



City of Sunnyvale

Agenda Item-No Attachments (PDF)

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REPORT TO COUNCIL

SUBJECT

Award of three contracts to Solenis LLC, Polydyne Inc., and San Joaquin Chemicals for the purchase of Polymer for the Water Pollution Control Plant and Approval of Budget Modification No. 7 (F22-148) and Find that this Action is Exempt from the California Environmental Quality Act (CEQA) Pursuant to CEQA Guideline 15378(b)(2)

REPORT IN BRIEF

Approval is requested to award contracts with a term of three years with the following not-to-exceed contract amounts: \$5,000,000 to Solenis LLC, of Wilmington, DE, \$3,000,000 to Polydyne Inc. of Riceboro, GA and \$1,000,000 to San Joaquin Chemicals, Inc. of Fresno, CA to provide Polymer for the Water Pollution Control Plant and authorize the City Manager to increase the not-to-exceed contract amount and extend the contracts for up to three additional one-year periods, subject to available budget and if pricing and service remain acceptable to the City. Approval is also requested for Budget Modification No. 7 in the amount of \$1,000,000.

EXISTING POLICY

Pursuant to Chapter 2.08 of the Sunnyvale Municipal Code, City Council approval is required for the procurement of goods and/or services exceeding \$250,000 in any one transaction.

ENVIRONMENTAL REVIEW

The action being considered does not constitute a "project" within the meaning of the California Environmental Quality Act ("CEQA") pursuant to CEQA Guidelines section 15378(b)(2) as it is a continuing administrative or maintenance activity, such as the purchase for supplies.

BACKGROUND AND DISCUSSION

The WPCP utilizes oxidation ponds for the secondary (biological) treatment portion of the wastewater treatment process. Algae that grow naturally in the ponds are the main source of oxygen for this process. Algae in the pond effluent are removed from the wastewater stream in the dissolved air flotation tanks (DAFTs) and dual media filters (DMFs), both of which are components of the WPCPs tertiary treatment process. This removal process has conventionally relied on adding organic polymers (and, at times, other chemicals) to the DAFTs. These chemicals function as coagulants/flocculants, causing the algae to aggregate into clumps (flocs), which are then lifted to the surface by the DAFT's rising air bubbles and skimmed off. Additional solids removal takes place in the DMFs.

Seasonal changes in the type of algae dominant in the ponds have been observed for many years, and these changes affect the ease with which algae are removed in the tertiary process. Approximately two years ago, a major shift occurred with the emergence of extremely small "picoalgae". Removal of these picoalgae in the tertiary process has proven to be very difficult,

requiring much higher doses of polymer to meet requirements for discharge to the Bay. The higher doses have had a compounding impact of reducing DMF run times (time between backwashes), resulting in higher volumes of filter backwash and limiting net tertiary plant throughput. Recycled water production was also impacted by the inability to achieve the lower filter effluent turbidity (2 NTU) required or the need to have all four DMFs operating in discharge (10 NTU) mode. Over the past two years, staff have investigated the use of different polymers and combinations of polymer plus inorganic coagulants to optimize treatment and minimize cost. They determined that the same product did not always perform equally well at different times of the year, and supply chain issues impacted a chemical supplier's ability to deliver product.

Due to the need to meet effluent and discharge requirements in response to the unique situation occurring at the ponds, the City purchased various chemicals under the City Manager's award authority, issuing multiple emergency contracts while extending the contract with Polydyne (current provider) to continue to provide polymer. These actions occurred while staff was conducting a solicitation for polymer product purchases for the coming years.

On July 25, 2022, the city issued an Invitation for Bids for Polymer products for the WPCP. In this solicitation, WPCP staff conducted a series of product trials with interested suppliers to determine the product effectiveness of the proposed polymer product. Suppliers were invited to conduct benchtop "jar testing" of their products to identify the best product(s) for use in subsequent full-scale trials. Proposed products were tested in the Bay Discharge (10 NTU) and Recycled Water (2 NTU) operating modes. Four interested suppliers were provided the opportunity to specify dosing rates based on previous testing or to allow WPCP staff to set dosing rates based on their experience. Dosage rates for the supplier's proposed polymer, and a secondary chemical (if applicable), filter effluent turbidity, filter head loss, and filter run times were monitored continuously or calculated from the monitoring data.

Three participating suppliers met requirements for Recycled Water operating mode and all four met requirements for Bay Discharge operating mode. Suppliers were only required to meet one of the requirements to remain qualified to provide a bid and were provided the monitoring data and a performance summary for its product trials.

Four responsive bids (pricing) were received. A ranking of bids was conducted that evaluated a total "dose adjusted" annual cost for treating a specified quantity of wastewater for each mode. Points were assigned relatively so that the lowest total point score represented the best overall performance. Results of the ranking are summarized in the Bid Summary (Attachment 1).

Staff requests authorization to enter into contracts with multiple vendors because of the observed variability in the performance of different products, based on the season and operating mode, and in consideration of potential supply chain issues. The WPCP intends to retain a supply of different products on site so that performance can be optimized on an ongoing basis and to minimize the overall cost. Multiple contracts will also provide backup suppliers when supply chain issues prevent the delivery of a preferred product. Having multiple contracts for different products will provide much-needed flexibility in addressing difficulties the WPCP has faced over the past several years in operating this critical treatment process.

Based on the performance testing results and the ranking process, staff is recommending an initial three-year contract to be awarded to Solenis LLC, Polydyne Inc., and San Joaquin Chemicals with the option to renew up to two additional one-year periods depending on need, pricing, product performance, and available budgeted funding. No supplier is guaranteed that a specific amount of product(s) will be purchased in any given year.

FISCAL IMPACT

Due to the ongoing pond algae issues, polymer use has increased substantially, to nearly twice as much as in past years. Additionally, the cost per unit of all polymers tested has also increased significantly. Based on the polymer trials, it is estimated that \$3.65 million will be needed for polymer annually. Staff has successfully tested a cheaper chemical called alum (aluminum sulphate) that can be partially substituted for polymer. Staff will implement this new regime starting January 2023. This is expected to bring down the chemical cost to \$3.1 Million for FY 2022/23. The current annual budget for polymer is \$1.0 Million. Savings of \$1.1 Million in electricity costs are expected due to the delay in bringing the primary treatment facilities online. As a result, staff is requesting an additional \$1.0 Million in chemicals budget for FY 2022/23.

For future years, staff anticipates annual polymer and alum costs to be in the range of \$2.6 Million until the algae issue is resolved or until the secondary treatment facilities come online in 2027. Once the new chemical regime of alum+polymer is established and fully tested, staff will have a firmer estimate of chemical costs for future years and request budget changes as part of next year's budget process.

Budget Modification No. 7 has been prepared to appropriate an additional \$1.0 M from the Wastewater Management Fund Rate Stabilization Reserve to Program 14600 - Wastewater Treatment to accommodate the additional cost and usage of polymer, which will bring the FY 2022/23 budget for chemicals from \$1,261,032 to \$2,261,032, a 79% increase. Costs for future years will be in the range of \$2.6 million/year up to 2027 under the worst case scenario and funding for future years will be requested in the upcoming budget process. Wastewater rates will have to be adjusted to account for the additional funding required.

Budget Modification No. 7

	Current	Increase/(Decrease)	Revised
Wastewater Management Fund			
Program 14600 - Wastewater Treatment	\$13,634,563	\$1,000,000	\$14,634,563
Wastewater Management Fund Rate Stabilization Reserve	\$60,260,431	(\$1,000,000)	\$59,260,431

PUBLIC CONTACT

Public contact was made by posting the Council agenda on the City's official-notice bulletin board outside City Hall, at the Sunnyvale Public Library, Senior Center, Community Center and in the Department of Public Safety Lobby. In addition, the agenda and report are available at the Sunnyvale Public Library, Office of the City Clerk, and on the City's website.

RECOMMENDATION

Take the following actions:

- Award three (3) three-year contracts in substantially the same form as Attachment 2, 3 and 4 to the report to: Solenis LLC, of Wilmington, DE, in an amount not-to-exceed \$5,000,000, Polydyne Inc. of Riceboro, CA, in an amount not-to-exceed \$3,000,000, and San Joaquin Chemicals, Inc. of Fresno, CA in an amount not-to-exceed \$1,000,000;
- Authorize the City Manager to execute the contracts when all necessary conditions have been met; and
- Authorize the City Manager to increase and extend each contract for up to three additional one-year periods based on available funding, need, pricing, and performance of the product.
- Approve Budget Modification No. 7 in the amount of \$1,000,000
- Find that the action being considered does not constitute a "project" within the meaning of the California Environmental Quality Act ("CEQA") pursuant to CEQA Guidelines section 15378(b) (2) as it is a continuing administrative or maintenance activity, such as the purchase for supplies.

Prepared by: Gregory S. Card, Purchasing Officer

Reviewed by: Tim Kirby, Director of Finance

Reviewed by: Ramana Chinnokotla, Director of Environmental Services

Reviewed by: Jaqui Guzmán, Deputy City Manager

Approved by: Kent Steffens, City Manager

ATTACHMENTS

1. Bid Summary
2. Draft Service Agreement for Solenis LLC
3. Draft Service Agreement for Polydyne Inc.
4. Draft Service Agreement for San Joaquin Chemicals