

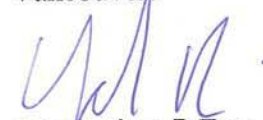


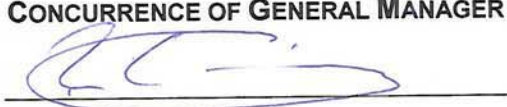
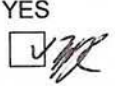
To: Public Works and Transportation Committee
From: John Irving, P.Eng. MPA
 Director, Engineering
Re: **Liquid Waste Management Plan 2002-2010**

Date: July 6, 2010
File: 10-6060-01/2010-Vol
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Staff Recommendation

That the results of the Liquid Waste Management Plan 2002-2010 be forwarded to Metro Vancouver.

for 
 John Irving, P.Eng. MPA
 Director, Engineering
 (604-276-4140)

FOR ORIGINATING DEPARTMENT USE ONLY			
ROUTED TO:	CONCURRENCE		CONCURRENCE OF GENERAL MANAGER
Sewerage & Drainage	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		
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Staff Report

Origin

As previously reported by staff at the May 25, 2009, regular meeting of Council in a staff report titled "Liquid Waste Management Plan", Metro Vancouver is currently in the process of updating the regional Liquid Waste Management Plan (LWMP). The updated plan is renamed the Integrated Liquid Waste and Resource Management Plan and is currently being issued for municipal adoption. Staff will report on the updated plan in a subsequent staff report.

This staff report reviews the LWMP commitments in the current 2002 plan that required action by the City of Richmond and reports the City's status with respect to these commitments.

Findings Of Fact

The 2002 Metro Vancouver Liquid Waste Management Plan (LWMP) was adopted by member municipalities in 2001 and approved by the Province of B.C. under the Waste Management Act in 2002. The 2002 LWMP will be superseded by the Metro Vancouver Integrated Liquid Waste and Resource Management Plan which is currently being circulated for municipal adoption.

The 2002 LWMP included 49 commitments. Of these, 9 commitments required action by the City of Richmond. The following is a review of the progress to date on the 9 City LWMP commitments.

C.19 – Infrastructure Management

This is a commitment by member municipalities to perform condition assessments of their sanitary systems and repair those systems to maintain inflow and infiltration (I&I) levels below the design allowance of 11,200 litres per hectare per day.

The sanitary system evaluation process is to be performed over a 20 year time cycle. Richmond has performed closed circuit television (CCTV) inspection on 83% of its gravity collection system since 2001 (approximately 386 kms) and will CCTV the City's remaining collection system within the next two years. The City has also performed condition assessments on 70 of its 153 sanitary pump stations.

The City monitors 80 of its 153 sanitary pump stations for flow through electronic loggers that record pump start and stop times. Written records of pump run times are maintained at each pump station during regular maintenance. Flow records maintained to date indicate that the City's overall I&I is well below the 11,200 litres per hectare per day maximum set by Metro Vancouver, however, 10 of the City's 153 sanitary catchments have been identified as potentially having high I & I and require additional investigation. The City's success regarding I&I is a result of capital replacement projects and on-going maintenance practices. The 10 catchments will be the subject of future capital projects. Additional flow monitoring initiatives will also be proposed through capital projects. The City's grease mitigation initiative has also contributed to the City's success.

C.20 – New Construction Objectives

This is a commitment by the District and its member municipalities to review engineering standards and guidelines for new sewer construction with the objective of ensuring a high standard for new construction to minimize future I&I problems.

The City of Richmond currently requires all new sanitary sewer construction to conform to the Master Municipal Construction Documents (MMCD) standard and the City of Richmond Supplementary Specifications and Detail Drawings. These are considered high standards and meet the objectives of commitment C.20.

C.23 – Biennial Liquid Waste Management Plan Progress Report

This is commitment to report progress on the LWMP every two years. Municipal reporting is based on a template provided by Metro Vancouver and Metro Vancouver compiles the biennial reports. Richmond has complied with the reporting requirement by providing completed reporting templates to Metro Vancouver when requested.

The LWMP reporting includes a requirement for sewer system mapping that indicates the overall extent of the sanitary sewer system evaluation program and the condition of sewer infrastructure. The City of Richmond has detailed mapping of all CCTV condition assessment work available in the original consultant reports and as a consolidated map.

Similarly, the LWMP reporting includes a requirement for a summary of all flow monitoring work occurring from the municipal collection system. The City sanitary sewer hydraulic modeling program has included a significant amount of sanitary flow monitoring. Flow monitoring is being performed at significant levels within the City and the flow monitor information is being utilized for productive purposes such as leak detection, sewer system planning, and in forming capital projects and maintenance practices.

C.37 – Stakeholder Participation

This is a commitment to invite the community government agencies to participate in the integrated planning process.

Richmond hosted public hearings in as part of the development of the City Centre Area plan and includes senior government organizations, such as the Department of Fisheries and Oceans (DFO) and the Vancouver International Airport, in decision making processes. The City also hosts an annual public open house highlighting municipal infrastructure projects and project specific public meetings for infrastructure projects that generate public interest.

C.38 – Policies and Bylaws

This is a commitment to adopting or updating policies or bylaws related to improving stormwater management for at least two stormwater issues.

The City has developed and implemented Bylaw 8385, ‘Green Roofs and Other Options Involving Industrial and Office Buildings Outside of City Centre’, which requires new industrial

or office buildings to reduce stormwater runoff by 20% when compared to conventional designs. The bylaw requires this reduction to be realized through stormwater best management practices including green roofs.

Additionally, Bylaw 7100, the “Official Community Plan”, schedule 2.10, “City Centre Area”, includes a policy (Policy 2.9.1(i)) that requires exploration of demand side management opportunities to:

- reduce infrastructure requirements;
- explore opportunities to integrate infrastructure with natural systems; and
- pilot innovative and environmentally sustainable infrastructure projects.

C.39 – Rate of Watershed-scale Stormwater Planning Work

Richmond committed to undertake (or review) integrated stormwater management planning at a watershed scale for urban watersheds with the goal of having a completed plan by 2014.

Staff has commenced their initiative and are in the process of developing the work plan. This work is timed to coincide with the current revision of the City’s Official Community Plan (OCP).

Stormwater management initiatives such as detention in Garden City Park lake and storage areas for farming purposes are examples of initiatives that already exist.

C.41 – New Marinas and Major Renovations

This is a commitment for municipalities to adopt bylaws that require new marinas or marinas undergoing major renovations to install sanitary sewage pump out facilities.

Richmond Bylaw No. 6989, “Public Health Protection”, sections 2.4.1.2 and 2/4/2/1(b) meet the LWMP requirements for marina sanitary sewage facilities.

C.49 – Identification of Water Uses and Water Quality Objectives

This commitment requires municipalities to identify water uses and quality objectives for waterways or confirm existing uses or objectives through their integrated storm water management plans.

The City is in the process of completing its integrated storm water management plan and has reviewed and expanded the use of stormwater and Fraser River water for agricultural use through the East Richmond Agricultural Water Supply Study. This initiative has facilitated farming activity in East Richmond while improving the performance of the drainage system.

Financial Impact

No financial impact.

Conclusion

The 2002 Metro Vancouver Liquid Waste Management Plan (LWMP) included 9 commitments requiring action by the City of Richmond. These commitments were oriented toward:

- Infrastructure management;
- High construction standards for new infrastructure;
- Incorporation of policies and bylaws to reduce impacts on the environment;
- Include various stakeholders in decision making; and
- Report progress on a biennial basis.

The City of Richmond has complied with all of the LWMP commitments and has accelerated the condition assessment elements.



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