



DATE: December 12, 2017
TO: Mayor and City Council
FROM: Director of Utilities & Environmental Services
SUBJECT: West Winton Landfill Leachate Conveyance System Replacement Project:
Approval of Addendum No. 1, Award of Contract, and Appropriation of Funds

RECOMMENDATION

That Council adopts the attached resolutions approving Addendum No. 1 which provided minor clarifications to the Specifications, awarding the contract to GSE Construction Co., Inc., in the amount of \$175,700, and appropriating additional funds from the Sewer Operating Fund for the West Winton Landfill Leachate Conveyance System Replacement Project.

SUMMARY

The West Winton Landfill (the landfill) is a closed San Francisco Bay-front landfill located at the western terminus of Winton Avenue in Hayward. The City currently owns the landfill, and pursuant to a waste discharge requirement issued by the California Regional Water Quality Control Board (Water Board), maintains the landfill. Part of the maintenance included installation of a leachate extraction and conveyance system. Since its installation in 1993, the system had been operating reliably until earlier this year after the unusually wet season when the system began to experience a number of leaks. This request is to award a contract for the replacement of the conveyance system so that the work can be completed in the next four months.

BACKGROUND

The West Winton Landfill (the landfill) is a closed San Francisco Bay-front landfill located at the western terminus of Winton Avenue in Hayward. The landfill covers an area of approximately sixty acres and is maintained as recreational open space and is used as a passive public park as part of the East Bay Regional Park District's Hayward Regional Shoreline. The facility was operated as a regional landfill by Waste Management of Alameda County, then called Oakland Scavengers, from 1930s until its closure in mid-1970s, and as such, the landfill's waste is owned by Waste Management, while the underlying land is owned by the City which acquired title in 1978. Perimeter trails are owned and maintained by the East Bay Regional Park District as part of its Regional Shoreline Trail system, which forms a portion of the Bay Trail system. Pursuant to an Order from the Water Board, and under an agreement with Waste Management, the City

operates and maintains the leachate conveyance system, and Waste Management maintains the leachate extraction system (wells and pumps).

The leachate extraction system (LES) was installed in 1993 to mitigate a leachate discharge affecting the Bay. In 1996, the system was expanded to the landfill's eastern panhandle where an additional extraction well was installed. The system had been operating reliably until earlier this year after the unusually wet season when the system began to experience a number of leaks. The leachate conveyance system consists of a relatively shallow buried PVC piping system. The piping has been in place for approximately twenty-four years. Over time and particularly after heavy rain this past winter following several years of drought conditions, it is expected that some settlement may have occurred. Because of these conditions, increased pressure on the buried piping system may have advanced pipe joint cracks resulting in leachate leaks. The landfill leachate conveyance system is an important component of managing leachate levels in the landfill. Tidal influences and to some extent precipitation can penetrate the landfill cap and cause liquid levels to rise. It is important to keep the system functioning so that water level gradients are drawn toward the extraction wells where the leachate can be pumped out and conveyed to the Water Pollution Control Facility for further treatment. Under a Waste Discharge Requirement issued by the California Regional Water Quality Control Board, buildup or mounding of leachate levels which can adversely impact waters of the State is prohibited. Therefore, it is essential to have a functioning leachate extraction system at all times.

City staff noticed a leachate spill at the landfill in April and promptly reported it to the Water Board. The City received a Notice of Violation on April 25, 2017 from the Water Board because of said failure of the leachate conveyance system. City staff investigated the failure and what may have contributed to it. There was significant work with the Water Board to identify the appropriate corrective measures. The system also experienced a failure on July 28, 2017 and two more in September.

Staff has been keeping the Water Board informed and is coordinating its work with Water Board staff.

DISCUSSION

The purpose of this project is to replace the existing leachate conveyance system with a new, more robust high density polyethylene piping system. In addition, new vaults will be installed with isolation valves and cleanout fittings to allow staff to isolate individual well heads while continuing to leave the remain wells in service. These vaults will allow staff easier access to isolate parts of the system, and fittings to allow pipe segments to be cleaned as necessary.

Staff has prepared plans and specifications for replacement of the leachate conveyance system. In addition, staff has worked closely with the Water Board and the Alameda County Department of Environmental Health to develop a health and safety plan to protect human health and the environment from exposed wastes and/or leachate during construction. In addition, staff has worked with the East Bay Regional Parks District to coordinate work that will take place in the public access paths during construction.

On October 30, 2017, Council approved the plans and specifications for the project and called for bids to be received on November 30. One November 15, 2017, Addendum No.1 was issued to provide clarification to the specifications.

On November 30, 2017, the City received four (4) bids for the project, ranging from \$145,700 to \$269,858. GSE Construction Co., Inc., submitted the low bid in the amount of \$145,700, which is 21% above the Engineer's Estimate of \$120,000. Despite this exceedance, staff believes this is a fair and competitive bid, given that 1) the project received four bids, and 2) this is a specialty project and difficult to prepare a baseline cost estimate, so it is not uncommon to see specialty projects have bids that are substantially above or below the Engineer's Estimate.

ECONOMIC IMPACT

There are no short-term economic impacts to Hayward customers. This cost will be absorbed as part of the maintenance budget for the landfill.

FISCAL IMPACT

The estimated project costs are as follows:

Design and Administration Services – City Staff	\$ 15,000
Construction Contract (Including administrative change orders)	\$ 175,700
Inspection– City Staff	\$ 20,000
Compaction Testing	\$ <u>10,000</u>
Total	\$220,700

The failure of the leachate system is unexpected and therefore is not included in the Adopted FY 2018 Capital Improvement Program (CIP).

Annual landfill maintenance, which includes mowing, monitoring, minor repairs, and other routine tasks, is funded by the Wastewater Operating Fund. The FY 18 budget is approximately \$290,000. Because the project includes major unanticipated repairs of the leachate conveyance system above and beyond those included in the Operating Fund, additional funding is necessary. This project is required to meet the City's Waste Discharge Requirement for the West Winton Landfill, therefore to fund the construction project, staff is requesting that adequate funds be appropriated from the Sewer Operating Fund balance in the amount of \$175,700 (including \$30,000 in administrative change orders in the event additional funds are needed for unforeseen conditions and changes during construction). At 20%, the administrative change order is higher than those of typical construction projects; however, it is necessary for this specialty project given higher potential for unforeseen field conditions.

STRATEGIC INITIATIVES

This agenda item is a routine operational item and does not relate to one of the Council's Strategic Initiatives.

SUSTAINABILITY FEATURES

The leachate conveyance system is essential to protecting the waters of the state from potential degradation that might be caused by groundwater and tidal waters mixing with landfill leachate. Improving the conveyance system will reduce the potential for leachate to be conveyed via groundwater or tidal marshes to the San Francisco Bay.

PUBLIC CONTACT

Staff has contacted the affected agencies (i.e., Regional Water Quality Control Board, East Bay Regional Park District, Alameda County Department of Environmental Health, and Waste Management) about this project and is closely coordinating this work with said agencies.

SCHEDULE

The following schedule has been developed for this project:

Award of Construction Contract	December 12, 2017
Begin Construction	January 2018
Construction Completion	March 2018

Prepared by: Suzan England, Senior Utilities Engineer

Recommended by: Alex Ameri, Director of Utilities & Environmental Services

Approved by:



Kelly McAdoo, City Manager