



Memorandum

TO: HONORABLE MAYOR
AND CITY COUNCIL

FROM: Kerrie Romanow
Matt Loesch
Jim Shannon

SUBJECT: SEE BELOW

DATE: December 4, 2023

Approved

Date

12/5/23

**SUBJECT: ACTIONS RELATED TO THE 7760 – FACILITY WIDE WATER
SYSTEMS IMPROVEMENTS PROJECT AT THE SAN JOSE-SANTA
CLARA REGIONAL WASTEWATER FACILITY**

RECOMMENDATION

- (a) Adopt a resolution adopting the Addendum to the Environmental Impact Report for the San José-Santa Clara Regional Water Pollution Control Plant Master Plan, Facility Wide Water Systems Improvements Project, File No. ER20-209, in accordance with the California Environmental Quality Act, as amended.
- (b) Accept the report on bids and award of a contract for the construction of 7760 – Facility Wide Water Systems Improvements Project to the lowest responsive, responsible bidder, Ranger Pipelines, Inc., in the amount of \$59,490,760.
- (c) Approve a 15% contingency in the amount of \$8,923,614.
- (d) Adopt the following 2023-2024 Appropriation Ordinance amendments in the San José-Santa Clara Treatment Plant Capital Fund:
 - (1) Decrease the Support Building Improvements appropriation to the Environmental Services Department by \$8,000,000; and
 - (2) Increase the Facility Wide Water Systems Improvements appropriation to the Environmental Services Department by \$8,000,000.

SUMMARY AND OUTCOME

Award of construction contract to Ranger Pipelines, Inc. will allow for construction and completion of the 7760 - Facility-wide Water Systems Improvements Project (Project) at the San José-Santa Clara Regional Wastewater Facility (RWF). This Project replaces aging water systems to meet future water demands and pressure requirements. Approval of a 15%

contingency will provide funding for unanticipated work necessary for the proper completion or construction of the Project.

BACKGROUND

The RWF has the following water systems:

1. Potable water (1W) supplied from San José Municipal Water System (Muni Water), and used for potable water, domestic hot water, toilet water, eyewash stations, emergency showers, and air conditioner chiller water.

Because this system is fed from the Municipal Water Main, an air gap is required in accordance with California State Law, Title 17. This Project provides the air gap tank as associated pump station and piping to protect the 1W supply from possible cross contamination that may occur from the treatment plant.

2. Groundwater (2W) supplied from two wells located at the RWF for process water needs such as seal water for sewage and sludge pumps, polymer dilution, irrigation water, wash-down water, and backup cooling water.

This system regularly experiences pipeline breaks, water quality issues, and cannot reliably supply water to processes without being blended with other sources (e.g., 2W and recycle water are mixed to meet the demands for digesters). This Project provides a mechanism to shift 2W service to 3W through piping interconnection changes, ensuring a reliable source of water supply to critical processes and end the reliance on groundwater.

3. Process water (3W) supplied from the final effluent of the RWF and used for seal water for sewage and sludge pumps, wash-down water, equipment cooling water, space heat loop water, digester hot water, chilled water, polymer dilution, and chemical feed solutions.

The 3W system pressure is inadequate to service high pressure demands and will not be able to reliably accommodate current and future peak water demands.

4. Fire protection water (4W) supplied from the final effluent of the RWF and used to supply fire water to all fire hydrants at the RWF.

The 4W system uses dedicated fire pumps that draw from the 3W wet well. In the event of an emergency, both 3W and 4W systems can be compromised since they use the same source of water. Shutdowns of the 3W system for addressing pipeline breaks or routing maintenance could compromise the fire water system. In addition, due to concerns for

health and safety of staff with potential exposure to 3W and Fire Department concerns with contamination of fire trucks, this Project includes a 4W pump station to allow fire protection water to be supplied by 1W, instead of the 3W wet well.

5. Recycled water supplied from the South Bay Water Recycling system. No upgrades to this system are planned as part of the Project.

The water systems consist of over 100,000 linear feet of piping ranging in size from a 1/2-inch diameter to a 30-inch diameter and were constructed over time with various RWF expansions (see **Attachment** – Project Location Map). Although there has been maintenance of the water systems over the years, there are significant portions of the system that are over 50 years old and are generally considered beyond their useful life. The water systems require rehabilitation and upgrades due to performance issues, age, and apparent or presumed underground condition. The major rehabilitation and upgrades to be performed under the Project include:

1. Replacing approximately 44,000 linear feet of 1W, 3W and 4W pipelines (located below-grade, inside tunnels and buildings) throughout the RWF.
2. Constructing a new 1W/4W pump station with air gap and process water tanks.
3. Constructing two hydropneumatic (bladder) tanks for 1W and 3W.
4. Constructing one 3W pump station located in the basement of the existing Filter Influent Pump Station building.
5. Constructing new washdown stations at the Primary Effluent Equalization Basin, both Biological Nutrient Removal basins and the Remote Digesters.
6. Adding/replacing pipe supports for existing and new piping.
7. Demolishing existing pump stations and equipment.
8. Demolishing existing 3W pipeline from the aeration basins and adding a new connection from secondary tunnel area to east of Biological Nutrient Removal 1.
9. Rehabilitating the Filter Influent Pump Station north wetwell.
10. Adding new interties and connections.
11. Separating from the Muni Water system with an air gap.
12. Connecting to the South Bay Water Recycling system.
13. Repairing/replacing sidewalk, curb, and gutter.
14. Paving and infill placement near 1W/4W pump station, 1W process tank, and 1W/3W bladder tanks.

A Construction Notice to Proceed is anticipated to be issued in February 2024, with substantial completion anticipated in December 2026.

Pre-Qualification of Contractors

Due to the complexity and large construction value of the Project, a rigorous pre-qualification process was completed to develop a list of qualified bidders. The pre-qualification process considered factors such as prior project experience, labor compliance and safety history.

A Request for Pre-Qualifications of Bidders was advertised on June 29, 2022. The City received pre-qualification packages from five potential contractors on August 11, 2022. One contractor subsequently withdrew their submittal. Staff evaluated the submissions and determined that the remaining four contractors met the pre-qualification requirements.

ANALYSIS

Bids were opened on August 24, 2023, with the following results:

Contractor	Bid Amount	Variance Amount	Over/(Under) Percent
Adjusted Engineer's Estimate*	\$48,416,000	--	--
Ranger Pipelines, Inc. (San Francisco)	59,490,760	11,074,760	23%
Steve P. Rados, Inc. (Santa Ana) (non-responsive)	61,538,495	13,122,495	27%
Mountain Cascade, Inc. (Livermore)	67,836,300	19,420,300	40%
Anvil Builders, Inc. (Emeryville)	71,972,660	23,556,660	49%

* The original Engineer's Estimate was \$48,145,000. Adjustments made to the estimate after advertisement included costs for asbestos removal and modifications to the 1W, 3W and 4W piping.

The bid submitted by Steve P. Rados, Inc. was deemed non-responsive due to the bidder's failure to submit a properly executed bid bond.

The low bid, submitted by Ranger Pipelines, Inc., in the amount of \$59,490,760 is 23% higher than the Adjusted Engineer's Estimate. The other three bids range from 27% to 49% above the Adjusted Engineer's Estimate.

The Engineer's Estimate prepared by the design consultant was based on construction costs for similar municipal water projects as well as recent quotes obtained from equipment and material vendors. Despite the recent nature of cost data and vendor quotes being used to prepare the Engineer's Estimate, the continued unprecedented post-COVID market conditions resulted in increased costs. Staff research and input from discussions with the City's independent third-party cost estimator, Leland Saylor Associates, indicate that a combination of factors, including a tight labor market, complex site conditions, and ongoing cost escalation of construction materials and equipment may have contributed to the higher-than-expected bid prices.

Labor shortages in the construction sector have persisted over the last few years and there is a high demand for skilled labor. The San Francisco Bay Area is also still experiencing a high volume of construction, with hundreds of millions of dollars of construction projects planned or underway in the San José/Santa Clara vicinity, including at the San José, Sunnyvale, Palo Alto and Rinconada treatment facilities. As a result, general contractors are paying a premium to attract and retain skilled labor. Specialty subcontractors, such as electrical, instrumentation and control, steel tank fabrication, fire alarm systems, hazardous material abatement, heating, ventilation, and air conditioning are also in high demand, and due to the limited pool of qualified subcontractors there is increased cost for this type of work.

A large portion of the Project is very labor intensive, including installation of 44,000 linear feet of pipe in areas congested with live underground utilities located in an operating wastewater facility. In addition to the challenging subsurface conditions, the contractors likely factored in productivity rates lower than are typical to account for utility conflicts and resolution, potential changes to pipe alignments, and subsequent impacts to construction means and methods. The contractor also likely included higher costs to comply with the RWF's rigorous safety and process shutdown requirements.

Additionally, the construction industry is still experiencing supply chain disruptions and high materials and price escalation. Long material lead-times coupled with the shortage and rising cost of key equipment and materials likely also contributed to higher project costs, particularly taking into consideration the three-year construction period.

In further analysis, staff benchmarked the construction cost for projects that included pipeline and pump station construction or rehabilitation with 13 water and wastewater utilities over the last three years. The comparison showed a 9% bid spread on average between the first and second low bidder. For this Project, the bid spread was only 3.5%, and gives staff confidence that the bid from the lowest responsive bidder is reasonable.

Despite the bids being higher than the Engineer's Estimate, staff is recommending proceeding with the award of the contract for the following reasons:

1. Repair and rehabilitation of the pipes in this Project have been identified as a high priority due to age and condition. Delaying the Project will increase the risk of pipe failure, resulting in higher operations and maintenance costs and possibly safety and permit violations.
2. The 4W (fire water) system is currently supplied with RWF final effluent. Due to concerns for health and safety of staff with potential exposure to final plant effluent and Fire Department concerns with contamination of fire trucks, there is an immediate need to switch over the source of the 4W system from final effluent to 1W (potable water) supplied by Muni Water.
3. Re-bidding the project is not recommended. It is unlikely that future construction prices will be lower since construction activity in San José and the surrounding area has not shown imminent signs of slowing down, material escalation increases are expected to

continue, and thereby a very high probability of the pricing increasing with a rebid process.

4. The contractor is currently working on the 7995 – Storm Drain System Improvements Project and is familiar with the challenges and intricacies of working at the RWF. There is no guarantee that a future low bidder will have experience with the complex subsurface conditions at the RWF, potentially resulting in higher bid prices.

Policy Alternatives

Alternative #1: Direct City staff to reject all bids and not implement the Project.

Pros: Capital cost savings in the short term.

Cons: Continued operation of the aging water systems would likely result in drinking water quality issues, interruption of water supply to critical wastewater process equipment, and inability to meet fire water demands.

Reasons for not recommending: Rehabilitating the water systems has been identified as a high priority capital improvement project due to performance issues, age, and condition. Portions of the water systems are over 50 years old and considered beyond their useful life. Delaying the project will increase the risk of water supply interruptions to critical processes due to pipeline failures, cause poor drinking water quality due to aging infrastructure, compromise fire water demand requirements, and increase operations and maintenance costs. The current 1W system also does not meet California State Law, Title 17 requirements.

Alternative #2: Direct staff to modify the scope and re-bid the Project.

Pros: Modifying the scope and re-bidding the Project may reduce costs in the near-term.

Cons: This alternative will increase project delivery costs, delay the construction schedule, and not fulfill the Project's original needs.

Reasons for not recommending: Modifying the scope to remove some construction elements would require rejecting all the bids and incurring additional consultant and staff costs to redesign and rebid the project, adding at least 10 to 12 months to the construction schedule. The criticality of the Project does not allow for a long delay in rebidding the Project. The removed items of work would still need to be completed as part of a future phase and will likely be more expensive to construct due to escalation. Rebids also do not necessarily force a more competitive market condition and there is also no guarantee that future bids will be in line with the Engineer's Estimate. All prequalified contractors may not participate in the rebidding process. In addition, considering the tight labor market and abundance of construction work in the bay area, costs may increase substantially, and qualified specialty subcontractors may not be available, reducing any potential savings to the City.

Contingency

San Jose Municipal Code Section 27.04.050 provides a standard contingency of 10% of the total contract amount for all public works contracts except those involving the renovation of a building or buildings. However, on this project a contingency of 15% is being requested because

of the challenge of maintaining continuous operations at the RWF during construction, in addition to managing complex project interfaces, process shutdowns, utility conflicts, and coordinating with multiple, concurrent capital improvement projects. The recommendation actions as part of this memorandum provide sufficient funding for the requested contingency.

Project Labor Agreement Applicability

The City's Project Labor Agreement is applicable to this project because the Engineer's Estimate is over \$1.22 million.

Wage Theft Prevention Policy Check

The Department of Public Works Office of Equality Assurance reviewed bidders for compliance with the City's Wage Theft Prevention Policy on July 14, 2023, and again on November 17, 2023. No wage theft violations were identified.

Local and Small Business Analysis

The recommended contractor is not a local or a small business enterprise. However, several local business enterprises are anticipated to be utilized for work scopes including quarry materials, pipe support suppliers, and electricians. The approximate value of work is \$5,000,000 for providing aggregate base, asphalt, crushed rock, sand, and ready-mix concrete; supplying miscellaneous metals and pipe supports; and performing high voltage electrical work.

EVALUATION AND FOLLOW-UP

No follow-up action with City Council is expected at this time. A progress report on this and other RWF capital projects will be made to the Transportation and Environment Committee on an annual basis. Quarterly progress reports of the RWF Capital Improvement Program will also be submitted to the Treatment Plant Advisory Committee and posted on the City's website.

COST SUMMARY/IMPLICATIONS

1. AMOUNT OF RECOMMENDATION/COST OF PROJECT:

Project Delivery*	\$22,209,520
Construction	\$59,490,760
Contingency (15%)	\$8,923,614
Total Project Costs	<u>\$90,623,894</u>
Prior Year Expenditures	<u>\$8,244,066</u>
REMAINING PROJECT COSTS	\$82,379,828

* Project delivery includes \$3,358,977 for project management, design, and environmental permitting during the feasibility/development phase; \$5,574,483 for project management, design, subsurface investigations during the design phase; \$514,524 for bid and award, \$11,845,732 for construction management, and \$915,804 for post-construction and project closeout. The Project delivery cost is approximately 37% of the construction contract, which is in line with project delivery costs for similar size capital projects in RWF.

2. **COST ELEMENTS OF CONTRACT:**

Mobilization/Demobilization	\$2,300,000
Pipeline Improvements	\$29,879,560
Pump Station and Process Tanks	\$22,500,000
Sitework, System Integration, and Hazmat Handling	\$2,156,200
Allowances	\$2,655,000

TOTAL CONTRACT AMOUNT	\$59,490,760
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3. **SOURCE OF FUNDING:** 512 – San José-Santa Clara Treatment Plant Capital Fund. Funding for the Project appropriation in 2023-2024 is insufficient for this award. Budget actions are recommended to increase the Facility Wide Water Systems Improvements appropriation by \$8,000,000 in 2023-2024 to award the construction contract and contingency. To offset this increase, staff recommends decreasing the Support Building Improvements appropriation. This funding is available due to the construction award for the heating, ventilation, and air conditioning improvements project funded by the Support Building Improvements appropriation being delayed to 2024-2025. The Project spans multiple years. Funding needed for construction management and post-construction costs beyond the current fiscal year to complete this work will be re-evaluated and programmed as part of the development of future budget cycles.
4. **FISCAL IMPACT:** The Project will have no additional impact on the San José-Santa Clara Treatment Plant Operating Fund (Fund 513) or the General Fund.
5. **PROJECT COST ALLOCATION:** In accordance with the recommendations set forth in the Capital Project Cost Allocations Technical Memorandum (Carollo Engineers, March 2016), this project is allocated between the four billable parameters relative to the rolling weighted average distribution of all RWF assets.

BUDGET REFERENCE

The table below identifies the fund and appropriations to fund the contract recommended as part of this memorandum and remaining project costs, including project delivery, construction, and contingency costs.

Fund #	Appn #	Appn Name	Total Appn	Rec. Budget Action	Amt for Contract	2023-2024 Adopted Capital Budget Page	Last Budget Action (Date, Ord. No.)
512	7679	Facility Wide Water Systems Improvements	\$64,349,000	\$8,000,000	\$59,490,760	276	10/17/2023 Ord. No. 30966
512	7681	Support Building Improvements	\$19,334,000	(\$8,000,000)	N/A	285	10/17/2023 Ord. No. 30966

COORDINATION

This Project and memorandum have been coordinated with the City Attorney's Office, and the Departments of Finance and Planning, Building and Code Enforcement. This memorandum will be presented at the December 14, 2023 Treatment Plant Advisory Committee meeting for consideration.

PUBLIC OUTREACH

This memorandum will be posted on the City's Council Agenda website for the January 9, 2024 City Council meeting.

COMMISSION RECOMMENDATION AND INPUT

This item is scheduled to be heard at the December 14, 2023 Treatment Plant Advisory Committee meeting. A supplemental memorandum with the Committee's recommendation will be included in the amended January 9, 2024, City Council meeting agenda.

HONORABLE MAYOR AND CITY COUNCIL

December 4, 2023

Subject: Actions Related to the 7760 – Facility-Wide Water Systems Improvements Project at the San José – Santa Clara Regional Wastewater Facility

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CEQA

Addendum to the Environmental Impact Report for the San José/Santa Clara Water Pollution Control Plant Master Plan, Facility-wide Water Systems Improvement Project, File No. ER20-209.

The Plant Master Plan Environmental Impact Report (PMP EIR) was adopted by City Council in November 2013. The EIR evaluated potential environmental impacts and provided applicable mitigation to reduce impacts. Since the completion of the PMP EIR, the City has further refined necessary improvements to the Facility's water distribution system as part of the Facility-wide Water Systems Improvements Project. Given that the City proposed these changes following the EIR adoption, an initial study and addendum to the PMP EIR was completed to meet CEQA requirements. The City's Planning, Building and Code Enforcement Department finalized the CEQA Addendum and Mitigation Monitoring Reporting Program in March 2023. The Mitigation Monitoring Reporting Program was prepared to ensure compliance with the mitigation measures during project implementation, some of these include protection of sensitive species and avoidance of nearby wetlands.

PUBLIC SUBSIDY REPORTING

This item does not include a public subsidy as defined in section 53083 or 53083.1 of the California Government Code or the City's Open Government Resolution.

/s/

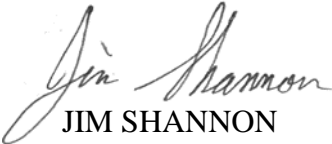
MATT LOESCH

Director of Public Works

/s/

KERRIE ROMANOW

Director, Environmental Services Department



JIM SHANNON

Budget Director

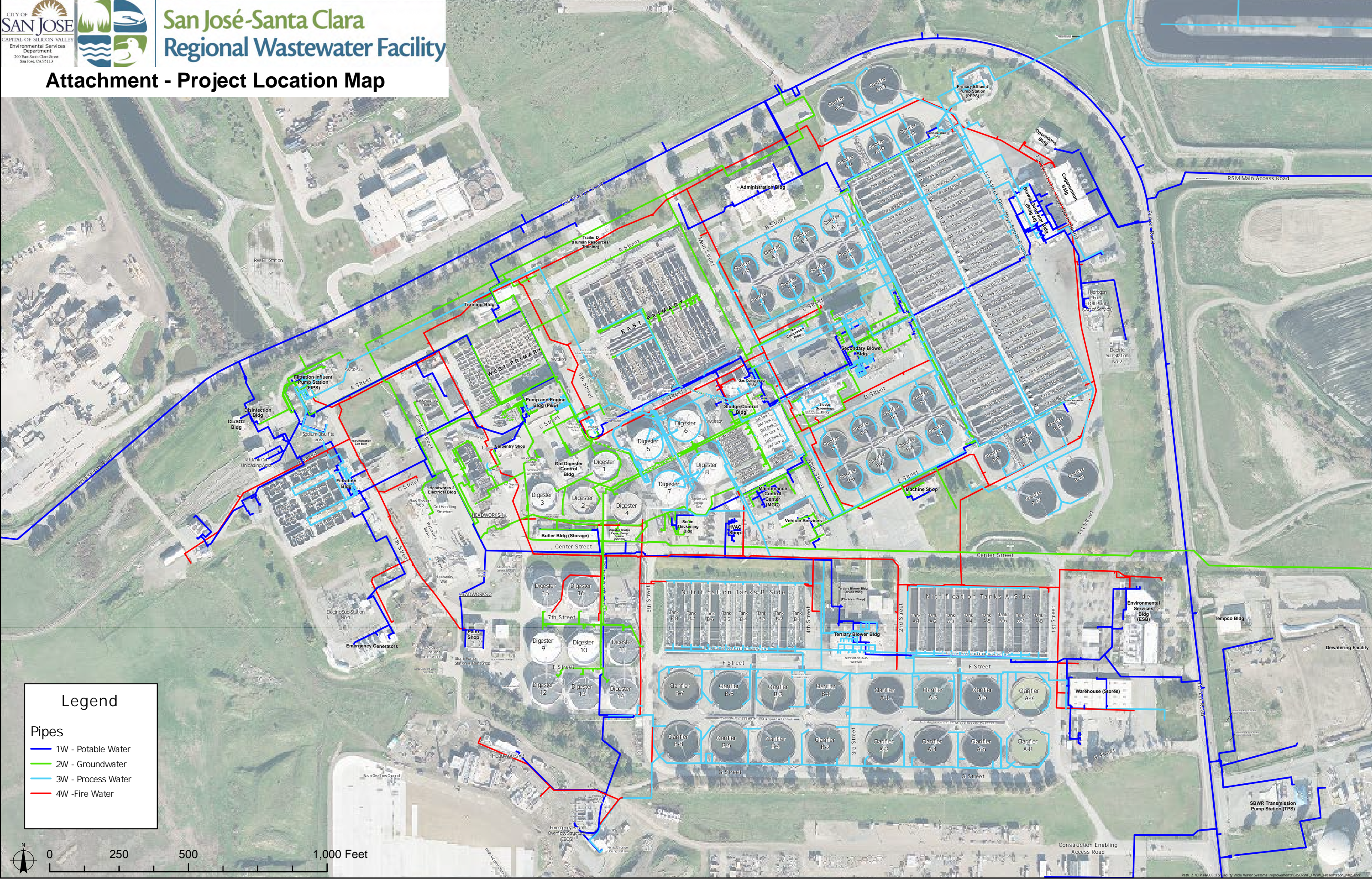
For questions, please contact Mariana Chavez-Vazquez, Assistant Director, Environmental Services Department at (408) 535-8550.

ATTACHMENT: Project Location Map



San José-Santa Clara Regional Wastewater Facility

Attachment - Project Location Map



Legend

Pipes

- 1W - Potable Water
- 2W - Groundwater
- 3W - Process Water
- 4W - Fire Water

