

NO: R113

COUNCIL DATE: July 10, 2023

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## REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **July 6, 2023**

FROM: **General Manager, Engineering**

FILE: **5600-43**

SUBJECT: **City of Surrey Water System Annual Report for 2022**

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## RECOMMENDATION

The Engineering Department recommends that Council:

1. Receive this report for information; and
2. Authorize staff to forward a copy of this report and the related report titled “City of Surrey Water System Annual Report for 2022”, a summary of which is attached to this report as Appendix “I”, to the Medical Health Officer in accordance with the requirements of the *British Columbia Drinking Water Protection Act*.

## INTENT

This report represents the Annual Report for 2022 of the City of Surrey Water System, which has been prepared in accordance with the requirements of the *British Columbia Drinking Water Protection Act* (the “Act”).

## DISCUSSION

The Act requires municipalities, and all other water suppliers, to report the results of water quality monitoring in accordance with the requirements described in Section 11 of the Act. The City, in cooperation with the Fraser Health Authority and Metro Vancouver, adheres to the “Water Quality Monitoring and Reporting Plan for Metro Vancouver (GVWD) and Local Government Members (2018)” which lays out requirements for water quality monitoring and reporting for the City’s water distribution system. The protocol document sets out monitoring parameters, the reporting structure, and response plans to emergency situations, such as incidents of high bacteria counts or other types of contamination, should they occur. Accordingly, the City satisfies this requirement through the preparation of an annual written report that is made available to water consumers and is forwarded to the Medical Health Officer (“MHO”) as information.

Overall, the 2022 Water System Annual Report confirms and demonstrates that the City year-over-year continues to deliver drinking water to good standards, and there are no concerns with bacterial contamination (E. Coli coliforms). In addition, the City continues to comply with the Act and regulations, as well as the Guidelines for Canadian Drinking Water Quality. This track record has ensured that the City’s customers are receiving safe and clean drinking water.

A summary of the City of Surrey Water System Annual Report for 2022 is attached to this report as Appendix "I". The full report will be available for viewing on the City's website and will be forwarded to the MHO, subject to approval by Council of the recommendations contained in this report.

## **CONCLUSION**

The City remains diligent and proactive in monitoring, operating, and maintaining the City's water distribution system to ensure that the City's water customers continue to receive safe and clean drinking water. Based on the above discussion, it is recommended that Council authorize staff to forward a copy of this report and the related report titled "City of Surrey Water System Annual Report for 2022", a summary of which is attached to this report as Appendix "I", to the MHO in accordance with the requirements of the Act.

Scott Neuman, P.Eng.  
General Manager, Engineering

RK/cc

## **Appendix "I" - Summary of the City of Surrey Water System Annual Report for 2022**

[https://surreybc.sharepoint.com/sites/eng.administration/gm administration/corporate reports/2023/july 10/city of surrey water system annual report for 2022/city of surrey water system annual report for 2022 \(7062023\) final.docx](https://surreybc.sharepoint.com/sites/eng.administration/gm%20administration/corporate%20reports/2023/july%2010/city%20of%20surrey%20water%20system%20annual%20report%20for%202022/city%20of%20surrey%20water%20system%20annual%20report%20for%202022%20(7062023)%20final.docx)

### Summary of the City of Surrey Water System Annual Report for 2022

The City of Surrey’s drinking water is supplied by the Greater Vancouver Water District, which is operated by Metro Vancouver. The City’s water distribution mains are about 1,870 km in length making it the longest distribution network in British Columbia. Within the distribution network, there are 30 pressure zones and nine pump stations.

The City monitors water quality at 51 sampling stations. Weekly samples are collected and tested by Metro Vancouver. Tests include bacteriological analysis, chlorine residuals, pH, temperature, and turbidity. There was no presence of E-coli bacteria detected in the 2,983 water samples analyzed in 2022. Six samples tested positive for total coliform bacteria; however, with flushing and resampling, subsequent test results were negative.

The City uses a unidirectional flushing program to flush all mains to ensure water quality is maintained throughout the distribution system. This program is completed on a five-year cycle. For issues regarding water quality or infrastructure failures, such as water main breaks, the City has response procedures. These procedures incorporate steps for repairs and communication between the City, Metro Vancouver, and Fraser Health Authority.

Chlorine residuals are monitored throughout the distribution system. In 2022, 91% of the 2,983 samples taken were greater than 0.2 mg/L. This is an increase of 1% as compared to 2021. Where there are increased Heterotrophic Plate Counts (“HPC”), as the result of low chlorine residual and circulation issues, staff flush the affected section to replenish the water in the mains and increase the chlorine residuals. The City continues to improve these low flow areas by connecting dead-end mains, known as looping, thus improving water quality to these areas. Quarterly samples are obtained for disinfection by-products (Haloacetic Acids and Trihalomethanes), and semi-annual samples for pH and metal analysis. The results of these tests meet the 2020 Guidelines for Canadian Drinking Water Quality.

There were no reported incidences of tampering or vandalism with the City’s water system in 2022. System security includes lighting, locks, and alarms at pump stations, as well as back flow prevention check valves on service connections. The City also guards against contaminants entering the system due to faulty connections through a Cross Connection Control Program.

In 2022, the number of new testable backflow preventers registered with the City was 814. The total number of assemblies registered is 15,927, which is a 2% increase from 2021. These assemblies were installed through development, renovations, or the cross-connection control survey requirements. Assemblies are required to be tested on an annual basis. The City ensures institutional, commercial and industrial operations remain in compliance with the *Surrey Waterworks Cross Connection Control By-law, 2013, No. 17988*.

The City remains diligent in maintaining its water distribution system to high quality standards and in ensuring the delivery of high-quality water to the City’s residents and businesses.