



The Corporation of Delta
COUNCIL REPORT
Regular Meeting

To: **Mayor and Council**

From: **Human Resources and Corporate Planning**

Date: **June 18, 2014**

Vancouver Landfill Technical Liaison Committee

The following report has been reviewed and endorsed by the Chief Administrative Officer.

▪ **RECOMMENDATIONS:**

- A. THAT a copy of this report be provided to the City of Vancouver's Mayor Gregor Robertson and Council; Dr. Penny Ballem, City Manager; and Mr. Peter Judd, General Manager of Engineering Services.
- B. THAT a copy of this report be provided to the Metro Vancouver Zero Waste Committee.

▪ **PURPOSE:**

To provide information to Council on the subject of a recent meeting of the Vancouver Landfill Technical Liaison Committee.

▪ **BACKGROUND:**

At the April 11, 2011 Regular Meeting of Delta Council, the establishment of a Vancouver Landfill Technical Liaison Committee was endorsed in response to concerns raised by Delta regarding landfill gas emissions. The committee meets quarterly to discuss issues relating to the Vancouver Landfill and consists of senior staff from the Corporation of Delta (Delta) and City of Vancouver (Vancouver). A map showing the phases of the Vancouver Landfill is included as Attachment A. Phase 1, Phase 2 and Phase 3 West have been closed. The current active area of the Landfill is Phase 3 East.

▪ **DISCUSSION:**

The twelfth meeting of the Vancouver Landfill Technical Liaison Committee (the committee) was held on May 29, 2014 at the Vancouver Landfill. The following items were discussed:

Landfill Gas Collection and Progressive Landfill Closure Works

All work on the landfill closure projects for Phase 3 west is substantially complete. Some additional landfill gas collection infrastructure work will be completed in the upcoming months. Improvements are being made to several existing landfill gas collection wells where evidence of fouling and leachate buildup has been observed that is affecting landfill gas collection performance. Additional horizontal gas collection wells are being installed in the active phase of the landfill (Phase 3 east) in an effort to improve gas collection efficiency since landfill gas generation is highest soon after the waste has been deposited.

For the month of April 2014, overall landfill gas collection efficiency was 63% which is calculated using a Provincial landfill gas generation model. This is an improvement over the annual average collection rate for 2013 which was 60%. This means emissions of approximately 37,500 tonnes of carbon dioxide equivalent were avoided over this one month period. The uncaptured methane emitted is equivalent to approximately 22,000 tonnes of carbon dioxide or the emissions of 4,400 cars over a one year period.

As noted in previous reports to Council, Vancouver is working on obtaining approval from the Ministry of Environment for a site specific landfill gas generation model that better represents landfill gas collection efficiency on the site. A pilot project to measure methane emissions from the site has recently been undertaken using remote sensing technology from a low flying helicopter. This data is currently being analyzed and the results will be used to further develop this site specific model.

The majority of the landfill gas that is collected is beneficially used by the Maxim Cogeneration Facility located at the Village Farms Greenhouse on 80th Street in Delta. The remaining gas is currently flared and with increasing landfill gas collection rates the amount of gas not currently beneficially used is increasing. Vancouver staff advised that discussions are continuing with FortisBC regarding the injection of this additional landfill gas, which is considered a "biogas" into the natural gas pipeline. The BC Utility Commission has recently increased the amount of biogas that FortisBC can purchase and sell to its customers which allows for the consideration of the Vancouver Landfill project. Specific approval of the Vancouver Landfill by the BC Utility Commission would still be required.

Landfill Operations

Staff discussed the draft BC Criteria for Municipal Solid Waste Landfills and Delta's comments that were previously reported to Council and submitted to the Ministry of Environment were provided to Vancouver staff. Primary issues of concern to Vancouver included how the criteria may be applied retroactively and the reduction in time provided for closing sections of the landfill once filling is completed.

Vancouver also advised that it has engaged a consultant to look at potential upgrades to the access and Residential Drop Off area at the landfill now that the South Fraser Perimeter Road is complete and new traffic patterns have been established.

Regulatory Reporting

It was confirmed at the committee meeting that Delta was receiving regular information on landfill gas, water quality and leachate monitoring from Vancouver. Since the last committee meeting, the annual report and annual landfill gas reports were submitted prior to the March 31, 2014 deadline and were provided to Delta.

The annual Environment Canada Greenhouse Gas and National Pollutant Release Inventory reports have also been submitted. The total amount of 2013 Greenhouse Gas emissions noted in the report to Environment Canada is 308,192 tonnes of carbon dioxide equivalent. This is comparable to the greenhouse gas emissions from approximately 60,000 cars. For further context, the total community greenhouse gas emissions in Delta in 2010 (excluding large industrial emissions) were approximately 590,000 tonnes of carbon dioxide equivalent.

No issues of non-compliance with regulations or the Landfill's Operational Certificate were identified.

Complaints

A summary of the complaints received since the last meeting was reviewed by the committee. No formal odour complaints have been received. Delta has also not received any formal odour complaints that were attributed to the Vancouver Landfill since the last meeting.

Highway 99 and George Massey Tunnel Replacement


An update was provided by Delta staff to Vancouver staff regarding potential Highway 99 improvements associated with the Massey Tunnel Replacement project. Landfill signage from the new South Fraser Perimeter Road was also discussed and it was agreed that Delta and Vancouver staff would work together to bring forward recommended signage improvements to the Ministry of Transportation and Infrastructure.

Implications:

Financial Implications – There are no financial implications



CONCLUSION:

A summary of items discussed at the last meeting of the Vancouver Landfill Technical Liaison Committee is provided for information. This committee is continuing to be productive and it is recommended this report be shared with the City of Vancouver's Mayor and Council and senior staff.


Sean McGill
Director of Human Resources and Corporate Planning

Department submission prepared by: Mike Brotherston, Manager of Climate Action and Environment

This report has been prepared in consultation with the following listed departments.

Concurring Departments		
Department	Name	Signature
Engineering	Steven Lan	
Office of Climate Action and Environment	Mike Brotherston	

- **ATTACHMENT:**
 - A. Vancouver Landfill fill plan

Fill Plan for Vancouver Landfill



— Access Road — Inner & Outer Ditch System