



## Legislation Text

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**File #:** 21-069, **Version:** 1

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Staff report for a City of San Leandro City Council Resolution to Authorize the City Manager to Execute a \$2,670,000 Consulting Services Agreement with Leland Environmental Solutions Corporation for Remediation of Soil at the Water Pollution Control Plant, Project 2015.0300; to Authorize the City Manager to Negotiate and Approve Contract Amendments Up to 10% (or \$267,000) of the Original Contract Amount; and to appropriate \$500,000 for the Project in Fiscal Year 2020-2021

### SUMMARY AND RECOMMENDATIONS

Authorizes a contract for design and furnishing materials to remediate stockpiled soil at the Water Pollution Control Plant (WPCP) that is proposed for use in transforming the former polishing ponds into a wetland treatment area for WPCP effluent.

Staff recommends:

- execution of the contract with Leland Environmental Solutions Corporation (Leland);
- authorization to approve contract amendments up to 10% of the original contract amount; and
- appropriation of \$500,000 from the WPCP Enterprise Fund for the project.

### BACKGROUND

The WPCP rehabilitation project, accepted by City Council on May 2, 2016, generated a large volume of soil, most of which was off hauled as part of the original construction project. Approximately 40,000 tons of the dirt generated was found to have higher than expected levels of metal and other contaminants and was stockpiled on site for possible treatment, re-use, or off haul. This dirt was stockpiled because the cost of treatment, re-use, and/or off haul was deemed to be significant enough to warrant competitive bidding of the work.

The City awarded a contract for off haul of the cleanest portion of the material in 2017 but testing performed by the contractor revealed that pesticides were present in some locations and consequently the original disposal site would no longer accept the dirt. The contract for hauling was cancelled and the City began to investigate methods for remediating the entire stockpile so that it could be removed from the site.

Subsequent to cancelation of the 2017 dirt removal contract, the City received a grant to prepare a design for conversion of the former polishing ponds to a wetland treatment area for WPCP effluent. The project will require dirt to fill the polishing ponds and the stockpiled soil could constitute a portion of this fill if desired.

While there is currently no regulatory requirement to remediate dirt that remains on site, staff investigated options so that costs and benefits of remediating the dirt could be evaluated. Cement or lime is commonly used to remediate soil containing metals but is ineffective on pesticides. Traditional

pesticide remediation uses specific plants to absorb the chemicals which requires both an area to lay the dirt out in a thin layer and time for plants to grow. The area required for treatment of the soil in this method is 24 acres, and the treatment could take 2 years to complete. Unfortunately, there is no land available on site in the required size for the treatment period. This method also only treats pesticides, metals would still require treatment with cement, making this more expensive than other options, even if land was available. The City contacted several consulting firms that specialize in soil remediation and while they were all familiar with the traditional methods for pesticide mitigation only Leland had a solution that could work with the WPCP's space constraints. Leland proposes using biochar (charcoal prepared from organic material) to not only remediate the soil for metals but also to bind the pesticides via adsorption, and thus prevent them from leaching out of the soil.

The biochar method seemed promising and the City solicited bids in 2019 from construction teams to test the dirt, specify, and supply the biochar, mix the material, and move it to the polishing ponds. Unfortunately, this process is not common, and no bids were received. The only way to remediate the dirt with biochar is to hire Leland for the design and supply of materials and then hire a contractor to process and move the dirt.

## **Analysis**

Staff considered the following options for this work:

- 1) reuse dirt without treatment;
- 2) treat the dirt with cement and reuse it;
- 3) treat the dirt with the proprietary biochar offered by Leland and reuse it on site; or
- 4) treat the dirt with cement, haul it to a regulated dump site, and import make up soil for the wetland treatment project.

Reusing the dirt without treatment is currently permitted but the City would remain liable for the future cost of cleanup, if and when regulations change. Future clean up would be more expensive than current clean up; consequently, this option was discarded.

Reusing the dirt on site with cement treatment relies on a common process that many contractors can perform. However, the amount of cement required is significant and is predicted to transform the soil into solid chunks that are not suitable for the proposed re-use; consequently, this option was discarded.

Reusing the dirt on site after treating with biochar is estimated to cost \$7.5M. This estimate is based on an assumed volume of biochar, if the actual quantity needed is different the cost will be higher or lower; the maximum likely value of the work is \$8M and this amount will be known when the design is complete. This option uses innovative materials to remediate the soil and extensive testing will be performed after treatment to ensure performance. If the post-treatment test results are unsatisfactory, the design consultant is required to pay for additional treatment until such time as all samples pass testing. This option requires a minimal amount of truck trips as the material is re-used on site.

Off hauling the dirt after cement treatment is the only other viable option. Similar to the biochar option, the design and construction cost is estimated at \$7.5M. This estimate includes the price to bring in an equivalent volume of soil for placement in the former polishing pond. There is risk of higher costs with this option as the cost is primarily to transport the material, which will be hauled to a

permitted waste disposal site. The estimate is based on a local disposal site, but it is possible that the material will need to be moved out of state at an increased cost. Although this process can stabilize only the metals within the soil and will not address the pesticides, the material should be acceptable for placement in a class II regulated dump facility. This process requires approximately 2,600 more truck trips than the biochar option and the design time is slightly longer which results in approximately \$240,000 of additional costs to haul sludge due to one season of lost use of the drying beds upon which the dirt is stored.

Staff recommends the third option: hiring Leland and mitigating all the contaminants in the dirt. Use of biochar is innovative and that carries some risk of higher than estimated costs, but there are cost savings due to quicker implementation as well as less impact on the neighborhood from trucking activity. Reducing the number of truck trips as well as the attendant emissions associated with this activity supports the goals of the City's Climate Action Plan. Leland has quoted a significant fee for the design work; Leland guarantees that its design will work and agrees to pay for rework of the soil if certain testing goals are not met. Rework of the soil could potentially cost millions of dollars; thus, Leland's fee reflects not just the effort required to do the work but also the cost of carrying the risk that Leland may need to rework the soil.

Leland must complete its design work before the exact quantity of biochar is known. In order to respond to changes in the amount of biochar needed in a timely fashion and avoid delaying work, staff requests authorization to issue individual contract amendments to the consultant up to 10% or \$267,000. If the design indicates the need for a quantity of biochar that exceeds the current change order authorization, staff will bring a report to the City Council before proceeding.

Staff recommends appropriation of an additional \$500,000 of WPCP enterprise funds for the project, which is sufficient to cover the work by Leland and the design phase of the project. Additional funding will be requested when a construction contract is awarded to mix and move the dirt.

### **Current Agency Policies**

- Maintain and enhance San Leandro's infrastructure.

### **Previous Actions**

- On January 21, 2014, via Resolution No. 14-005, Council appropriated funding for off haul of stockpiled soil.
- On October 2, 2017, via Resolution No. 2017-136, Council awarded the contract for WPCP Dirt Removal 2017.
- On March 19, 2018, via Resolution No. 2018-023, Council canceled the contract to off haul the stockpiled soil due to higher than anticipated contamination.

### **Applicable General Plan Policies**

- Policy EH-4.9 Nearshore Waters. Ensure the continued improvement of nearshore waters through the regulation of water pollution sources along the San Leandro shoreline, including

boating and other water-oriented activities.

### **Permits and/or Variances Granted**

The existing water board permit for the WPCP covers this work.

### **Environmental Review**

This project is categorically exempt from the California Environmental Quality Act (CEQA) per Section 15304(a) of the CEQA guidelines.

### **Fiscal Impacts**

The cost of this contract is \$2,670,000, which includes design, furnishing material, and quality control during construction.

The total project cost is as follows:

#### Phase 1

Design and Bid:	\$750,000
Furnish Biochar (Leland):	\$1,750,000
Quality Control (Leland):	\$374,000
<u>Contingency:</u>	<u>276,000</u>
Sub Total	\$3,150,000

#### Phase 2

Construction:	\$3,615,000
Contingency:	\$649,000
<u>Construction Management and Inspection:</u>	<u>\$86,000</u>
Sub Total	\$4,350,000
Project Total	\$7,500,000

### **Budget Authority**

<u>Account No.</u>	<u>Source</u>	<u>Fiscal Year</u>	<u>Amount</u>
593-52-229	WPCP Enterprise Fund	FY13/14	\$2,650,000
593-52-229	WPCP Enterprise Fund	Req. by this action	<u>\$500,000</u>
	Total		\$3,150,000

### **Attachment to Related Legislative File**

- CSA Leland WPCP Dirt Treatment 2021

### **PREPARED BY:**

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