



COUNCIL REPORT

DATE: September 13, 2022

CATEGORY: Consent

DEPT.: Public Works

TITLE: **Addendum No. 11 to Regional Water Quality Control Plant Basic Agreement**

RECOMMENDATION

Authorize the City Manager or designee to execute Addendum No. 11 to the Basic Agreement Between the City of Palo Alto, the City of Mountain View, and the City of Los Altos for the Acquisition, Construction, and Maintenance of a Joint Sewer System to approve the following at the Regional Water Quality Control Plant in Palo Alto: (1) increase the maximum amount of financing for the Primary Sedimentation Tank Rehabilitation Project from \$17 million to \$19.4 million; and (2) construct and implement the Secondary Treatment Upgrades Project with a maximum financing authorization of \$169 million.

BACKGROUND

In 1968, the cities of Mountain View and Los Altos agreed to retire their wastewater treatment plants and approved a contract with the City of Palo Alto (Basic Agreement, also referred to as the Partners Agreement) for the acquisition, construction, and maintenance of a joint wastewater treatment plant at the site of Palo Alto's existing plant that was constructed in 1934. The new plant began operating in 1972. The Basic Agreement was originally set to expire on July 1, 2035 but was extended to December 31, 2060 as part of Addendum No. 8, approved in 2015.

In addition to providing wastewater treatment services for the cities of Palo Alto, Mountain View, and Los Altos, the Palo Alto Regional Water Quality Control Plant (Treatment Plant) provides services to the Town of Los Altos Hills, Stanford University, and the East Palo Alto Sanitary District under separate agreements with the City of Palo Alto.

The Treatment Plant is an advanced treatment facility that uses a multi-stage process to remove organic materials and other pollutants from approximately 16 million gallons per day of wastewater generated in the service area. The treated effluent is predominantly discharged to the San Francisco Bay and meets the stringent discharge requirements of the California Regional Water Quality Control Board as well as the requirements for reuse in recycled water applications. Per the Basic Agreement, Palo Alto owns and operates the Treatment Plant's wastewater

treatment and disposal facilities and is responsible for managing capital improvements to the plant. The Basic Agreement is amended as needed to implement and fund major capital projects for the replacement of obsolete or end-of-life equipment.

In 2012, Treatment Plant staff developed a Long-Range Facilities Plan (LRFP) that reviewed existing and future (50-year time frame) capacity needs, plant condition and deficiencies, the impacts of potential regulatory changes, alternatives to the existing solids incineration and liquid treatment processes, site layouts for plant improvements and potential expansion, and preliminary cost estimates. The LRFP, which was the first comprehensive long-range plan since 1966, included recommendations to rehabilitate and replace existing facilities nearing the end of their useful life. The highest-priority projects are being implemented over multiple years to effectively manage resources and costs.

Based on the LRFP recommendations, Los Altos and Mountain View's city councils approved the following addenda to the Basic Agreement with City of Palo Alto:

- Addendum No. 8 in 2015 to authorize construction and cost-sharing of a sludge dewatering and truck load-out facility. Construction of this project was completed in 2019.
- Addendum No. 9 in 2018 to approve funding for design of the Secondary Treatment Upgrades Project. The design work has been completed, and the project is ready to proceed into construction.
- Addendum No. 10 in 2020 to approve funding for the design and construction of the Primary Sedimentation Tank Rehabilitation Project. This project is in construction and will be completed in 2023.

ANALYSIS

If approved, Addendum No. 11 will provide additional funding to complete the construction of the Primary Sedimentation Tank Rehabilitation Project originally funded in Addendum No. 10 and will fund the construction costs for the Secondary Treatment Upgrades Project, which was designed under Addendum No. 9.

Primary Sedimentation Tank Rehabilitation Project

The Primary Sedimentation Tank Rehabilitation Project is currently under construction. Its project budget of \$17 million is based on a 2018 estimate. Additional funding of \$2.4 million is needed to provide a construction contingency, additional design services during construction, and increased costs in construction management, program management, and construction. Project completion is scheduled for December 2023. The additional \$2.4 million will be financed

through the California Clean Water State Revolving Fund (SRF) Program, as described further in the Fiscal Impact section of this report.

Secondary Treatment Upgrades Project

A key upgrade in 1972 included construction of a biological treatment process unit (i.e., secondary treatment) that consists of four concrete aeration basins that allow the growth of specific bacteria to break down and remove organic compounds in the wastewater. The secondary treatment equipment is between 28 to 50 years old and beyond its useful life.

In addition, the current secondary treatment process is not able to remove nitrogen, which is a new regulatory requirement to discharge treated effluent to San Francisco Bay. The upgraded secondary treatment process will remove harmful nitrogen by creating both oxygen-deficient and oxygen-rich zones in modified aeration tanks. The project will improve final water quality, ensure the Treatment Plant continues to meet effluent discharge permit limits, and allow for ultimate decommissioning of the aging biotrickling filters and other aging equipment. The scope of work includes the following for all four basins:

- Replacement of the air bubble diffusers and the piping manifolds in the basins;
- Replacement and automation of influent and effluent flow diversion gates;
- Concrete work to install new flow channels for flow distribution;
- Replacement of air blowers and sludge pumps;
- Installation of two pump stations, a standby generator, and an electrical power load center; and
- Replacement of aging motor control centers and piping.

Design work for the Secondary Treatment Upgrades Project is complete. Construction documents have been prepared, and bids are being solicited from construction contractors. Upon receiving a successful bid, the City of Palo Alto will award the construction contract and a separate construction management contract. Construction is scheduled to start in January 2023 and complete in December 2027.

The estimated project cost is \$169 million, which will be financed through the California Clean Water SRF Program.

FISCAL IMPACT

The State Water Resources Control Board Division of Financial Assistance administers the California Clean Water SRF Program, which provides low-interest financing to agencies for wastewater projects. Under this program, eligible projects can apply for loans with interest rates that are approximately half of the State General Obligation rate, resulting in lower project costs and maximizing benefits to ratepayers and partner agencies. The total SRF loan application includes the costs for planning, design, construction, construction contingency, capital program administration, and construction management. The first repayment occurs one year after a project's substantial completion.

Palo Alto has previously obtained the following SRF loans for the Treatment Plant improvements:

- Palo Alto/Mountain View Recycled Water Pipeline project (\$9.0 million, 20-year term, Agreement 07-814-550, executed October 12, 2007);
- Ultraviolet Disinfection Facility (\$8.5 million, 20-year term, Agreement 09-814-550, executed October 27, 2009); and
- Sludge Dewatering and Truck Load-Out Facility (\$25.7 million, 30-year term, Agreement D16-01034, executed June 7, 2017).

Palo Alto obtained a \$17 million SRF 30-year term loan for the Primary Sedimentation Tank Rehabilitation Project in 2021. As authorized in Addendum No. 11, this SRF loan will be amended to a new financing amount of \$19.4 million. Loan repayments will begin in 2024, one year after project substantial completion.

For the Secondary Treatment Upgrades Project, Palo Alto executed a loan with the SRF Program on May 9, 2022 with favorable terms, including a 0.8% locked-in interest rate, a 30-year term, project financing of approximately \$169 million, and debt payments that will start one year after project substantial completion, estimated to be in 2028.

Each partner agency's share of the loan repayments is based on a percentage of the total wastewater flows. The estimated annual repayments to be contributed by each partner agency are summarized in Tables 1 and 2 below.

**Table 1: CWSRF Loan Repayment Partner Agency Estimates
Primary Sedimentation Tank Rehabilitation Project**

Contributing Partner Agency	Percent Share	Annual Repayment¹
Palo Alto	38.16%	\$282,682
Mountain View	37.89%	\$280,681
Los Altos	9.47%	\$70,152
East Palo Alto Sanitary District	7.64%	\$56,595
Stanford University	5.26%	\$38,965
Los Altos Hills	1.58%	\$11,704
Total:	100.00%	\$740,779

1. Based on CWSRF loan amount of \$19,400,000 at 0.9% locked interest rate for 30-year term.

**Table 2: CWSRF Loan Repayment Partner Agency Estimates
Secondary Treatment Upgrades Project**

Contributing Partner Agency	Percent Share	Annual Repayment¹
Palo Alto	38.16%	\$2,421,600
Mountain View	37.89%	\$2,404,466
Los Altos	9.47%	\$600,958
East Palo Alto Sanitary District	7.64%	\$484,828
Stanford University	5.26%	\$333,795
Los Altos Hills	1.58%	\$100,265
Total:	100.00%	\$6,345,912

1. Based on CWSRF loan amount of \$168,658,977 at 0.8% locked interest rate for 30-year term.

Following the completion of the LRF in Fiscal Year 2014-15, the City adopted the first of 10 annual 2% wastewater rate increases to generate sufficient revenue to fund the City's share of the Treatment Plant's rehabilitation project costs. However, these rate increases may not be sufficient to handle the rising treatment plant capital project costs. Staff will review the Wastewater Fund in the upcoming budget cycle to determine if the annual 2% increases will need to continue beyond the original 10-year plan.

ALTERNATIVES

1. Do not approve the amendment to the Basic Agreement and direct staff to work with City of Palo Alto staff to identify alternative funding mechanisms.
2. Provide other direction.

PUBLIC NOTICING—Agenda posting.

Prepared by:

Lisa Au
Assistant Public Works Director

Approved by:

Dawn S. Cameron
Public Works Director

Audrey Seymour Ramberg
Assistant City Manager/
Chief Operating Officer

LA/EP/6/CAM
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cc: PWD, FASD, AFASD, WRM