



(6)

May 28, 2009

File: 4030-06-30-01

Sheila Scholes  
Municipal Clerk  
District of West Vancouver  
750 17th Street  
West Vancouver, BC V7V 3T3

ATTACHMENTS  
AVAILABLE FOR VIEWING  
IN LEGISLATIVE SERVICES DEPARTMENT

Dear Ms. Scholes:

*Re: Metro Vancouver Draft Liquid Waste Management Plan*

The City Council at its Special meeting of Monday, May 25, 2009 unanimously endorsed the following resolution:

**"PURSUANT** to the report of the Deputy City Engineer, dated May 20, 2009, entitled "Metro Vancouver Draft Liquid Waste Management Plan":

**THAT** Metro Vancouver be urged to revise the Plan to include a secondary sewage treatment plant for the North Shore by 2020 subject to senior government cost sharing;

**AND THAT** a letter be forwarded to the Provincial and Federal governments urging them to each provide 1/3 funding for the new treatment plant;

**AND THAT** Metro Vancouver be encouraged to begin Integrated Resource Management Planning for the North Shore, in cooperation with the three North Shore Municipalities as soon as possible;

**AND THAT** a copy of this resolution and the May 20, 2009 report be forwarded to Metro Vancouver, the District of North Vancouver, the District of West Vancouver and to the Squamish Nation."

Yours truly,

Sandra E. Dowey  
City Clerk

Encl. (Electronic version posted on [www.cnv.org/city\\_hall/council\\_meetings/council\\_meeting\\_agenda](http://www.cnv.org/city_hall/council_meetings/council_meeting_agenda))

cc. S. Ono, City Engineer  
D. Pope, Deputy City Engineer



The Corporation of **THE CITY OF NORTH VANCOUVER**  
**ENGINEERING, PARKS & ENVIRONMENT DEPARTMENT**

REPORT

To: Mayor Darrell R. Mussatto and Members of Council

COPY

From: Douglas Pope, Deputy City Engineer

SUBJECT: METRO VANCOUVER DRAFT LIQUID WASTE MANAGEMENT PLAN

Date: May 20, 2009

File No: 4030-06-30-01

*The following is a suggested recommendation only. Please refer to Council Minutes for adopted resolution.*

**RECOMMENDATION:**

**PURSUANT** to the report of the Deputy City Engineer, dated May 20, 2009, entitled, "Metro Vancouver Draft Liquid Waste Management Plan";

**THAT** Metro Vancouver be urged to revise the Plan to include a secondary sewage treatment plant for the North Shore by 2020 subject to senior government cost sharing;

**AND THAT** a letter be forwarded to the Provincial and Federal government urging them to each provide 1/3 funding for the new treatment plant;

**AND THAT** Metro Vancouver be encouraged to begin Integrated Resource Management Planning for the North Shore, in cooperation with the three North Shore Municipalities as soon as possible;

**AND THAT** a copy of this resolution and report be forwarded to Metro Vancouver, the District of North Vancouver, the District of West Vancouver and to the Squamish Nation.

**ATTACHMENTS:**

1. Map of Sanitary Sewer Mains in the City
2. Metro Vancouver Liquid Waste Management Plan Draft dated March 2009
3. Metro Vancouver slide - potential LWMP cost implications
4. Council resolution Jan 2007

## **PURPOSE:**

Metro Vancouver is soliciting comments from Mayor and Council and the general public on a draft update to its Liquid Waste Management Plan (LWMP). This report summarizes the key issues impacting the City of North Vancouver that are addressed in the draft Plan and provides some proposed comments for forwarding to Metro Vancouver.

## **BACKGROUND:**

### **Liquid Waste management in the region**

Over 440 billion litres of liquid waste is generated annually in Metro Vancouver. Management of this waste is governed by the region's Liquid Waste Management Plan, which was approved by the Province and adopted in 2002. Through implementation of this plan, the liquid waste is to be managed in a way that protects human health and the environment and in accordance with the Provincial Environmental Management Act.

### **Responsibilities for liquid waste management and disposal**

The City, along with other Metro Vancouver municipalities, has delegated responsibility for the sewage treatment portion of liquid waste management and disposal to the Greater Vancouver Sewerage and Drainage District (GVS&DD).

While the City is responsible for the collection of sewage from homes and businesses via a vast network of underground pipes (see Attachment 1), Metro Vancouver is responsible for the treatment and disposal of the waste and they are responsible for operating 5 wastewater treatment plants in the region.

The City is responsible for the collection and disposal of stormwater. This is primarily rainwater that falls on our roads, roofs or other impermeable surfaces.

On April 6, 2009, Marvin Hunt, Chair of the Waste Management Committee wrote to Mayor and Council and attached the draft Plan (see Attachment 2). Metro Vancouver is requesting formal feedback on the Plan from Mayor and Council before May 29, 2009.

A well-attended public consultation session occurred on the North Shore on April 29, 2009. Issues and concerns raised included how our stormwater is managed, integrated resource management, sewage treatment technologies, and the cost of treatment plant upgrades.

The following is a summary of some key issues contained in the Plan that are of particular interest to the City.

### **Replacement of the Lions Gate Sewage Treatment Plant (LGSTP)**

The most significant issue for the North Shore municipalities is the timing of the upgrade of the Lions Gate Sewage treatment plant (STP) which is currently located just west of

the Lions Gate Bridge and discharges to Burrard Inlet. When the Provincial Minister of the Environment approved the 2002 Plan, she imposed a deadline for upgrade of the Iona STP (servicing the Vancouver sewerage area) by 2020 and the Lions Gate STP (serving the North Shore sewerage area) by 2030.

Although the Lions Gate STP has failed toxicity testing of the effluent due to Ammonia and surfactants (detergents), extensive monitoring has been completed and there has been no significant environmental impact measured in the receiving environment. Similarly, there have been no significant environmental impacts measured in the receiving environment in the vicinity of the Iona STP deep sea outfall.

However, it is still considered prudent to upgrade both STPs and as it is a requirement of the Province and has recently become a requirement of the Federal government (via a Canada-wide strategy for the Management of Municipal Wastewater Effluent). The key question is timing and how the new plant will be funded.

Under Metro Vancouver's current plans, the North Shore Sewerage Area will be served by a new secondary level treatment plant located at the site of the former BC Rail Passenger Station Lands in North Vancouver. There are outstanding siting issues with the Iona Island Wastewater Treatment Plant which will require resolution prior to committing to its upgrade.

The current draft plan recommends a new secondary treatment plant be built on a new site in the District of North Vancouver either in 2020 or 2030, depending on timing and level of Provincial and Federal funding. Replacement of the LGSTP will likely have significant impacts to the Regional Sewer Levy imposed on the City (see Attachment 3). Depending on the level of senior government funding provided, the regional sewer levy could increase anywhere from 80% to 250%.

In 2007, Council wrote to Metro Vancouver urging the Lions Gate Sewage treatment plant be upgraded within 10 years, (Attachment 4). It is recommended that Council again put forward a preference for upgrading of the Lions Gate Plant by 2020, but also urge the Province and Federal governments to each provide 1/3 funding.

### **Integrated Resource Management (IRM)**

The Plan proposes to consider liquid wastes as resources. Options beyond the traditional approach of centralized wastewater treatment will be investigated that can lead to a more distributed system incorporating revenue opportunities associated with using water, energy and materials from the liquid waste stream.

The Plan includes a commitment for Metro Vancouver to conduct an IRM business case model for each sewerage area, including the North Shore. The IRM concept best considers all wastes, both liquid and solid, taking into account energy, water supply and land use. Metro Vancouver should be encouraged to consider IRM more holistically and in conjunction with the current solid waste management planning.

It is expected that even with long term implementation of IRM, the North Shore is going to need a new sewage treatment plant. Therefore, Metro Vancouver should be encouraged to begin this study on the North Shore soon, as it may have implications to the design and capacity of the new plant.

### **Integrated Stormwater Management Plans (ISMPs)**

The Plan contains a commitment for municipalities to develop and implement ISMPs for all watersheds. Each ISMP for each water shed will be unique but common to all will be the requirement for site level best management practices to reduce discharge volume and reduce discharge of pollutants. The City has started to incorporate storm water best management practices in it's own projects - examples are the bioswales along the Green Necklace Greenway and the on Lonsdale at the new bus bulges at 19<sup>th</sup> and 21<sup>st</sup> Streets. Many new developments have also incorporated facilities to allow rainwater to infiltrate on their own site. Through this initiative developers will likely be required to deal with more of their stormwater on their own site rather than piping it directly to the City's stormwater system.

### **Private Property Sewer Laterals**

A significant portion of the underground sewage collection system is on private land. It is thought that these private property sewer laterals, some of which are quite old and in disrepair, contribute to the unwanted infiltration of rainwater and groundwater into the sewer system. The Plan includes an action for municipalities to consider requiring the inspection, repair and replacement of old sewer laterals on private property by the owner. While this will help reduce infiltration to the sewer system, it will come at a cost to property owners and to the City to administer the program. The authority for the City to require these actions is also not clear, so the Plan contains an action for Metro Vancouver to identify needed changes to legislation.

### **CONCLUSION:**

The contemplated changes to liquid waste management have significant financial and operational implications. However, resource recovery, improved treatment and renewal of infrastructure are in accordance with sound waste management principles, and the draft LWMP provides a solid framework for dealing with our liquid wastes now and in the future.

### **FINANCIAL IMPLICATIONS:**

The slide in Attachment 3 forecasts the increase in costs to cover Metro Vancouver capital and operating costs as a result of the implementation of the draft Plan. It should be noted that in 2009, the regional levy made up 57% of the City single detached residential annual sewer rate.

What is not included in this forecast is the individual municipal costs for initiatives that are the direct responsibility of the City. Many of these municipal initiatives are all ready on-

going and significant increased costs are not anticipated as a result of this Plan. However there are some potential new initiatives, such as management of private property sewer laterals that could result in increased costs. Until further planning work is completed, these costs are difficult to quantify.

**INTER-DEPARTMENTAL IMPLICATIONS:**

This report was endorsed by the Civic Projects Team on May 19, 2009

**CORPORATE PLAN AND/OR POLICY IMPLICATIONS:**

The proposed LWMP is supported in the following sections of the City's OCP: 8.4, 8.6, 8.7, 8.9, 11.7, 11.8.

RESPECTFULLY SUBMITTED BY:



\_\_\_\_\_  
Douglas T. Pope, P.Eng.  
Deputy City Engineer

REVIEWED BY:



\_\_\_\_\_  
Steven T. Ono, P. Eng  
City Engineer

REVIEWED BY:



\_\_\_\_\_  
A. K. Tollstam, C. A.  
City Manager

Attachment #1

City of North Vancouver

Sanitary Mains

Legend

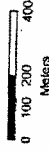
Ownership

— GVRD

--- CNV

--- City Boundary

□ Block Outline

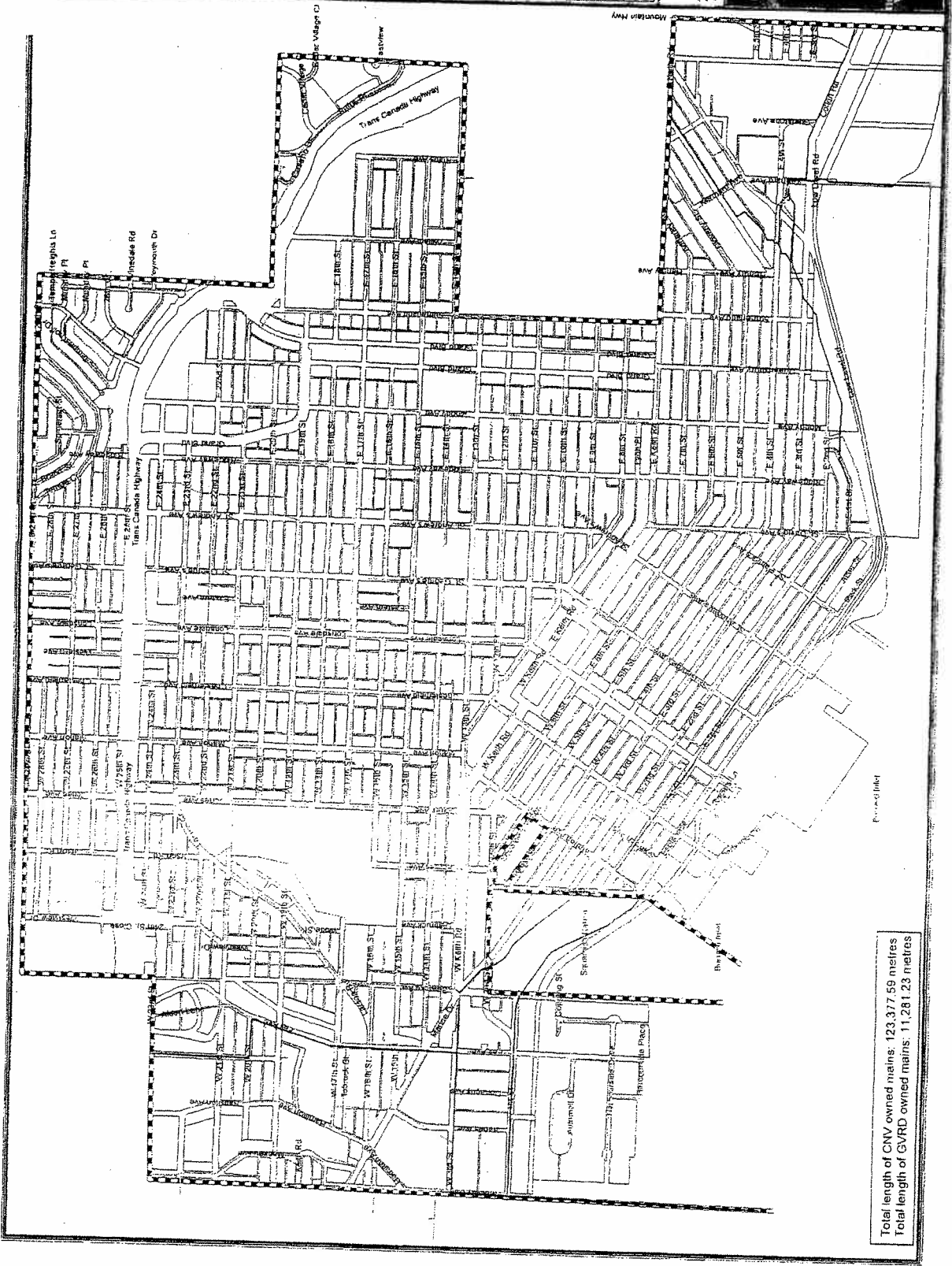


DISCLAIMER

This map was produced on the City of North Vancouver's Geographic Information System (GIS) and the information is derived from sources provided herein. The City of North Vancouver disclaims all responsibility for the accuracy or completeness of the information contained herein.

GIS Software Information Technology  
City of North Vancouver

2009



Total length of CNV owned mains: 123,377.59 metres  
Total length of GVRD owned mains: 11,281.23 metres

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