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2022 DRINKING WATER QUALITY & COMPLIANCE

ORGANIZED HAMLET OF CRYSTAL LAKE

INTRODUCTION

The Water Security Agency and the Ministry of Environment requires that at least once each year waterworks owners provide notification to consumers of the quality of water produced and supplied as well as information on the performance of the waterworks in submitting samples as required by a Minister's Order or Permit to Operate a waterworks. The following is a summary of the **Organized Hamlet of Crystal Lake** water quality and sample submission compliance record for the January 1 to December 31, **2022, time period**. This report was completed on **June 30, 2023**. Readers should refer to Water Security Agency's Municipal Drinking Water Quality Monitoring Guidelines, June 2015, EPB 502 for more information on minimum sample submission requirements and the meaning of type of sample. Permit requirements for a specific waterworks may require more sampling than outlined in the department's monitoring guidelines. If consumers need more information on the nature and significance of specific water tests, for example, "what is the significance of Selenium in a water supply", more detailed information is available from: http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/index_e.html.

Water Quality Standards Bacteriological Quality

| Parameter/Location | Limit | Regular Samples | Regular Samples | # of Positive Regular |
|---------------------|----------------------|-----------------|-----------------|-----------------------|
| | | Required | Submitted | Submitted (%) |
| Total Coliform | 0 Organisms/100 mL | 15 | 18 | 0 |
| E. coli | 0 Organisms/100 mL | 15 | 18 | 0 |
| Background Bacteria | Less than 200/100 mL | -- | -- | -- |

Water Disinfection –

Chlorine Residual in Distribution System for Test Results Submitted with Bacteriological Samples

| Parameter | Minimum Limit | Total Chlorine Residual Range | Free Chlorine Residual Range | # Tests Required | # Tests Submitted | # Adequate Chlorine (%) |
|-------------------|------------------------------------|-------------------------------|------------------------------|------------------|-------------------|-------------------------|
| Chlorine Residual | 0.1 mg/L free OR 0.5 mg/L total | 0.37 – 1.58 | 0.24 – 0.36 | 15 | 15 | 100% |

Water Disinfection - Free Chlorine Residual for Water Entering Distribution System from Waterworks Records-From Water Treatment Plant Records

| Parameter | Limit (mg/L) | Test Level Range | # Tests Performed | # Tests Not Meeting Requirements |
|------------------------|--------------|------------------|-------------------|----------------------------------|
| Free Chlorine Residual | at least 0.1 | 0.37 – 1.68 | 18 | 0 |

A minimum of 0.1 milligrams per litre (mg/L) free chlorine residual is required for water entering the distribution system. Tests are normally performed on a daily basis by the waterworks operator and are to be recorded in operation records. This data includes the number of free chlorine residual tests performed, the overall range of free chlorine residual (highest and lowest recorded values) and the number of tests and percentage of results not meeting the minimum requirement of 0.1 mg/L free chlorine residual.

Turbidity – From Water Treatment Plant Records

| Parameter | Limit (NTU) | Test Level # Tests Range | # Tests Not Meeting Requirements | Maximum Turbidity (NTU) | # Tests Required | # Tests Performed |
|-----------|-------------|--------------------------|----------------------------------|-------------------------|------------------|-------------------|
| Turbidity | <1.0 | .58 – 0.78 | 0 | 0.78 | 15 | 18 |

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Chemical – Health Category

All waterworks serving less than 5000 persons are required to submit water samples for SE's Chemical Health category once every 2 years. The Chemical Health category includes analysis for arsenic, barium, boron, cadmium, chromium, fluoride, lead, nitrate, selenium and uranium. The last sample for Chemical Health analysis was submitted on June 15, 2022. Sample results indicated that the provincial drinking water quality standards were exceeded with Iron (0.7, maximum >0.3) and Arsenic (15.8, maximum >10).

More information on water quality and sample submission performance may be obtained from:

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