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## Contract Approval – Heavy Grit and Sludge Disposal

### Recommendation

That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to City Council:

1. That the Administration enter into an agreement with Loraas Landfill for the disposal of heavy grit and sludge from the City's Biosolids Handling Facility at a cost of \$785,887.99 (including taxes); and
2. That Purchasing Services authorize the appropriate purchase order.

### Topic and Purpose

The purpose of this report is to obtain approval to enter into an agreement with Loraas Landfill for disposal fees incurred during the North 40 Biosolids Handling Facility (Biosolids Handling Facility) Cell 28 Relining project.

### Report Highlights

1. In April 2018 Engineering Services contracted the construction of a concrete cell liner to Brodsky Construction Inc. through a competitive tender which included the removal of existing heavy grit and sludge.
2. Engineering Services reviewed acceptable landfill options and opted to dispose of the heavy grit and sludge at the Loraas Landfill.

### Strategic Goals

This report supports the Strategic Goal of Asset & Financial Sustainability by ensuring municipal infrastructure is well maintained and managed to optimize the useful life of the assets.

### Background

The Biosolids Handling Facility is an integral component of the wastewater treatment process. The facility has multiple decant cells that receive grit and sludge from various sources such as the wastewater treatment process, cleaning of the digesters and hydrovac trucks. Once dewatered, the grit must be taken to an approved landfill for disposal. In addition to clay and sand, the grit contains hazardous materials including biohazardous and sharp items.

As part of the WWTP's asset management plan and in order to be in compliance with the Water Security Agency (WSA) Permit to Operate, the Administration has been retrofitting existing cells with concrete liners.

### Report

In April 2018 Engineering Services contracted the construction of a concrete cell liner to Brodsky Construction Inc. through a competitive tender in the amount of \$1,058,771.28.

Included in their scope of work was the removal and hauling of an estimated 5000 tonnes of heavy grit and sludge from the existing cell. This cell had been receiving grit for 30 years so the actual volume and moisture content was unknown at the time of tender. The actual amount removed was 7075 tonnes.

There are only two possible local locations that can receive the grit and sludge; the Saskatoon Landfill and the Loraas Landfill. Several factors were considered when determining the appropriate location for disposal including the hauling distance and the ability of the landfill to receive the material. The Loraas Landfill is significantly closer to the North 40 Biosolids Facility than the Saskatoon Landfill by approximately 75%. In addition, the City's Permit to Operate was reviewed to determine the Landfill's ability to accept the material. Based on a combination of permit/guideline, current fill sequencing (options for disposal locations), and operational constraints, the Saskatoon Landfill was unable to receive the partially treated digester grit. Furthermore, the grit and sludge at the Biosolids Handling Facility is not partially treated, therefore, it is more hazardous than the digester grit and unacceptable for the City's Landfill.

An existing annual blanket order for heavy grit and sludge disposal at the Loraas Landfill is in place with the Waste Water Treatment Plant. This led to an oversight whereby the disposal services for the material from the cell lining project were assumed to be pre-arranged when in fact the blanket order that was in place was for a much smaller quantity of material. As a result, landfill disposal fees were not included in the construction contract with Brodsky Construction Inc. but were to be paid to Loraas Landfill directly on a per tonne basis. In consultation with Purchasing Services, City Council approval is required to process payment for disposal services.

In order to determine the appropriate course of action is followed in the future, controls are being put in place to ensure future purchasing of related services is executed according to the Purchasing Policy.

### **Options to the Recommendation**

Considering all factors, Loraas Landfill was the only feasible option for disposal of the material. As the work is already completed and the cost is reasonable, there are no options to the recommendation at this time.

### **Financial Implications**

There is sufficient approved funding in Capital Project #2567 – WWT – Relining Cell place for this expenditure. This capital project is funded by the Wastewater Utility, therefore, this purchase will not affect the mill rate. The following is a summary of the project expenditures:

Budget	\$4,475,000.00
Construction contract	\$1,058,771.28
Loraas Landfill charges	\$ 748,464.75
GST (5%)	<u>\$ 37,423.24</u>
Budget remaining	\$2,630,340.73

### **Environmental Implications**

By utilizing the Loraas Landfill, considerable energy savings were realized due to the landfill's close proximity to the project compared with the Saskatoon Landfill. The hauling distance for the 471 loads of grit would have been over 4 times further (6.3 km as opposed to 27 km) resulting in a considerable increase in Green House Gas emissions.

By disposing of the grit at the Loraas Landfill, landfill airspace was conserved since the disposal of grit would have displaced future domestic waste disposal capacity.

### **Other Considerations/Implications**

There are no options, communication, public or stakeholder involvement, policy, privacy, or CPTED implications or considerations.

### **Due Date for Follow-up and/or Project Completion**

Construction of the liner for cell 28 at the Biosolids Handling Facility was completed in August 2018.

### **Public Notice**

Public Notice pursuant to Section 3 of Policy No. C01-021, Public Notice Policy, is not required.

### **Report Approval**

Written by:	Lucas Storey, Project Engineer, Saskatoon Water
Reviewed by:	Pam Hamoline, Engineering Services Manager Reid Corbett, Director, Saskatoon Water
Approved by:	Angela Gardiner, Acting General Manager, Transportation and Utilities Department Jeff Jorgenson, City Manager

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