

Corporate Report

NO: R154

COUNCIL DATE: July 14, 2003



REGULAR COUNCIL

TO: **Mayor &
Council** DATE: **July 8, 2003**

FROM: **General Manager,
Engineering** FILE: **5600-42**

SUBJECT: **Water System Quality - 2002 Annual Report**

RECOMMENDATIONS

1. That this report be received for information.
2. That a copy of this report be forwarded to the Medical Health Officer.

INTENT

To inform Council of the results of the 2002 Water System Quality Annual Report.

DISCUSSION

As a water distribution system operator, the City must monitor the quality of the water it delivers to its customers. The City, with the Fraser Health Authority (FHA) and the GVRD, has developed a water quality monitoring and reporting plan. A protocol document was developed that sets out monitoring parameters, reporting structure, and the response plans to emergency situations such as incidences of high bacteria counts or other types of contamination.

A Summary of the 2002 Water System Quality Annual Report is attached. The full report is available at the Engineering Department and will be forwarded to the Medical Health Officer following receipt of this report by Council. Since the City purchases its water from the GVRD, most of the parameters are monitored by the GVRD at the source. The City monitors for such things as bacteria and turbidity (cloudiness) as well as chemical and physical parameters unique to distribution systems.

None of the samples analysed in 2002 detected the presence of bacterial contamination (fecal coliforms). However, a precautionary Boil Water Advisory (BWA) was implemented on a South Surrey neighbourhood on October 3, 2002. The BWA was in effect for 48 hours. The reason behind the BWA was the presence of high turbidity counts, caused by the failure of a coupling due to construction activity in the area. This failure caused sudden discharge of water,

thereby disturbing the biofilm and silt in the distribution system. The precautionary measure was taken as high turbidity may be an indicator of bacterial growth that could mask or harbour pathogens if there is some contamination. There was no contamination in this situation and the BWA was lifted in agreement with the FHA after consecutive negative laboratory results were received.

Portions of the City's distribution system does experience lower than desirable residual chlorine levels. The impact of this situation is being reviewed with the Fraser Health Authority.

Where weekly sampling test results revealed (through the use of heterotrophic plate counts, HPC) bacterial growth beyond acceptable limits, the City's maintenance crews flushed the mains in the affected areas. Low chlorine residuals, low flow demands, and the absence of circulation at or near dead ends in the system, are characteristics of areas where elevated HPC's reoccur.

Other than the above noted exceptions, the water samples fully met the Guidelines for Canadian Drinking Water Quality Standards.

Paul Ham, P.Eng.
General Manager, Engineering

PH/GMC/brb
Attachment

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