



Conservation and Water Stewardship

Office of Drinking Water

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<http://www.manitoba.ca/drinkingwater>

24 February 2012

File: 252.00

Mayor and Council
City Hall
510 Main St.
Winnipeg MB R3B 1B9

Dear Mayor and Council Members:

RE: 2011 Annual Audit Report for the Winnipeg Public Water System

Please find enclosed the 2011 Audit Report for the Winnipeg Public Water System. The Audit indicates that your public water system has complied with the terms and conditions of the Operating Licence (PWS-09-412 RR).

The enclosed report provides the details of your licence requirements and the compliance achieved. There were just a few instances when bacteriological samples taken at some points in the distribution network have revealed the presence of coliform bacteria, which may be indicative of a potential contamination. It should be noted that chlorine readings at the time of sampling were high enough to ensure the protection of public health. In all instances, the City staff responded promptly and re-samples at the suspect locations, after corrective actions were undertaken, did not indicate the presence of coliform bacteria. Ultimately, the compliance level achieved with regard to the bacteriological standard was 99.6 percent for the entire year, which is well within acceptable limits.

Compliance for all other standards and monitoring requirements was 100 percent, indicating exemplary operation and monitoring of Winnipeg's water treatment facility and distribution system.

This Audit Report is based on information submitted to this office by various sources. If your records conflict with the audit information, or if you have any questions concerning this report or any other drinking water related issues, you may contact me at (204) 945-8913.

Sincerely,

Gilbert Bushati
Senior Regional Drinking Water Officer

Encl.: Audit Report

Copy: D. Sacher, P.Eng.
K. Kjartanson, P.Eng.
A. Weremy, P.Eng.



Water System:	Licence #:	Owner:	Owner's Representative:
Winnipeg Public Water System	PWS-09-412 RR	City of Winnipeg	Diane Sacher, P.Eng., Director

Water Quality Standards		Percent Compliance	Corrective Action Forms
Bacterial			
Total coliform and E. coli bacteria (treated water)	Less than one total coliform and E. coli bacteria detectable per 100mL in all treated water	100%	-
Total coliform and E. coli bacteria (distribution water)	Less than one total coliform and E. coli bacteria detectable per 100mL in all distributed water	99.6%	Yes
Comments:	There were eight non-compliant, high-reading coliform samples during year 2011. Corrective Action Reports for low positive coliform incidents were submitted on seven occasions, resulting in deemed compliance.		
Disinfection			
Chlorine residual	Free chlorine residual of at least 0.5 mg/L in water entering the distribution system following a minimum contact time of 20 minutes	100%	-
	Free chlorine residual of at least 0.1 mg/L at all times at any point in the water distribution system	100%	Yes
Ultraviolet (UV)	At least 95% of the volume of water produced per month undergoing UV disinfection within validated conditions	100%	-
Comments:	Corrective Action Reports for low disinfectant residuals were submitted in two occasions.		
Physical			
Turbidity	<ul style="list-style-type: none"> ▪ Less than or equal to 0.3 NTU in 95% of the measurements in a month of the effluent from each operating particulate filter ▪ Not exceed 0.3 NTU for more than 12 consecutive hours of filter operation ▪ Not exceed 1.0 NTU for any continuous measurement 	100%	-
Comments:			
Chemical		Result	
Total trihalomethanes (THMs)	Less than or equal to 0.10 mg/L as running annual average of quarterly samples	≤ 0.038 mg/L	
Comments:	The total THMs are calculated as locational running annual average of quarterly samples, for each of the six sampling locations. The lowest value was 0.033 mg/L and the highest was 0.038 mg/L. The Winnipeg Public Water System is in compliance with the total THMs standard.		

Monitoring Requirements		Percent Compl.
Bacterial		
Total coliform and E. coli	<ul style="list-style-type: none"> ▪ Weekly sampling program with each set of samples consisting of one raw, one treated, and a minimum of 42 distribution sample(s) ▪ Consecutive sample sets must be separated by at least five days 	100%



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Comments:		
Disinfection		
Free chlorine (treated water)	<ul style="list-style-type: none"> Continuous sampling at the water treatment plant downstream of the chlorine contact chamber following a minimum of 20 minutes of contact time A minimum of five confirmatory grab samples per week downstream of the chlorine contact chamber following a minimum of 20 minutes of chlorine contact time 	100%
Free chlorine (distribution system)	At the same times and locations as bacteriological distribution system sampling	100%
Total chlorine (treated water)	A minimum of five confirmatory grab samples per week downstream of the chlorine contact chamber following a minimum of 20 minutes of chlorine contact time	100%
Total chlorine (distribution system)	At the same times and locations as bacteriological distribution system sampling	100%
Comments:		
Physical		
Turbidity	<ul style="list-style-type: none"> Continuous monitoring of the raw water (water treatment plant) and a minimum of three confirmatory grab samples per week from the same location Continuous monitoring of the effluent from each of the operating particulate filters and a minimum of three confirmatory grab samples per week from the same locations 	100%
Comments:		
Chemistry		
General chemistry (parameter list provided by the Office of Drinking Water)	One raw sample and one treated sample (Deacon Booster Pumping Station) taken on a quarterly basis	100%
Trihalomethanes (THMs)	Six preserved distribution system samples taken on a quarterly basis during February, May, August, and November	100%
Comments:		

Reporting Requirements		Compliance (Yes / No)
Disinfection	Submit original monthly disinfection report forms within seven days after the end of each calendar month	Yes
Physical	Submit original monthly turbidity report forms within seven days after the end of each calendar month	Yes
Corrective Actions	Submit original corrective action report for minor exceedences as described in the most recent version of the Office of Drinking Water "Operational Guidelines for Public and Semi-public Water Systems", along with the monthly disinfection, or turbidity report form	Yes
Emergency	Immediately notify the Office of Drinking Water of any condition that may affect the ability of the water system to produce or deliver safe drinking water including treatment upsets or bypass conditions, contamination of the source water or treated water, a filtration or disinfection system failure, or a distribution system failure	Yes



Water System:

Winnipeg Public Water System

Licence #:

PWS-09-412 RR

Owner:

City of Winnipeg

Owner's Representative:

Diane Sacher, P.Eng., Director

Comments:

Other Regulatory Requirements

Engineering Assessment

Due Date: 1 July 2011

Date Received: 30 June 2011

Comments:

Compliance Plan

Due Date: 1 March 2012

Date Received: 24 February 2012

Comments: Statement of Compliance was requested in lieu of the Compliance Plan

Operating Licence Expiry Date

Expiry Date: 30 June 2015

Comments: Please note that you are required to apply for renewal of your operating licence 60 days prior to its expiry

2011 Water System Annual Report

Due Date: 31 March 2012

Date Received: -

Comments:

Inspection

System Inspected: 23 November 2011

Inspection Letter Sent: 5 December 2011

Comments: This inspection did not find any issues requiring urgent attention