycled Water Quality Improvements Project	JOB #: 1233	PREPARED BY: C. TRUONG/S. SONG	DATE: 9/29/24
		FILE: N Cost Estimates	CHECKED BY: J. JUNG	DATE: 10/3/24

LINE ITEM	ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		MATERIAL AND LABOR	
		NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
	Electrical and Instrumentations								**$ 2,020,000**
	SUBTOTAL (ROUNDED)								**$ 13,780,000**
	Contractor Overhead and Profit	10%	Job						$ 1,378,000
	Sales Tax	8%							$ 591,000
	General Conditions (Bonds, Insurance etc.)	5%							$ 689,000
	Contingency	10%							$ 1,378,000
	TOTAL COST (ROUNDED)								**$ 17,816,000**
	ENGINEER OPINION OF TOTAL CONSTRUCTION COST (2024)								**$ 17,816,000**

TYPE OF ESTIMATE	BASE TIME OF ESTIMATE	BASIS OF ESTIMATE (FACTORS TO CONSIDER)	
( ) 30% DESIGN	(X) CURRENT COST AT ENR CCI OF 13244.84	( ) LOCATION FACTOR	( ) LABOR AVAILABILITY
( ) 60% DESIGN	( ) MID-CONSTRUCTION, (MONTH/YEAR ____/____)	( ) COMPLEXITY FACTOR	( ) SCHEDULE (OVERTIME)
( ) 90% DESIGN	AT ENR CCI OF ____	( ) PROJECT SIZE FACTOR	( ) MARKET (ECONOMY)
(X) 100% and FINAL BID SET DESIGN			

APPENDIX C: URBAN WATER MANAGEMENT PLAN – Section 6.6.6.

San Clemente 2020 Urban Water Management Plan

Table 6-8: Retail: 2020 UWMP Recycled Water Use Projection Compared to 2020 Actual

DWR Submittal Table 6-5 Retail: 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual			
☐	Recycled water was not used in 2015 nor projected for use in 2020. The Supplier will not complete the table below.		
Use Type		**2015 Projection for 2020**	**2020 Actual Use**
Agricultural irrigation			
Landscape irrigation (excludes golf courses)		900	545
Golf course irrigation		450	382
Commercial use			
Industrial use		50	228
Geothermal and other energy production			
Seawater intrusion barrier			
Recreational impoundment			
Wetlands or wildlife habitat			
Groundwater recharge (IPR)			
Surface water augmentation (IPR)			
Direct potable reuse			
Other	*Type of Use*		
Total		1,400	1,155
NOTE:			

6.6.5 Potential Recycled Water Uses

The City recognizes the benefits of recycled water use and recently completed an expansion of its WRP. The City continues to support, encourage, and contribute to the continued development of recycled water and potential uses throughout the region. Staff is evaluating the potential for a Phase II expansion and regional uses for its recycled water.

6.6.6 Optimization Plan

The City has advocated the use of recycled water since 1957 and requires recycled systems where applicable and feasible. Using recycled water also provides customers with a more reliable supply of water that is not subject to water supply allocations imposed by MET or MWDOC. The City will conduct future cost/benefit analyses for recycled water projects and seek creative solutions to facilitate the conversion of dedicated irrigation accounts from potable to recycled water, in coordination with MWDOC, MET and other cooperative agencies. These include solutions for funding, regulatory requirements, institutional arrangements, and public acceptance.

San Clemente 2020 Urban Water Management Plan

The City and Santa Margarita Water District (SMWD) are currently developing an agreement for the sale and purchase of recycled water between the agencies. The proposed interconnection will allow for the distribution of recycled water through a jointly owned recycled water pump station and pressure reducing station. SMWD may have an option to purchase unused recycled water from the City, and the City would have access to store water in Trampas Canyon Recycled Water Reservoir for use during WRP outages or peak demand periods.

Table 6-9: Retail: Methods to Expand Future Recycled Water Use

Submittal Table 6-6 Retail: Methods to Expand Future Recycled Water Use			
	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use (AFY)
Recycled Water Expansion Phase II	Expansion of existing recycled water distribution system to provide access/ conversion from potable water to additional irrigation customers/HOAs.	2025	165
		Total	165
NOTES:			

6.7 Desalination Opportunities

In 2001, MET developed a Seawater Desalination Program (SDP) to provide incentives for developing new seawater desalination projects in MET's service area. In 2014, MET modified the provisions of their Local Resources Program (LRP) to include incentives for locally produced seawater desalination projects that reduce the need for imported supplies. To qualify for the incentive, proposed projects must replace an existing demand or prevent new demand on MET's imported water supplies. In return, MET offers three incentive formulas under the program:

- Sliding scale incentive up to $340 per AF for a 25-year agreement term, depending on the unit cost of seawater produced compared to the cost of MET supplies.
- Sliding scale incentive up to $475 per AF for a 15-year agreement term, depending on the unit cost of seawater produced compared to the cost of MET supplies.
- Fixed incentive up to $305 per AF for a 25-year agreement term.

Developing local supplies within MET's service area is part of their IRP goal of improving water supply reliability in the region. Creating new local supplies reduce pressure on imported supplies from the SWP and Colorado River.