

Summerside



WATER SYSTEM REPORT

For 2010

**Prepared By the Department of
Municipal Services
City of Summerside**

Contents

Introduction	3
Summary.....	3
Bacteria Testing Results.....	5
Chemistry Analysis	5
Chlorination of Water System.....	5
Conclusion.....	6
Suggested Reading Material	7

Water System Report
January – December 2010
City of Summerside, Prince Edward Island
Department of Municipal Services

Introduction

The City of Summerside began sampling and testing its water on a bi-weekly basis in the 1960's. In 2001 Summerside established its present policy for standard water sampling practice. This policy ensures that the drinking water quality in the City Water Utility is maintained according to the standards set out in the Canadian Drinking Water Standards. These standards are used as the basis for interpreting our water testing results. In any situation where standards do not exist the City follow the guidance of the Provincial Chief Health Officer.

The Environmental Protection Act, Drinking Water and Wastewater Facility Operating Regulations, sets out the requirements which the City follows for sampling, testing, and reporting of water quality. These regulations first came into effect on December 18, 2004. As well as federal and provincial regulations, the Atlantic Canada Guidelines for the Supply, Treatment, Storage, Distribution, and Operation of Drinking Water Supply Systems provide information to City officials with regards to our water system. These guidelines offer information about the design, operation, and maintenance of new and existing water systems, both large and small.

This report fulfills the City's regulated requirement for summarizing system water quality on an annual basis.

Summary

The City of Summerside have identified 8 locations within the water distribution system from which water samples are collected for testing on a regular (2 week) basis. In addition to collecting samples at these 8 locations, which are shown in Table 1: Water Sample Locations, City staff also collect samples from each active source (well or well field) within the City. The number of sample locations and frequency of sampling was determined in accordance with Health Canada's Canadian Drinking Water Guidelines in consultation with Provincial authorities.

Sample Location	Civic Address (Summerside, P.E.I.)	City Sampling Zone
St. Eleanor's Community Center	1 West Drive	1
Pope Road Variety Store	148 Pope Road	2
Granville Street Gas and Convenience	486 Granville Street	3
Lions Club Senior's Residence	326 Brophy Avenue	4

Summerside Fire Hall (Station 1)	251 Foundry Street	6
24 Hour Irving	96 Water Street	6
Ben's Bakery Outlet Store	686 Water Street East	7
Read's Corner Tim Hortons	820 Water Street East	8
City Water Source Location		
Summerside Well "Number 7"	123 Walker Avenue	3
Summerside Well "Number 1"	411 Northmarket Street	6
Summerside Well "Number 10"	277 Greenwood Drive	8
Summerside Well "SE4"	26 Briggs Street	1
Wilmot Well Field (contains 4 active wells)	855 Read Drive	2

Table 1: Water Sample Locations

The City Sampling zones listed in Table 1 are shown below in Figure 1: Summerside Water Sample Areas. Section 11 of the Prince Edward Island Environmental Protection Act was used to determine that 8 sampling zones were needed for the City.

Following collection, all water samples are sent to the Provincial Department of Environment Analytical Laboratory in Charlottetown. Every sample is tested for 3 Bacteria types – Total Coliforms DC, Escherichia Coli DC ("E. Coli"), and Background Growth Bacteria. In addition to the bacteria tests which are performed at the Provincial lab, at the time of sample collection the Chlorine Residual is analyzed and recorded by City Staff, as required by City policy.

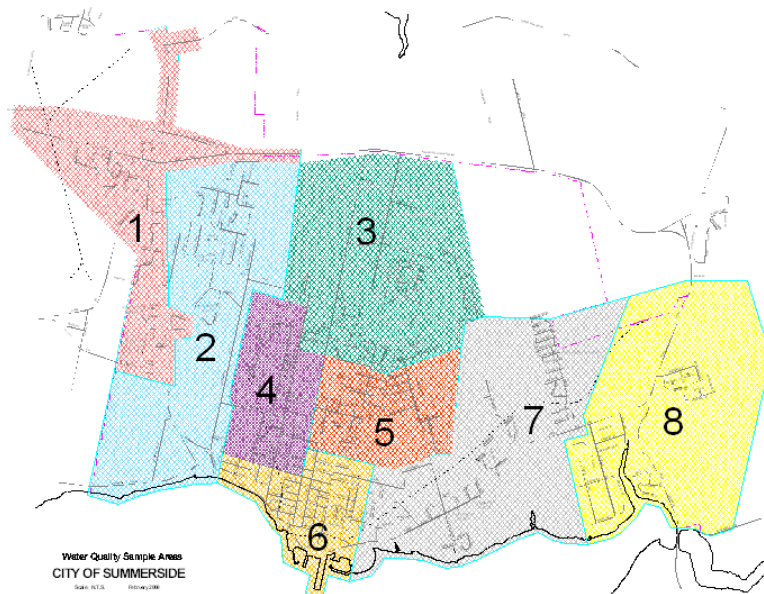


Figure 1: Summerside Water Sample Areas

Bacteria Testing Results

During the 2010 year 318 Water Samples from the City of Summerside System and Source Wells were tested for Bacteria at the P.E.I. Analytical Laboratory (samples from Capital Projects – construction of new lines – are discussed in a later section of this report). Of these 318 samples 315 were taken from the public drinking water system as part of the City's regular testing procedure. All 315 regular City samples showed that the water was free of harmful bacteria and suitable for drinking. The three other samples were taken at by special request (at customers' premises) and also showed the water to be clean and suitable for drinking.

Chemistry Analysis

According to the Canadian Drinking Water Guidelines all active wells must be subject to chemical analysis. A general chemical analysis of each well must be performed annually and a detailed chemical analysis is required every three years. All water chemistry analysis for the City of Summerside is performed at the Provincial Analytical Laboratory, the same lab which performs the City's water Bacteria testing. The Canadian Drinking Water Guidelines set a Maximum Allowable Concentration (MAC) for various chemicals in drinking water.

City of Summerside drew samples from each active well on April 8, 2010 for general chemical analysis. The results showed that all active wells were within the Canadian Drinking Water Guidelines. A second set of samples was drawn on October 13, again showing the water met the required guidelines. In addition to the well testing 2 general chemistry results were done by request at customer' premises and showed that the water these customers received was in line with the guidelines. A new well drilled in 2010 in the Wilmot Wellfield was tested twice during the test pumping process and both results showed the water from this new well to be in line with Canadian Drinking Water Guidelines.

The City of Summerside perform detailed chemical analysis on all wells on a 3 year rotation as required by the province. City wells are due for detailed chemistry analysis during the 2011 calendar year.

During 2010 City of Summerside staff collected 73 samples for nitrate analysis. The Canadian Drinking Water Guidelines set 10 mg/L as the Maximum Allowable Concentration for Nitrates. All samples taken during 2010 from the Summerside system were within the allowable limits.

Chlorination of Water System

The City of Summerside continues to apply chlorine to the municipal water system at each well site and well field. The goal of chlorination is to maintain a Chlorine Free Residual of at least 0.1 mg/L or higher at all points in the system at all times. This level of chlorination is required by the Canadian Drinking Water Guidelines.

City Staff evaluate the chlorine free residual of each water sample used for bacteria testing. This means that on average 12 chlorine free residual tests are performed at the same locations as bacteria tests on a biweekly basis. Chlorine Residuals are normally checked at all active wells approximately 3 or 4 times per week. During 2010 the lowest chlorine level measured was 0.10 mg/L and the highest was 0.86 mg/L. Therefore, all chlorine residuals were within Canadian Drinking Water Guidelines.

Conclusion

The City of Summerside Municipal Works department continues to operate and maintain a safe water utility, delivering water to customers which is safe for human consumption. The public are welcome to contact the Municipal Services Director at 902-432-1272 with any questions.

Suggested Reading Material

Information on The Atlantic Canada Water Guidelines and the P.E.I. Act can be seen on Provincial Government's web site:

<http://www.gov.pe.ca/infopei/index.php3?number=1004345&lang=E>

Information on Health Canada's Canadian Drinking Water Guidelines can be seen at Health Canada's web site:

http://www.hc-sc.gc.ca/ewh-semt/water-eau/drink-potab/index_e.html

Information on Chemical parameters can be found on the P.E.I. Gov web site:

<http://www.gov.pe.ca/infopei/index.php3?number=43878&lang=E>