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CITY OF VANCOUVER

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ADMINISTRATIVE REPORT

Report Date: January 28, 2008  
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Meeting Date: January 29, 2008

TO: Vancouver City Council

FROM: General Manager of Engineering Services

SUBJECT: Interim/Long Term Disposal of Regional Municipal Solid Waste at  
Vancouver Landfill

## RECOMMENDATION

- A. THAT the General Manager of Engineering Services issue an RFP for a multi-faceted consulting study to examine and assess the financial, regulatory and environmental implications of the Metro Vancouver Board proposal to make the Vancouver Landfill the only interim and long term residual waste management facility for the entire region.
- B. THAT Vancouver not participate in a task force with Metro Vancouver and Delta to work towards a possible agreement to establish the Vancouver Landfill as a long-term residual waste management facility for the region until such time as Council has reviewed the results of this study and assessed the implications for the City of Vancouver.
- C. THAT staff inform the Commissioner of the Greater Vancouver Sewerage and Drainage District that:
  - i. Vancouver will not accept Regional Waste quantities in excess of the Solid Waste Management Plan or the Operational Certificate of the Vancouver Landfill, unless those are first amended.
  - ii. Vancouver will not apply for an amendment to the Operational Certificate for the Vancouver Landfill until Council has had the opportunity to assess the implications for the City of Vancouver.

## **GENERAL MANAGER'S COMMENTS**

The decision of the Greater Vancouver Sewerage and Drainage District Board to pursue the Vancouver Landfill as the sole solid waste residual management facility for the entire region has significant financial, regulatory, and environmental implications to the City of Vancouver. The Vancouver Landfill represents a huge financial asset to the City. It is a viable and economic solution to the City's waste disposal needs for many years to come. Accepting waste from the entire region will significantly shorten the life of the landfill.

City staff had no input to this recommendation and have not had the opportunity to fully assess and evaluate its impact. Council needs to have the opportunity to evaluate and consider all of the implications of such a proposal, from a City of Vancouver perspective before agreeing to work towards an agreement. A comprehensive consulting study is recommended to fully investigate the implications and risks to the City of Vancouver in a timely manner to be able to respond to this Regional initiative.

The General Manager of Engineering Services recommends Council adopt Recommendations A through C.

## **CITY MANAGER'S COMMENTS**

The City Manager recommends Council approval of Recommendations A through C.

## **COUNCIL POLICY**

There is no applicable Council Policy.

## **PURPOSE**

The purpose of this report is to seek Council direction in order to respond to the decision of the Metro Vancouver Board, to pursue the Vancouver Landfill as the long term residual solid waste management facility for the entire Metro Vancouver region.

Metro Vancouver is also interested in using the Vancouver Landfill as an interim solution to the waste disposal needs from the time that the Cache Creek Landfill is full, (by 2010) until such time as long term waste to energy alternatives are implemented. They have estimated that this would take 6 years, however Vancouver staff believe that there is a great deal of uncertainty about the timelines involved in successfully siting, permitting, constructing, and commissioning waste to energy facilities within Metro Vancouver. The potential implications of starting to accept all of the region's waste at the Vancouver Landfill, when no long term solution is assured within a reliable time frame are of major concern.

This report recommends the commissioning of a multi-faceted consulting study to examine and assess the financial, regulatory and environmental implications that would result from these Metro Vancouver proposals.

## **BACKGROUND**

Vancouver has owned and operated the Vancouver Landfill located in the municipality of Delta since 1962. The Vancouver Landfill operates in accordance with Operational Certificate MR-01611 issued by the Ministry of Environment, and under the provisions of the Regional Solid Waste Management Plan. The Vancouver Landfill currently serves the communities of

Vancouver, Delta, Richmond, White Rock, the University Endowment Lands and portions of South Surrey, representing approximately 40% of the population of the region.

The Vancouver Landfill is a model for environmentally sensitive and sustainable landfilling operations.

Examples include

- The beneficial use of landfill gas to create electricity for over 6,000 homes and heat for local greenhouses
- A highly successful and commercially competitive yard and garden trimmings composting facility in operation since 1989
- An innovative demonstration project composting of food waste for potential expansion to a regional program.
- Ongoing expansion of the landfill gas collection system for the sale of landfill gas.
- A leachate collection and containment system to ensure protection of the environment including ongoing monitoring to evaluate the efficiency of this system.
- the design of closure plans to assure the long term stewardship of the landfill and beneficial use of the land it occupies.

### *Historical Waste Disposal*

Metro Vancouver began providing regional municipal solid waste services in 1973. The following year, the first regional landfill in Coquitlam was established to serve the eastern municipalities.

By 1983, Metro Vancouver was faced with the closure of the Coquitlam Landfill and encountered opposition in its attempts to obtain a replacement landfill site. At that time, the region also looked to the Vancouver Landfill to become the only disposal site for the region but this was opposed by the City of Vancouver and by the Corporation of Delta. Vancouver and Delta did agree to the request to dispose of the region's waste on an interim basis, subject to a firm long term plan for an alternative. An agreement was signed to use the Vancouver Landfill from October 1983 until October 1986 while the Burnaby Waste-to-Energy Facility was built (completed in 1988) and the Cache Creek Landfill was opened (1989).

During this interim period, an additional 200,000 tonnes of waste per year was disposed of at the Vancouver Landfill representing a 70% increase from the approximately 275,000 tonnes of waste per year already accepted from private and municipal haulers in Vancouver, Delta, White Rock and the University Endowment Lands.

### *Current Waste Disposal at Vancouver Landfill*

In order to assist in the management of the excess regional municipal solid waste in the Metro Vancouver system, Vancouver Landfill has been accepting additional regional waste and as a result, has been operating at its permitted capacity for the last three years. This has helped to extend the life of the Cache Creek Landfill while the Region sought a replacement. Cache Creek Landfill has also been operating at capacity in recent years, although they have been accepting waste from outside Metro Vancouver, consisting of approximately 20% of their allowable capacity. Acceptance of this out-of-region waste has reduced the overall lifespan of Cache Creek Landfill.

### *Recent Developments*

On January 25, 2008, the Greater Vancouver Sewerage and Drainage District Board approved the Commissioner's recommendations as follows:

- a) Abandon plans to replace the Cache Creek Landfill through continued landfilling in the interior of British Columbia, and instead focus its attention and efforts on the Zero Waste Challenge, the establishment of local composting and waste-to-energy processing capacity, and the use of the Vancouver Landfill and/or Washington State landfill(s) for the disposal of any residuals; and
- b) Establish a task force with representation from Metro Vancouver, the City of Vancouver and the Corporation of Delta that will work towards a possible agreement to establish Vancouver Landfill as a long-term residual waste management facility for the region.

In the interim between the pending closure of the Cache Creek landfill at the end of 2009 and the commissioning of the waste-to-energy facilities projected for 2016, Metro Vancouver is proposing to dispose of the entire region's municipal solid waste (1.5 million tonnes per year) at the Vancouver Landfill.

### **DISCUSSION**

Vancouver has been prudent in making provisions for the long term disposal of its waste and has expended considerable funds in acquiring and operating the Landfill. This investment has resulted in low disposal costs to Vancouver residents in the past and will continue for years to come. Other benefits from Vancouver's ownership of the Landfill include:

- revenue from commercial customers tipping fees
- revenue from the sale of landfill gas for electricity and heat
- potential value of carbon credits for offsetting the impacts of all municipal operations through greenhouse gas reduction initiatives at the Landfill

The Vancouver Landfill represents a very significant financial asset to Vancouver and its residents. The current actual cost of disposal at the landfill to Vancouver residents is \$21 per tonne and the estimated remaining capacity is between 20 and 30 million tonnes. The current regional tipping fee, based on the average cost of incineration in Burnaby, landfilling at Cache Creek, and landfilling at the Vancouver Landfill is \$68 per tonne. Metro Vancouver's projected cost of operations of a Waste to Energy Facility is \$130 per tonne. At the current maximum authorized disposal rate under the Operational Certificate, the Landfill could accommodate Vancouver's solid waste disposal needs for another 30 to 40 years. This life will be further extended by expanded waste reduction, diversion and recycling programs.

There is a great deal of uncertainty about the impact of the Region's proposal. In the short term, prior to implementation of the waste to energy alternatives, the Landfill would receive double the current maximum annual tonnage. The region has estimated that it will take 6 years to implement the waste to energy alternative. City staff believe that this estimate is both very optimistic, and highly uncertain. The 6-year estimate could increase significantly based on the uncertain timelines for siting, permitting, and constructing new waste-to-energy facilities within Metro Vancouver.

Risks to the City of Vancouver in this proposal include:

- The uncertainty of the regulatory review and public process involved in amending the Landfill's Operational Certificate and the Regional Solid Waste Management Plan to allow for a doubling of the annual allowable tonnage.
- The acceptability of the proposal to Delta, the Landfill's host community, and subsequent support to continued landfill operations.
- Metro Vancouver's projected operating cost per tonne for the waste-to-energy facilities of approximately \$130 compared to the current cost at the Landfill of \$21 per tonne.
- The additional risk of the environmental and financial liability for managing all of the region's waste.

Appendix A outlines an initial draft of steps that would be required to increase the maximum allowable discharge quantity and expand the allowable origins of municipal solid waste at the Vancouver Landfill by the end of 2009 for the interim period until 2016.

## ALTERNATIVES/OPTIONS

Rather than approving the recommendations of this report, Council could decide:

- a) To agree to establish a Tripartite Task Force now, as suggested in Metro Vancouver's Board resolution, without the benefit of an in-depth analysis of the potential implications and risks. This is not recommended because of the very large potential impacts on Vancouver's waste disposal options and costs.
- b) To inform Metro Vancouver that Vancouver is not interested in having the Vancouver Landfill become the long term residual waste management facility for the region. Despite the concerns and uncertainties identified in this report, Vancouver should not rule out that there may be an acceptable solution that addresses the region's municipal solid waste problem without disadvantaging the good position that Vancouver currently enjoys.
- c) To instruct staff to carry out the proposed review in-house, without the assistance of a consulting team. Given the impending closure of the Cache Creek Landfill there is a pressing need to establish a Vancouver position and determine whether or not Vancouver is prepared to consider the Regional proposals. This work cannot be accommodated by staff without consulting assistance.

## FINANCIAL IMPLICATIONS

The complete scope and cost of this consulting assignment has not been assessed at this time; however, it will quite likely exceed the level of the City Manager's authority to award consulting assignments (\$30,000). As such, the cost of the study would be reported back to Council along with a recommendation on consultant selection.

The appropriate funding source for a study such as this would be the Solid Waste Capital Reserve which is set aside from the ongoing income from commercial waste tipping fees at the Landfill and Vancouver South Transfer Station, in order to fund the City's future solid waste disposal capital needs. There is adequate funding available from that source for a study of this nature.

## PERSONNEL IMPLICATIONS

It will be challenging for Engineering Services, Corporate Services, and Legal Services staff to deal with the management of a consulting study, and to participate in discussions with Metro Vancouver staff on this issue, given the many other current issues that we already face. However, it is also not possible to quickly hire more staff to take on the additional work. The use of consulting assistance is the best possible alternative and is recommended. The challenge of issuing the Request For Proposals and managing the consultant contract will have to be addressed using existing resources and will likely displace other ongoing work.

## ENVIRONMENTAL IMPLICATIONS

Significant long term environmental implications will likely arise from the decisions resulting from this work; however, there are none directly associated with the consulting award.

## CONCLUSION

It is important for Vancouver Council to evaluate the potential implications of the Metro Vancouver proposal to make the Vancouver Landfill the only interim and long term residual waste management facility for the entire region, before the City agrees to begin negotiating to that end. The General Manager of Engineering Services recommends that Vancouver commission a multi-faceted consulting study to examine the financial, regulatory and environmental implications and risks of the region's proposals.

The General Manager of Engineering Services also recommends that Vancouver not agree to make application for an amendment to the Operational Certificate for the Landfill until Council has had the opportunity to review the outcome of this assessment, and that Vancouver not receive regional waste in excess of the current Operating Certificate.

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## Appendix A

### List of Requirements to Implement Metro Vancouver's Board Recommendations

Outlined below are a number of steps that need to be taken in order to proceed with acceptance of Metro Vancouver waste as recommended by the Waste Management Committee on Tuesday, January 22, 2008.

- Agreement in principle from Delta Council (previously opposed to increasing tonnage/truck traffic/reducing landfill life)
- Vancouver City Council approval/direction to proceed
  - Financial analysis of implications to Vancouver residents
  - Cost/benefit analysis of options
- Legal Requirements and Considerations
  - Ministry of Environment
    - OC major amendment to increase tonnage, origin and waste types (materials currently accepted at Cache Creek, e.g. fly ash, out of region waste, etc. with implications on Waste Discharge Permit)
    - Environmental Assessment involving public consultation, technical studies, scrutiny of all requirements by any interested parties, additional operational and engineering requirements
    - Metro Vancouver SWMP amendment
  - Vancouver - GVS&DD - Delta Tripartite Agreement (1989)
    - Amend to add other waste origins
    - Review and change waste disposal fees and royalties including compensation to Vancouver for lost space resulting in long term revenue loss and increased disposal costs
  - Vancouver-Delta Agreement (1999)
    - Amend capacity, height and end use requirements for longer term operation if desired
  - Indemnities/Risks
    - Review of ownership/operator for regional waste (responsibility for compliance with government regulations, public relations, environmental liability, labour relations, emergencies)
- Engineering
  - Design & Operations Plan review and update
  - Closure design review
  - Solid Waste Capital Reserve review for closure costs and timing
- Operational/Facility Upgrades and Accelerated Timing (additional equipment, staffing, site access, traffic management, environmental protection systems)