



CITY OF
**PALO
ALTO**

City Council Staff Report

From: City Manager

Report Type: CONSENT CALENDAR

Lead Department: Public Works

Meeting Date: February 12, 2024

Report #:2309-2048

TITLE

Approval of Two General Services Contracts in the Wastewater Treatment Enterprise Fund: a Contract with Lystek International Limited in an Amount Not to Exceed \$5,322,769 and a Contract with Synagro-WWT, Inc. in an Amount Not to Exceed \$7,617,013, Both for Offsite Sludge Treatment Services for a Five-Year Term; CEQA status - exempt

RECOMMENDATION

Staff recommends that the City Council:

1. Approve and authorize the City Manager or their designee to execute a contract with Lystek International Limited (Lystek), in the amount of \$5,322,769 for sludge treatment services for the Regional Water Quality Control Plant (RWQCP) for a term of five years, beginning April 1, 2024, and ending on March 31, 2029. The contract amount for the first year of the agreement will be \$944,240; and
2. Approve and authorize the City Manager or their designee to execute a contract with Synagro-WWT, Inc. (Synagro), in the amount of \$7,617,013 for sludge treatment services for the RWQCP for a term of five years, beginning April 1, 2024, and ending on March 31, 2029. The contract amount for the first year of the agreement will be \$1,107,040.

EXECUTIVE SUMMARY

Staff issued a Request For Proposals for sludge treatment services and recommends contracts be awarded to Lystek (Attachment A) and Synagro (Attachment B). Wastewater treatment is managed by the RWQCP within the Public Works Department. Since 2018, the City has utilized contracted services for sludge treatment. Selection and award of general services agreements has been through formal solicitation of proposals, review of costs, and assessment of quality of services.

BACKGROUND

City Council approved retiring the City's two 46-year-old sewage sludge incinerators¹ as a key to reducing carbon dioxide emissions by over 12,000 metric tons annually. The incinerators operated from 1972 until their replacement in March 2019 with a new sludge dewatering and truck loadout facility. Sludge hauling and treatment contracts were implemented to address sludge treatment after incinerator retirement. Since March 2019, the sludge has been hauled to two different regional treatment facilities. To prepare for hauling and treatment, the City solicited requests for proposals for sludge hauling and treatment services in 2017. Five-year contracts for sludge treatment services with Lystek and Synagro were approved on June 18, 2018, and these contracts have terms through March 31, 2024. To transport sludge to the treatment facilities, City Council approved a three-year contract² with Denali Water Solutions, LLC (Denali) on June 18, 2018 in an amount not to exceed \$2,181,000 for sludge hauling services through March 31, 2022. Denali began daily sludge hauling from the dewatering facility on March 19, 2019. A new contract³ for sludge hauling, again with Denali, was approved on January 24, 2022 for three more years of hauling services beginning April 1, 2022 and ending March 31, 2025.

Lystek

Lystek is a corporation and has a sludge treatment facility approximately 82 miles from the RWQCP, located at the Fairfield-Suisun Sewer District (FSSD) site under a 20-year lease that ends January 1, 2036. FSSD is a special purpose district. Through July 2023, Lystek has treated 33,532 wet tons of sludge from Palo Alto. Lystek has also treated sludge from the City of San Francisco, East Bay Municipal Utility District, Marin County, City of Benicia, City of Petaluma, City of Santa Rosa, City of South San Francisco, City of Healdsburg, and other Bay Area agencies. Lystek is currently processing about 200 wet tons per day of trucked-in sludge from multiple agencies; Lystek's total processing capacity of 150,000 annual wet tons is more than sufficient for Palo Alto's sludge. Lystek uses a low-temperature hydrolysis process involving high-speed shearing, alkali, and low pressure, low-temperature steam injection. Lystek's goal is to divert more than 95 percent of the received Palo Alto sludge to make a product (branded as LysteMize) that would be added to the FSSD anaerobic digesters. LysteMize will help FSSD reduce volatile solids, improve biogas and electricity yields, decrease residual biosolids volumes, and reduce FSSD's demand from PG&E for both natural gas and electricity by meeting onsite electric energy demands when combusting the extra biogas in FSSD's engine generators. The final product of all sludge sent to Lystek and from the FSSD anaerobic digesters is a USEPA

¹ City Council, December 11, 2017; SR # 8487

https://paloalto.admin.opencities.com/InformationManagement/FileAdmin.aspx#&&FH=File_23152553-c158-4dfe-9795-71bc0ee63c4e

² City Council, June 18, 2018; SR # 8913

<https://www.cityofpaloalto.org/files/assets/public/agendas-minutes-reports/reports/city-manager-reports-cmr/2018/2018-06-18-8913-approve-three-public-works-contracts-for-sludge-hauling-and-offsite-treatment-services.pdf>

³ City Council, January 24, 2022; SR # 13520, pg. 17

<https://www.cityofpaloalto.org/files/assets/public/agendas-minutes-reports/agendas-minutes/city-council-agendas-minutes/2022/20220124/20220124pccsm-amended-linked-cq-added.pdf>

Class A product (i.e., Lystek’s LysteGro product, which is a registered fertilizer with California Department of Food and Agriculture). LysteGro is land applied year-round within 100 miles of the Lystek facility.

Synagro

Synagro is a corporation and operates several sludge composting facilities in the US including the El Nido Central Valley Composting (CVC) facility located in Dos Palos, approximately 114 miles from RWQCP. CVC uses an open windrow processing method that combines RWQCP sludge with a bulking agent (primarily green waste and wood waste). High temperature aerobic composting converts RWQCP sludge into a USEPA Class A product that is sold in bulk to the region’s agricultural market; the product is typically land applied within 30 miles of the Synagro CVC facility. The CVC facility is permitted by CalRecycle to handle up to 100,000 tons per year of feedstock. Through July 2023, Synagro has treated 47,267 wet tons of Palo Alto sludge. CVC has also serviced the City of Fresno, City of Sunnyvale, Silicon Valley Clean Water in Redwood City, City of San Francisco, Union Sanitary District in Union City, South County Regional Wastewater Authority serving Gilroy and Morgan Hill, and the Delta Diablo Sanitation District in Antioch.

ANALYSIS

On June 21, 2023, a Request for Proposals (RFP 187745) was posted on OpenGov, the City’s eProcurement platform, and an email notification sent to the Bidder’s List, which included four offsite treatment facilities, seeking proposals from qualified sludge treatment facilities. The RFP allowed service providers to submit a proposal for all or part of the sludge produced by the RWQCP as noted in Table 1, which is based on the lowest and highest quarters of sludge production since January 2020.

Table 1: Sludge Production Estimates			
Dates	Estimated Minimum Sludge Production	Estimated Maximum Sludge Production	Estimated Annual Production Increase
4/1/24 – 3/31/25	16,500	20,600	--
4/1/25 – 3/31/26	16,500	21,424	4%
4/1/26 – 3/31/27	16,500	22,281	4%
4/1/27 – 3/31/28	16,500	25,089	4% + 1917 tons ¹
4/1/28 – 3/31/29	16,500	28,754	4% + 2661 tons ¹
¹ Note: Additional sludge production is expected with upgraded Secondary Treatment system, which will produce an estimated 34% additional waste activated sludge (WAS) or about 10% additional total sludge production beginning on an estimated date of 6/9/2027; consequently, the ratios of primary and WAS sludge listed in the scope of work’s Attachment B, Exhibit A may change slightly in years 4 and 5 of the contract.			

Proposals were due on August 15, 2023 and two proposals were received. The table below provides a summary of the RFP process:

Proposal RFP# 187745	Proposal Name: Sludge Treatment Services for the Regional Water Quality Control Plant
Proposed Length of Project	60 Months
Number of Vendors Notified	2708
Number of Proposal Packages Downloaded	33

Public Link to Solicitation	https://procurement.opengov.com/portal/palo-alto-ca/projects/51100
Total Days to Respond to Proposal	53 days
Mandatory Pre-proposal Meeting	Tuesday, July 25, 2023 at 10:00 a.m. PST
Number of Providers at Pre-proposal Meeting	6 providers
Number of Proposals Received	2 proposals received

The evaluation committee, composed of representatives from the Public Works Department, carefully reviewed and assessed the two proposals using standard evaluation criteria. The committee carefully reviewed each firm's qualifications and submittal in response to the criteria identified in the RFP. The providers not proposing do not have the capacity or ability to take Palo Alto's sludge during the five-year contract term.

Staff recommends award of contracts to both Synagro and Lystek for diversification of options consistent with current practice. Both proposers have provided good service since the start of regular services in the prior contract since March 2019. The contracted minimum annual delivery in the contracted scope of work is 5,800 and 10,000 tons per year to Lystek and Synagro, respectively. Staff contacted Lystek and explored lowering the Lystek minimum tonnage below 5,800 tons per year, which is a reduction from the current contract's minimum to Lystek of 6,500 tons per year. Further reduction in the Lystek minimum annual delivery requirement is not an option. Surplus sludge production above the Lystek minimum will be directed to the lower cost Synagro facility.

FISCAL/RESOURCE IMPACT

The five-year cost for the sludge treatment services contract in comparison to the prior five-year contract has increased by \$5.9 million.

COMPARISON OF CONTRACT COSTS (PROPOSED AND EXISTING)

2024-2029 Cost Proposal Total, Lystek & Synagro	\$12,939,782
2019-2024 Cost Proposal Total, Lystek & Synagro	\$7,064,000
<i>Five Year Total Cost Increase</i>	<i>\$5,875,782 (\$1.2M annually)</i>

The unit price for both facilities will be increasing on April 1, 2024 as follows:

- Lystek increases from \$98.55/wet ton to \$148.00/wet ton; and
- Synagro increases from \$40.85/wet ton to \$68.00/wet ton.

Vendors have indicated that the increase in unit price between the two five-year general service contracts is because of (a) greater regional demands on offsite sludge treatment capacity, (b) greater demands on capacity because of regulatory changes due to SB 1383 (2016) restricting disposal of biosolids in landfills as alternative daily cover, (c) higher transportation

expenses for the offsite facilities to haul the biosolids fertilizer and biosolids compost to its end use, (d) higher fuel costs, and (e) higher chemical costs, as much as a 100% increase, for Lystek's process.

There has also been higher labor inflation (about 4% to 5% per year) for labor at the treatment facility and for the drivers hauling away the Class A biosolids. The actual inflation realized over the course of the current contracts from 11/28/18 to 3/31/24 was not captured in the original contracts, and they were set contractually at 2% per year (Synagro)⁴ and 3% per year (Lystek)⁵. Actual San Francisco CPI-U inflation over a similar period has averaged 3.92% (August 2018 to August 2023). Said another way, Synagro assumed 10% inflation but about 20% was realized in the first 5-year contract; likewise, Lystek assumed 16% inflation but about 20% was realized. Both proposers reflect a greater uncertainty in the next five-year contract for the 12-month price adjustments (i.e., 4.0% to 6.0%).

Staff believes that the proposals submitted by Lystek and Synagro fit the overall cost, experience, and operational flexibility needed at the RWQCP. Each treatment facility is successfully handling large quantities of sludge. The unit price summary of both facilities is included in Table 2 below.

Table 2: Lystek and Synagro Treatment Facility Unit Prices US \$/wet ton							
Facility	Current Contract 11/28/23 - 3/31/24	Year 1 4/1/24- 3/31/25	Year 2 4/1/25- 3/31/26	Year 3 4/1/26- 3/31/27	Year 4 4/1/27- 3/31/28	Year 5 4/1/28- 3/31/29	Comment
Lystek	\$98.55	\$148.00	\$156.88	\$166.29	\$176.27	\$186.85	4500 tons May to October; 1300 tons November to April
Synagro	\$40.85	\$68.00	\$72.08	\$76.40	\$80.99	\$85.85	10,000 tons per year minimum
Notes: 1. Lystek 12-month price increase is 6.0%, 5.0%, 4.0%, and 4.0% per year for contract years 2, 3, 4, and 5, respectively. 2. Synagro 12-month price increase is 4.8% per year for contract years 2, 3, 4, and 5. 3. For purposes of calculating not-to-exceed amounts and allow for diversification in force majeure situations, a 10% adder is included; the Lystek annual amount is set at 6,380 wet tons per year and Synagro annual amount is set at 14,800 tons in contract year one rising to 22,954 tons in contract year five							

Contingency for Force Majeure Situations and Regulatory Changes

⁴ City Council, June 18, 2018; SR 8913 <https://www.cityofpaloalto.org/files/assets/public/agendas-minutes-reports/reports/city-manager-reports-cmrs/year-archive/2018/id-8913-approve-three-public-works-contracts-for-sludge-hauling-and-offsite-treatment-services.pdf>

⁵ City Council, June 18, 2018; SR 8913 <https://www.cityofpaloalto.org/files/assets/public/agendas-minutes-reports/reports/city-manager-reports-cmrs/year-archive/2018/id-8913-approve-three-public-works-contracts-for-sludge-hauling-and-offsite-treatment-services.pdf>

Unit prices govern each agreement up to the authorized not to exceed amounts and pursuant to tonnage minimums as well as actual production of RWQCP sludge. A force majeure may limit sludge disposal options (e.g., damaged roadways, earthquake damage, process breakdowns, new regulatory constraints, etc.). In these two contracts, Palo Alto has the benefit of diversified disposal options at Lystek and Synagro. The RWQCP's 24/7 production of sludge requires a disposal option be active and available within one to two days, depending on RWQCP's available onsite sludge storage.

Lystek has onsite sludge drying beds that serve as a secondary backup should the main processing facility be unavailable. Synagro and Lystek can each receive all the RWQCP-produced sludge, if needed. Both Lystek and Synagro produce sludge meeting USEPA Class A standards suitable for year-round land application. Considering potential new regulatory drivers, tonnage commitments, operational flexibility, and cost, staff recommends Synagro and Lystek as the two treatment facilities for Palo Alto's sludge.

Long Range Facilities Plan Update to Look at Future Options for RWQCP Biosolids Treatment
Lystek and Synagro continue to provide an efficient and cost-effective solution for biosolids treatment, however, there may be other options that could be implemented after the term of this contract that better serve the City. A long-term biosolids treatment solution was established with the October 2014 Biosolids Facilities Plan. That plan was re-evaluated in a Biosolids Facilities Plan Update⁶ in October 2019, which was completed six months after startup of the new sludge dewatering and truck loadout facility. The 2019 Biosolids Facilities Plan update continued to show that offsite treatment was the best option in the interim.

The Long Range Facilities Plan⁷ (LRFP) was approved in 2012⁸. The RWQCP is in the process of updating the LRFP. Consultant selection for the LRFP Update is expected to be approved by City Council in approximately May 2024. The LRFP Update will include a task to update the 2019 Biosolids Facilities Plan Update; the LRFP Update and the biosolids treatment facility analysis will be completed by approximately December 2026. The results of that evaluation will inform the future efficiency, environmental benefit, and cost effectiveness of sludge hauling and offsite sludge treatment services. As requested by City Council at the August 21, 2023 meeting on property acquisition⁹ adjacent to the RWQCP, the evaluation will include an analysis of the need for the Measure "E" site adjacent to the RWQCP. Finally, the San Jose Water Pollution Control Plant is evaluating proposals through about the end of 2025 for a privately constructed

⁶ Palo Alto Regional Water Quality Control Plant Biosolids Facility Plan Update;
https://www.cityofpaloalto.org/files/assets/public/v/1/public-works/water-quality-control-plant/sludge-dewatering-building/finaldraft_palo_alto_bfp_update.pdf?t=47012.05

⁷ The Long Range Facilities Plan for the Regional Water Quality Control Plant Final Report
<https://www.cityofpaloalto.org/files/assets/public/v/1/public-works/water-quality-control-plant/lrpf-final-report-08-2012.pdf>

⁸ City Council, July 2, 2012; SR 2914 <https://www.cityofpaloalto.org/files/assets/public/v/1/agendas-minutes-reports/reports/city-manager-reports-cmrs/year-archive/2012/id-2914.pdf>

⁹ City Council, August 21, 2023; SR 2304-1389, Item 7,
<https://cityofpaloalto.primegov.com/Portal/Meeting?meetingTemplateId=13014>

and operated biosolids facility at the San Jose wastewater plant site (i.e., about eight acres of land set aside for this operation)¹⁰. This potential facility would be operational in 2029 at the earliest; the request for proposals indicated that the contracted operator may be open to imported feedstock from other agencies such as Palo Alto. Imported feedstock would likely only be received after successfully proven operation treating San Jose biosolids and if the private operator had surplus capacity for imported feedstock. The anticipated San Jose treatment facility option will also be evaluated in the LRFP Update.

Budget Summary

As the contracts commence April 1, 2024, the three-month cost of the contracts in Fiscal Year 2024 with the two vendors is estimated to be \$485,599 for sludge treatment services. These contracts would continue to be budgeted in the Wastewater Treatment Enterprise Fund operating budget. The additional contract service expense of about \$177,332 in FY2024 will be absorbed by the Wastewater Treatment Enterprise Fund or staff will return for a Budget Amendment, as needed.

For future Fiscal Years 2025 through 2029 of the respective contracts, funding is subject to City Council approval and the annual appropriation of funds through the budget process. Estimated contracted amounts are shown below in Table 3 and Table 4 by fiscal year and contract year, and contracted amounts include 10 percent additional sludge compared to the estimates in Table 1 delivered to either Lystek or Synagro to provide flexibility in meeting minimum delivery guarantees and force majeure situations.

FY	Lystek	Synagro	Sludge Treatment Cost Total	Denali (sludge hauling)	Sludge Hauling and Treatment Cost Total
2024 (last 3 months)	\$279,474	\$254,685	\$534,159	\$176,583	\$710,742
2025	\$961,008	\$1,138,564	\$2,099,573	\$727,470	\$2,827,043
2026	\$1,018,669	\$1,273,875	\$2,292,544	\$780,218	\$3,072,762
2027	\$1,079,789	\$1,465,087	\$2,544,876	\$854,721	\$3,399,598
2028	\$1,144,576	\$1,830,157	\$2,974,733	\$1,000,986	\$3,975,719
2029 (first 9 months)	\$839,252	\$1,654,645	\$2,493,897	\$852,443	\$3,346,340
Total	\$5,322,769	\$7,617,013	\$ 12,939,782	\$ 4,392,422	\$17,332,204

¹⁰ San Jose City Council, October 24, 2023; San Jose City Council Agenda File 23-1418, Item 2.9, <https://sanjose.legistar.com/View.ashx?M=F&ID=12367407&GUID=C7666A67-143D-42FE-9A5D-43DBF97ED1D6>

Table 4: Sludge Treatment Cost Summary by Contract Year				
Contract Year	Lystek	Synagro	Lystek + 10%	Synagro + 10%
1	\$858,400	\$1,006,400	\$944,240	\$1,107,040
2	\$909,904	\$1,126,178	\$1,000,894	\$1,238,796
3	\$964,498	\$1,259,224	\$1,060,948	\$1,385,147
4	\$1,022,368	\$1,562,195	\$1,124,605	\$1,718,414
5	\$1,083,710	\$1,970,560	\$1,192,081	\$2,167,616
Total	\$4,838,881	\$6,924,557	\$5,322,769	\$7,617,013

STAKEHOLDER ENGAGEMENT

RFP 187745 was issued in on June 21, 2023 for further continuance of sludge treatment services. The evaluation committee for this RFP included staff from the Public Works Department under the guidance of the City's Purchasing and Contracts Administration Division.

ENVIRONMENTAL REVIEW

City Council action on this item is exempt from review under the California Environmental Quality Act (CEQA) in the proposed contracts for sludge dewatering and hauling since these are existing operations at the RWQCP. CEQA Guidelines section 15301.

ATTACHMENTS

Attachment A: Contract C24187745A with Lystek International Limited
Attachment B: Contract C24187745B with Synagro-WWT, Inc.
Attachment C: Key Terms

APPROVED BY:

Brad Eggleston, Public Works Director