

September 2, 2016

## Solid Waste Utility Audit

### Background

#### **Solid Waste Utility (SWU)**

The Solid Waste Utility was established in 1998 to administer the residential and commercial solid waste services managed by the Solid Waste Management Branch of Engineering Services.

#### SWU Programs

The SWU's operation consists of City-run collection programs (garbage, green bin, and recycling) and operation of the City's transfer station and landfill.

#### SWU Funding

The SWU is a self-sustaining operation based on full cost-recovery. Rates are subject to Council approval and the fee setting process recovers costs through user fees charged to customers. Key inputs to the SWU Division's annual budget include the cost per tonne of disposing refuse at the Vancouver Landfill (VLF) and the Vancouver South Transfer Station (VSTS), tonnage to be collected, the number of households requiring services, and the expected recovery on sale of recyclable materials. The fee calculation is reviewed by management and compared to prior years for reasonableness. Any issues are discussed and resolved prior to finalizing the fees for Council approval. At the end of the year, any operating surplus in the solid waste utility is transferred to the Solid Waste Capital Reserve (see below).

#### Landfill Operation

The City owns and operates the Vancouver Landfill in Delta. The Landfill receives approximately 40% of Metro Vancouver's waste, and is expected to continue to operate with a scheduled closure in 2037 under the Tripartite Agreement with Metro Vancouver and the Corporation of Delta.

#### Landfill Operation Certificate

The Landfill's Operational Certificate (MR-01611) issued by the Ministry of Environment (MOE) requires that the City maintain a reserve sufficient to fund closure, post-closure and environmental contingencies related to the Landfill.

#### **Solid Waste Capital Reserve (SWCR)**

The Solid Waste Capital Reserve is a stabilization reserve for the SWU to fund the Vancouver Landfill's (VLF) closure/post closure activities.

#### Contributors to this fund

Contributions to the SWCR are made from the landfill's operating surplus and are attributable to four of the landfill's many waste sources:

- Vancouver-origin Municipal Solid Waste (MSW), known as Residential Drop-off or RDO, deposited at the City's transfer station and Vancouver Landfill;
- Commercially collected Vancouver-origin MSW, which are collected by City Sanitation staff and excluding RDO mentioned above;
- Delta-origin MSW RDO; and
- Vancouver-origin Demolition and Land-Clearing waste (DLC).

Any other surplus attributable to other waste streams is refunded to Metro Vancouver or the Corporation of Delta in accordance with the Tripartite Agreement.

### Management of SWCR

The City manages the SWCR through the Capital Finance Fund (CFF). The SWCR is monitored by Engineering's Transfer and Landfill Operations Branch and Financial Services. The Capital Financing Fund (CFF) provides internal financing to capital projects and City Council directed that City staff report annually all liabilities including Landfill closure and post-closure care costs.<sup>1</sup>

### Status of SWCR

The current balance (Aug 2016) of the SWCR is approximately \$83M. This balance is reported annually in the Vancouver Landfill Annual Report. The reserve calculation is based on contributions to the SWCR as well as expenditures from the Landfill's Design and Operations Plan and the Western 40 Hectares Closure Plan.

### Recent External Review of SWCR

Deloitte LLP, conducted a third party SWCR review in May 2014 to verify requirements for closure and post closure care. The review took into account expected revenues, operating costs, loan repayment costs, waste tonnages and potential contingency requirements and was "... intended to inform a discussion of strategic options for ensuring the SWCR is adequately funded."<sup>2</sup>

A further follow-up (final) consultant's report (November 2014) presented estimated liabilities for landfill closure under two scenarios in response to questions posed by the City in the event that Metro Vancouver's Waste bylaw 280 failed to obtain Provincial approval. The scenarios were modifications of the "Business as Usual" representing the Landfill continue to operate under status quo and if the bylaw was passed. The consultant presented the two scenarios but did not make any recommendation for their work.

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<sup>1</sup> In 2001, Council set the minimum balance of the SWCR at \$30,000,000 and require the SWCR be reviewed every five years. The landfill closure and post-closure liability as at December 31, 2015 is \$85.3 million (2014 - \$71.9 million).

<sup>2</sup> Deloitte's "Memorandum on Initial Results of Solid Waste Capital Reserve Sufficiency" report dated May 21, 2014, page 2, scope of work last paragraph.

### Scope

The Major Fund Audit - Solid Waste Utility (SWU) was initiated to provide independent assurance that this fund and related business processes are managed effectively, efficiently and in accordance with applicable City policies and provincial legislations.

Our work included:

- Review of SWU related Council Directives, City Bylaws, and Vancouver Charter requirements;
- Assess City's compliance to the BC Environmental Management Act pertaining to municipal waste management and the Landfill Operational Certificate MR-01611;
- Examine effectiveness of processes to ensure SWU funds are monitored and used as intended;
- Review adequacy of accounting processes on fund activity and balances in the SWU capital reserve; and
- Determine sufficiency of Solid Waste Capital Reserve.

### Conclusion

The Solid Waste Utility (SWU) business processes and internal controls are adequate to support the objectives of SWU operations and managed in accordance with City and Ministry of Environment (MOE) policies and regulations. The Solid Waste Capital Reserve is at a level that is adequate to fund the current estimates of the future liability of closure and post-closure care activities as required by the Ministry.

Some of the more significant recommendations included:

- **Review Landfill Closure Scenarios and Operation Calculations**  
Engineering will continue to work with Metro Vancouver and the Corporation of Delta to determine the most probable closure scenario and establish the plan for landfill's operation based on expected future solid waste tonnage.
- **Maximize Utilization of Collected Landfill Gas**  
Engineering is committed to meet or exceed the Ministry of Environment's Landfill Gas (LFG) Guidelines of 75% collection efficiency by 2016. Landfill staff will work with Fortis to maximize utilization of collected LFG for beneficial use and integration with the City's renewable energy goals.
- **Disposition of Surplus Levies on Utility Fees**  
To stabilize future utility rates Solid Waste Utility management will work with Financial Services to review the accumulated surpluses and determine the appropriate amounts to apply as offsets against future rate increases.

Management has committed to improve the City's landfill operation by continuing consultations with municipalities in the Burns Bog Landfill Agreement, analyzing different closure scenarios and increasing utilization of landfill methane gas. Accumulated surpluses from solid waste utility fees will be reviewed to arrive at a suitable application in developing future utility rates.