



Meeting 2009 June 15

COUNCIL REPORT

**ENVIRONMENT COMMITTEE**

*HIS WORSHIP, THE MAYOR  
AND COUNCILLORS*

**SUBJECT: 2008 ANNUAL DRINKING WATER QUALITY MONITORING REPORT**

**RECOMMENDATIONS:**

1. THAT Council receive this report for information purposes.
2. THAT Council forward a copy of this report to Dr. Nadine Loewen, Medical Health Officer, Fraser Health Authority, Suite 400 – 4946 Canada Way, Burnaby, B.C., V5G 4H7.

**REPORT**

The Environment Committee, at its meeting held on 2009 June 09, received and adopted the *attached* report providing Council with the City's 2008 annual drinking water quality monitoring report.

The annual report (*under separate cover*) provides an overview of the regulatory context, outlines the drinking water quality program undertaken by staff in 2008 and associated sample results to provide the evidence of potability and compliance with the B.C. Drinking Water Protection Regulation.

Respectfully submitted,

Councillor D. Johnston  
Chair

Councillor S. Dhaliwal  
Vice Chair

Councillor A. Kang  
Member

Copied to:	City Manager Director Engineering
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**TO:** CHAIR AND MEMBERS  
ENVIRONMENT COMMITTEE

**DATE:** 2009 May 26

**FROM:** DIRECTOR ENGINEERING

**FILE:** 39500 12

**SUBJECT:** 2008 ANNUAL DRINKING WATER QUALITY MONITORING REPORT

**PURPOSE:** To present the Committee and Council with the City's 2008 Annual Drinking Water Quality Monitoring Report

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**RECOMMENDATION:**

1. **THAT** The Committee recommend Council to:
  - a) Receive this report for information purposes, and
  - b) Forward a copy of this report to Dr. Nadine Loewen, Medical Health Officer, Fraser Health Authority, Suite 400-4946 Canada Way, Burnaby, B.C., V5G 4H7.

**REPORT**

For the past ten years, the City has been preparing and making public an annual report on drinking water quality monitoring results. Enclosed (under separate cover) is the City's 2008 Annual Drinking Water Quality Monitoring Report. The report provides an overview of the regulatory context, outlines the drinking water quality program undertaken by staff in 2008 and associated sample results to provide the evidence of potability and compliance with the B.C. Drinking Water Protection Regulation.

In summary, there were 63 sample locations selected throughout the City's waterworks system in 2008. A total of 2,170 routine drinking water samples were obtained from City and Metro Vancouver water main sample sites during the year and submitted to the Metro Vancouver laboratory for analysis of total coliform, E. Coli (indicator of fecal contamination), Heterotrophic Plate Count (HPC - early indicator of bacterial re-growth in the water mains), and turbidity. Free chlorine residual and temperature were also measured in the field at the time of sampling. In addition, there were selected sample locations used for monitoring disinfection by-products (trihalomethanes and haloacetic acid), pH, and metals.

In reviewing the 2008 drinking water quality sample data, it was noted that overall, the water quality continues to improve over previous years. The bacteriological water quality complied with the B.C. Drinking Water Protection Regulation. There was no E. Coli detected in any of the potable water sampled. With respect to total coliforms, at no time did the percentage of samples tested positive for coliform exceed the 10% stipulated in the B.C. Drinking Water Protection Regulation. Any samples

To: Environment Committee  
From: Director Engineering  
Re: 2008 ANNUAL DRINKING WATER QUALITY  
MONITORING REPORT

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with greater than 10 total coliforms resulted in a follow-up with the Fraser Health Authority and immediate flushing of applicable water mains and re-sampling. HPC's have also shown to be reduced when compared to previous years.

Free chlorine residuals at various sampling stations have also improved over the past years. With an exception of the sample sites at the outlet from the Centennial Reservoir, all of the remaining samples stations achieved the objective of 0.2 mg/L or above in 2008. The reason for low chlorine residuals at the Centennial Reservoir location could be attributed to low down for water from the reservoir. In order to address this, the City has installed a point of use ultra violet system approved by the Fraser Health Authority in early 2007 for the user downstream of the reservoir.

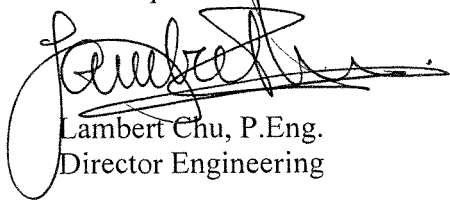
In addition, the disinfection by-product measured as Total Trihalomethanes, Bromochloromethanes and Haloacetic Acids, and physical/chemical parameters monitored were found to be below the Guidelines for Canadian Drinking Water Quality. While the pH levels of water at the select sample location marginally met the Aesthetic Objective noted in the Guidelines for Canadian Drinking Water Quality, they are representative of the pH of source water.

With respect to turbidity in drinking water, the majority of samples had turbidity of less than 1 NTU. For those samples where turbidity was greater than 1 NTU, these may be attributed to source water conditions or other transient activities such as water main flushing, water main breaks or fire fighting which cause a change in the water pressure or flow in the system. Samples with high turbidity readings were followed up with immediate flushing of applicable water main(s), re-sampling and an update to the Fraser Health Authority.

Staff continue to strive to improve the drinking water quality through ongoing replacement of ageing water mains, routine flushing of water mains, increased monitoring and vigilance to ensure compliance, and upgrading of staff skills and knowledge base.

Copies of the City's 2008 Annual Drinking Water Quality Report are available to the public at the Engineering Department. Staff will also be providing a notice in the local newspaper informing the public regarding the availability of this report. Copies of the report will also be made available in public libraries in Burnaby.

This is provided for the Committee and Council's information.



Lambert Chu, P.Eng.  
Director Engineering

DD:dd  
Enclosure

Copied to: City Manager