



# Public Water System Annual Report

Dauphin Public Water System

It is the City of Dauphin's belief that the public has a right to access information related to the drinking water they consume. To that end the following report has been prepared for the City of Dauphin water system.

**3/14/2011**

## Water System Information

Name of Public Water System: Dauphin Public Water System

Name of the Legal Owner: City of Dauphin

Contact Person: Bill Brenner C.E.T., Water Treatment and Technology Manager

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Emergency Phone Number: 204.648.3295

Names of Water Treatment Plant Operators:

Randy Hlady - Water Treatment Technician

Bryan Adcock – Operator in Training

Water Treatment Plant Phone Number: 204.622.3287

Date Completed: March 15, 2011



Bill Brenner, C.E.T.

Water Treatment and Technology Manager

City of Dauphin

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## Introduction

The 2010 Annual Report for the City of Dauphin summarized the Water Utility's ability to produce safe potable water and meet the requirements of all provincial regulations

## Description of Water System

The City of Dauphin Public Water System (PWS) provides potable drinking water to a population of 7906 residents (2006 Census). Dauphin's PWS also supplies potable water to 3 private water systems in the RM of Dauphin those being the Lockville Water Coop, Eclipse Water Coop and the Dauphin Airport. Treated water produced from the water treatment plant meets all health and aesthetic objectives as stated in the *Guidelines for Canadian Drinking Water Quality*.

### Water Supply Source

The City of Dauphin (City) obtains surface water from the Vermillion River Reservoir. The intake structure is located approximately 6.5 km from the water treatment plant (WTP) site. Raw water is pumped from the reservoir via the Vermillion Raw Water Pumping Station to the Lower Reservoir located at the WTP site via 300 mm diameter pipe. It is then pumped into the WTP via the Low-lift Pumping Station via 300 mm diameter pipe.

Edwards Creek is used as a back-up water source when required. The intake structure is located just south of the southern tip of the Lower Reservoir. Due to raw water quality concerns (variable composition, high manganese levels), Edwards Creek is only used in emergency situations.

### Intake Structures

The Vermillion Raw Water Reservoir is operated by Manitoba Water Stewardship. The intake structure consists of approximately 45 m of 400 mm diameter cast iron pipe. The pipe opening is screened by a stainless steel mesh. The Vermillion Pumping Station consists of two alternating 50 hp pumps. Raw water is pumped from the Vermillion Reservoir 4 to 5 days per week to the Lower Reservoir at the WTP site via approximately 6 km of 300 mm diameter pipe.

On an as needed basis raw water is also sourced from Edwards Creek. Edwards Creek is controlled by Parks Canada. The intake structure is located at the southeast shore of the Lower Reservoir at the WTP site.

### Water Treatment Process

The source water for the WTP is the Vermillion River and, if necessary, Edwards Creek. Raw water is drawn from Vermillion River by pumps and stored in the Lower Reservoir at the WTP site. Raw water is pumped from the Lower Reservoir via the Low Lift Pumping Station and enters the facility on the north side of the building and is split to feed the two process trains. Treated water is stored in three reservoirs: the WTP Reservoir, the Jackson Street Reservoir and the Brown Avenue Reservoir and distributed to the consumers via watermains. The PRV/Booster Station located along Hwy #5 aids in the transfer of the treated water to the City of Dauphin (City) distribution system.

The existing treatment process consists of the following:

- Flash Mixing/Flocculation/Sedimentation, using aluminium sulphate (alum), caustic soda and polymer.
- Ozonation, for primary disinfection.
- Filtration, polishing step using sand and anthracite rapid gravity filters.
- Chloramination, using chlorine and ammonia for secondary disinfection.
- Fluoridation, using hydrofluosilic acid (HFSA) for consumers' dental health.

These processes are designed to clarify the water and remove microbial contaminants, such as bacteria, and organic materials that are naturally found in surface waters.

### Distribution System

The existing water distribution network is made up of pipes of various, age, size and material. The distribution network is made up of pipe ranging from 100 mm to 300 mm diameter, with the majority of the pipe being 150 mm in diameter.

The City has a very detailed procedure for swabbing and flushing their watermain network. Between 2002 and 2007 the entire distribution network was flushed annually and one quarter of the network was swabbed annually. The City will be flushing a portion of the distribution system in 2011.

### Storage Reservoirs

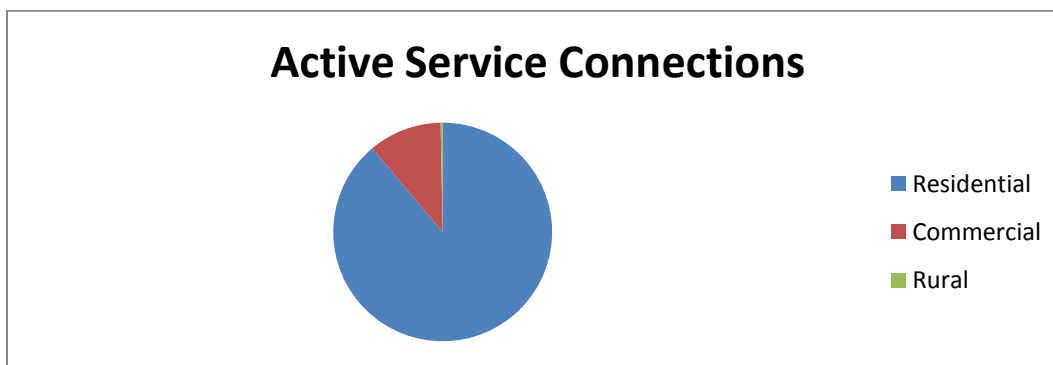
The water storage system incorporates one (1) raw water and three (2) treated water reservoirs. The table below summarizes their capacities.

Capacity of Reservoirs

	Imperial Units (Imp. Gallons)	Metric Units (ML)	Year Constructed
Edwards Reservoir (Raw)	11,300,000	51.4	
WTP (Treated)	792,000	3.6	1999 & 2001
Brown Avenue (Treated)	1,000,000	4.54	1981

### Number of Connections, Population Served and Types of Water Users

The Dauphin distribution system is comprised of 3313 active service connections servicing a population of 7906 residents (2006 Census). All service connections are metered with 88.8% being residential services, 10.8% being commercial services and 0.4% being rural services.



## Classification and Certification

The water system facility classifications for the 2010 year:

Class 4 Water Treatment Facility Classification

Class 2 Water Distribution Facility Classification

The water system staff and certification levels for the 2010 year:

Staff Member	Water Treatment	Water Distribution
William P. Brenner, C.E.T.	Class IV	Class II
Randy A. Hlady	Class IV (conditional)	Class II
Bryan Adcock	Class III (conditional)	
Kevin J. Komarnicki, C.E.T.	Class II	Class II
Lyle R. Stokotelny, C.E.T.		Class II
Dwight E. Olsen		Class II
Merv P. Kufley		Class I
Jeff J. Weselowski		Class II
Brian L. Harvey		Class II
Ronald E. Paziuk		Class II
John Sochan	Class II	Class II
Gary Burla		Class I
Curtis Flett		Class I

## Disinfection System in Use

The final step in the treatment of safe water is disinfection. Disinfection is the selective destruction or inactivation of potential disease causing organisms in water. As per the Drinking Water Safety Act the Dauphin PWS is required to ensure a disinfectant residual of at least:

- 0.5 mg of free chlorine per litre of water entering the distribution system following a minimum contact time of 20 minutes
- 0.3 mg of monochloramine per litre of water at all times at any point in the water distribution system

### Type of Disinfection system used

Secondary disinfection of the filtered water is accomplished using chlorine gas and aqua-ammonia. Chlorine and ammonia are added to the treated water to produce chloramines. Chlorine gas is added to the water using a Wallace and Tiernan V-Notch gas feeder system. Ammonia is added to the water using a Wallace and Tiernan positive displacement pump.

For one month in the fall of 2010, the Dauphin PWS switched to free chlorination in the distribution system. The Dauphin PWS will continue to use free chlorination in the distribution system for one month annually.

### Equipment Redundancy and Monitoring Requirements

Chlorine gas is stored in a separate room in 68 kg cylinders. Two banks of two cylinders are connected to the chlorine feed system at all times and an automatic transfer system is in place.

Each of the two banks of cylinders is capable of supplying the full amount of chlorine required for disinfection at peak demand. Parts and maintenance kits for all chlorination equipment are kept at the WTP at all times.

Spare ammonia pumps as well as pump parts are stored at the WTP at all times.

### Disinfectant Residual Overall Performance/Results

For 2010, the Dauphin PWS has met all regulatory requirements in regard to monitoring and reporting disinfection residuals in the water leaving the water treatment plant as well as in the distribution system.

## List of Water Quality Standards

The Province of Manitoba has adopted a number of water quality standards from the *Guidelines for Canadian Drinking Water Quality*, developed by Health Canada. The parameters are health-based and they express the maximum acceptable concentration for a surface water supply source. Concentration values in excess constitute a health-related issue and require corrective actions.<sup>1</sup>

Parameter	Quality Standard	Frequency	Performance
Total Coliform and <i>E.coli</i>	• Zero <i>E.coli</i> and total coliform bacteria detectable per 100 mL in all treated and distributed water.	Bi-weekly	100% Compliance
Chlorine Residual	• A free chlorine residual of at least 0.5 mg/L in water entering the distribution system following a minimum contact time of 20 minutes.	Daily	100% Compliance
	• Report Submissions	Monthly	100% Compliance
Monochloramine	• A monochloramine residual of at least 0.3 mg/L at all times at any point in the water distribution system.	Bi-weekly	100% Compliance
Turbidity	• Less than or equal to 0.3 NTU in 95% of the measurements in a month of the effluent from each operating particulate filter.	Continuous	100% Compliance
	• Not exceed 0.3 NTU for more than 12 consecutive hours of filter operation.	Continuous	100% Compliance

Parameter	Quality Standard	Frequency	Performance
	<ul style="list-style-type: none"> <li>• Not exceed 1.0 NTU for any continuous measurement.</li> </ul>	Continuous	100% Compliance
	<ul style="list-style-type: none"> <li>• Report Submissions</li> </ul>	Monthly	100% Compliance
Total Trihalomethanes (to include: bromodichloromethane, bromoform, chloroform, dibromochloromethane)	<ul style="list-style-type: none"> <li>• Total Trihalomethane less than or equal to 0.10 mg/L</li> <li>• Bromodichloromethane less than or equal to 0.016 mg/L.</li> </ul>	Quarterly	100% Compliance

## Water System Failures and Corrective Actions

In 2010, there were no water system failures or associated corrective actions required.

## Additional Records Required

As part of Manitoba Health's fluoridation program, water samples are collected on a daily basis at the WTP and City Hall and tested on site. Daily fluoride results are recorded and a 14 day composite sample is submitted by-weekly for analysis. The Dauphin PWS strives to maintain a 1.00 mg/L fluoride level. The operating range for fluoride, as identified by Manitoba Health, is 0.80-1.20 mg/L. In 2010, fluoride levels never exceeded the 1.20 mg/L recommended limit. (See Appendix "B" – Certificate of Commendation)

## Drinking Water Safety Orders and Actions Taken in Response

In 2010, no Drinking Water Safety Orders were issued for the Dauphin Public Water System.

## Boil Water Advisories and Actions Taken in Response

In 2010, no Boil Water Advisories were issued for the Dauphin Public Water System.

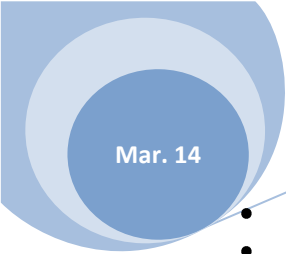
## Warnings Issued or Charges Laid on the System in Accordance with the Drinking Water Safety Act

In 2010, no Warnings were issued for the Dauphin Public Water System.

## Major Expenses Incurred

- Replace 1' of filter coal in one filter \$17,100.00
- Replace ozone generator modules \$ 8,900.00
- Purchase leak detection equipment \$26,700.00
- Hydrant replacements \$1,083,373.00
- Watermain replacement Merrell Ave \$115,612.00
- Watermain leak repair Centennial Drive \$7,600.00





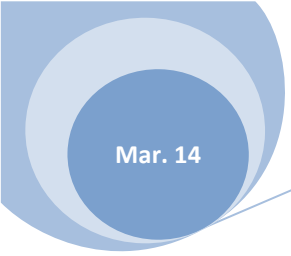
Mar. 14

- WTP Snow plow \$7400.00
- Industrial Park Upgrades \$289,173.00

### Future System Expansion and/or Increased Production

The City of Dauphin currently has the ability to provide 200% of our average daily flows; therefore, there is currently no need to look at ways to increase water production.

As part of the City’s ongoing effort to control operation costs at the water treatment plant, we are currently exploring the possibility of converting our primary disinfection system from ozone to ultraviolet (UV) disinfection. Initial information indicates that a significant reduction in operational costs could be realized by the conversion. The city will explore this option in 2013.



# Appendix

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## Appendix A – Bacteriological Sample Results

Collection Date	Sample Identification	Total Coliform	E.Coli
12-Jan-10	Dauphin 1 Raw	32	0
12-Jan-10	Dauphin 2 TTD	0	0
12-Jan-10	Dauphin 3 Dist. Civic office	0	0
12-Jan-10	Dauphin 5 Dist. Brown Res East	0	0
12-Jan-10	Dauphin 6 Dist. Tuxedo Dr.	0	0
12-Jan-10	Dauphin 7 Dist. Coop Bulkgas	0	0
19-Jan-10	Dauphin 1 Raw	14	0
19-Jan-10	Dauphin 2 Ttd	0	0
19-Jan-10	Dauphin 3 Dist Brown Ave Res	0	0
19-Jan-10	Dauphin 4 Dist City Shop	0	0
19-Jan-10	Daup 5 Dist Booster Sta Chl Bl	0	0
19-Jan-10	Dauphin 2 Dist Civic Office	0	0
5-Jan-10	Dauphin 1 Raw	34	0
5-Jan-10	Dauphin 2 Ttd	0	0
5-Jan-10	Daup 3 Dist Brown Reser Mainln	0	0
5-Jan-10	Dauphin 4 Dist City Shop	0	0
5-Jan-10	Dn 5 Dist Bootser St Chlo Bldg	0	0
5-Jan-10	Dauphin 6 Dist Civic Office #2	0	0
2-Feb-10	DAUPHIN 1 RAW	48	0
2-Feb-10	DAUPHIN 2 TTD	0	0
2-Feb-10	DAUPHIN 3 DIST@BROWN AVE REDEVOIR MAIN LINE	0	0
2-Feb-10	DAUPHIN 3 DIST@ CITY SHOP	0	0
2-Feb-10	DAUPHIN 3 DIST@BOOSTER STATION CHLORINATING BLDG	0	0
2-Feb-10	DAUPHIN 3 DIST@CIVIC OFFICE	0	0
16-Feb-10	DAUPHIN 1 RAW	43	0
16-Feb-10	DAUPHIN 2 TTD	>200	0
16-Feb-10	DAUPHIN 3 DIST @ CIVIC OFFICE #4	0	0

Collection Date	Sample Identification	Total Coliform	E.Coli
16-Feb-10	DAUPHIN 3 DIST @ RES WESTCELL #5	2	0
16-Feb-10	DAUPHIN 3 DIST @ TUXEDO DR #6	0	0
16-Feb-10	DAUPHIN 3 DIST @ COOP BULK GAS #7	0	0
22-Feb-10	DAUPHIN 2-TTD	0	0
22-Feb-10	DAUPHIN 1 RAW	15	0
22-Feb-10	DAUPHIN 2 TTD	0	0
22-Feb-10	DAUPHIN 3 DIST @ CITY SHOP #4	0	0
22-Feb-10	DAUPHIN 3 DIST @BOOSTER STN #5	0	0
22-Feb-10	DAUPHIN 3 DIST @ CIVIC OFFICE #2	0	0
22-Feb-10	DAUPHIN 3 DIST BROWN RES #3	0	0
9-Mar-10	DAUPHIN 1 RAW	18	0
9-Mar-10	DAUPHIN 2 TTD	0	0
9-Mar-10	DAUPHIN 3 DIST @ BROWN AVE RESEVOIR MAIN LINE	0	0
9-Mar-10	DAUPHIN 4 3 DIST @ CITY SHOP	0	0
9-Mar-10	DAUPHIN 5 3 DIST @ BOOSTER STATION CHLORINATING BLDG	0	0
9-Mar-10	DAUPHIN 2 3 DIST @ CIVIC OFFICE	0	0
16-Mar-10	DAUPHIN 1 RAW	15	0
16-Mar-10	DAUPHIN 2 TTD	0	0
16-Mar-10	DAUPHIN 3 DIST @ CIVIC OFFICE #4	0	0
16-Mar-10	DAUPHIN BROWN RES EAST CELL #5	0	0
16-Mar-10	DAUPHIN TUXEDO DR #6	0	0
16-Mar-10	DAUPHIN COOP BULK GAS #7	0	0
23-Mar-10	DAUPHIN 1 RAW	14	0
23-Mar-10	DAUPHIN 2 TTD	0	0
23-Mar-10	DAUPHIN 3 DIST@BROWN AVE RESEVOIR MAINLINE	0	0
23-Mar-10	DAUPHIN 3 DIST@CITY SHOP	0	0
23-Mar-10	DAUPHIN 3 DIST@ BOOSTER STATION CHLORINATING BLDG	0	0

Collection Date	Sample Identification	Total Coliform	E.Coli
23-Mar-10	DAUPHIN 3 DIST @ CIVIC OFFICE	0	0
6-Apr-10	DAUPHIN 1 RAW	78	1
6-Apr-10	DAUPHIN 2 TTD	0	0
6-Apr-10	DAUPHIN 3 DIST @ BROWN AVE RESEVOIR MAIN LINE	0	0
6-Apr-10	DAUPHIN 4 DIST @ CITY SHOP	0	0
6-Apr-10	DAUPHIN 5 DIST @ BOOSTER STATION CHLORINATING BLDG	0	0
6-Apr-10	DAUPHIN 2 DIST @ CIVIC OFFICE	0	0
13-Apr-10	DAUPHIN 1-RAW	101	0
13-Apr-10	DAUPHIN 2-TTD	0	0
13-Apr-10	DAUPHIN 3-DIST@CIVIC OFFICE#4	0	0
13-Apr-10	BRAUN RES WEST CELL #5	0	0
13-Apr-10	TUXEDO DR #6	0	0
13-Apr-10	COOP BULK GAS #7	0	0
20-Apr-10	DAUPHIN 1 RAW	6	0
20-Apr-10	DAUPHIN 2 TTD	0	0
20-Apr-10	DAUPHIN 3 DIST @ BROWN AVE RESEVOIR	0	0
20-Apr-10	DAUPHIN 3 DIST @ CITY SHOP	0	0
20-Apr-10	DAUPHIN 3 DIST @ BOOSTER STN CHLORINATING BLDG	0	0
20-Apr-10	DAUPHIN 3 DIST @ CIVIC OFFICE	0	0
4-May-10	DAUPHIN 1 RAW	>200	2
4-May-10	DAUPHIN 2 TTD	0	0
4-May-10	DAUPHIN 3 DIST @ BROWN AVE RESEVOIR MAIN LINE	0	0
4-May-10	DAUPHIN 4 DIST @ CITY SHOP	0	0
4-May-10	DAUPHIN 5 DIST @ BOOSTER STATION CHLORINATING BLDG	0	0
4-May-10	DAUPHIN 2 DIST @ CIVIC OFFICE	0	0
11-May-10	DAUPHIN 1-RAW	>200	3
11-May-10	DAUPHIN 2-TTD	0	0

Collection Date	Sample Identification	Total Coliform	E.Coli
11-May-10	DAUPHIN 3-DIST@CIVIC OFFICE #4	0	0
11-May-10	DAUPHIN 3-DIST@BROWN RES WEST CELL#5	0	0
11-May-10	DAUPHIN-3-DIST@TUXEDO DR #6	1	0
11-May-10	DAUPHIN 3-DIST@COOP BULK GAS #7	0	0
17-May-10	DAUPHIN 1 RAW	144	3
17-May-10	DAUPHIN 2 TTD	0	0
17-May-10	3 DAUPHIN 3 DIST @ BROWN AVE RESEVOIR	0	0
17-May-10	4 DAUPHIN 3 DIST @ CITY SHOP	0	0
17-May-10	5 DAUPHIN 3 DIST @ BOOSTER STATION CHLORINATING BLDG	0	0
17-May-10	2 DAUPHIN 3 DIST @ CIVIC OFFICE	0	0
17-May-10	6 TUXEDO DR	0	0
1-Jun-10	DAUPHIN 1 RAW	>200	4
1-Jun-10	DAUPHIN 2 TTD	0	0
1-Jun-10	DAUPHIN 3 DIST @ BROWN AVE RESEVOIR	0	0
1-Jun-10	DAUPHIN 3 DIST @ CITY SHOP	0	0
1-Jun-10	DAUPHIN 3 DIST @ BOOSTER STN CHLORINATED BLDG	0	0
1-Jun-10	DAUPHIN 3 DIST @ CIVIC OFFICE	0	0
15-Jun-10	DAUPHIN 1 - RAW	>200	10
15-Jun-10	DAUPHIN 2- T'TD	0	0
15-Jun-10	DAUPHIN 3 - DIST@ CIVIC OFFICE #4	0	0
15-Jun-10	DAUPHIN - BROWN RES WEST CELL # 5	0	0
15-Jun-10	DAUPHIN - COOP BULK GAS # 7	0	0
15-Jun-10	DAUPHIN - TUXEDO DR # 6	0	0
22-Jun-10	DAUPHIN 1 - RAW	>200	12
22-Jun-10	DAUPHIN 2 - T'TD	0	0
22-Jun-10	DAUPHIN 3 - DIST @ BROWN AVE RESEVOIR MAIN LINE	0	0
22-Jun-10	DAUPHIN 4 - DIST @ CITY SHOP	0	0

Collection Date	Sample Identification	Total Coliform	E.Coli
22-Jun-10	DAUPHIN 5 - DIST @ BOOSTER STATION CHLORINATING BLDG	0	0
22-Jun-10	DAUPHIN 6 - DIST @ CIVIC OFFICE	0	0
6-Jul-10	DAUPHIN 1 RAW	200	8
6-Jul-10	DAUPHIN 2 TTD	0	0
6-Jul-10	DAUPHIN 3 DIST @ BROWN AVE RESEVOIR MAIN LINE	0	0
6-Jul-10	DAUPHIN 3 DIST @ CITY SHOP	0	0
6-Jul-10	DAUPHIN 3 DIST @ BOOSTER STATION CHLORINATING BLDG	0	0
6-Jul-10	DAUPHIN 3 DIST @ CIVIC OFFICE	0	0
13-Jul-10	DAUPHIN 1 RAW	144	8
13-Jul-10	DAUPHIN 2 TTD	0	0
13-Jul-10	DAUPHIN 3 DIST @ CIVIC OFFICE #4	0	0
13-Jul-10	DAUPHIN 3 DIST @ BROWN RES EAST CELL #5	0	0
13-Jul-10	DAUPHIN 3 DIST @ TUXEDO DR #6	0	0
13-Jul-10	DAUPHIN 3 DIST @ COOP BULK GAS #7	0	0
20-Jul-10	DAUPHIN 1-RAW	>200	11
20-Jul-10	DAUPHIN 2-TTD	0	0
20-Jul-10	#3 DAUPHIN 3-DIST @ BROWN AVE RESEVOIR MAIN LINE	0	0
20-Jul-10	#4 DAUPHIN 3-DIST @ CITY SHOP	0	0
20-Jul-10	#5 DAUPHIN 3-DIST@ BOOSTER STN CHLORINATING BLDG	0	0
20-Jul-10	#2 DAUPHIN 3-DIST @ CIVIC OFFICE	0	0
3-Aug-10	DAUPHIN 1-RAW	165	9
3-Aug-10	DAUPHIN 2-TTD	3	0
3-Aug-10	DAUPHIN 3-DIST@BROWN AVE RESERVOIR MAIN LIN	0	0
3-Aug-10	DAUPHIN 3-DIST@CITY SHOP	0	0
3-Aug-10	DAUPHIN 3-DIST@BOOSTER STATION CHLORINATING BLDG	0	0
3-Aug-10	DAUPHIN 3-DIST@CIVIC OFFICE	0	0
9-Aug-10	DAUPHIN 2 - TTD	0	0

Collection Date	Sample Identification	Total Coliform	E.Coli
17-Aug-10	DAUPHIN 1 - RAW	>200	10
17-Aug-10	DAUPHIN 2 - T'TD	0	0
17-Aug-10	DAUPHIN 3 - DIST @ CIVIC OFFICE #4	0	0
17-Aug-10	DAUPHIN - BROWN RES WEST WELL #5	0	0
17-Aug-10	DAUPHIN - TUXEDO DR #6	0	0
17-Aug-10	DAUPHIN - CO-OP BULK GAS #7	0	0
24-Aug-10	DAUPHIN 1 RAW	>200	2
24-Aug-10	DAUPHIN 2 TTD	0	0
24-Aug-10	DAUPHIN 3 DIST @ BROWN AVE RESEVOIR MAIN LINE	0	0
24-Aug-10	DAUPHIN 3 DIST @ CITY SHOP	0	0
24-Aug-10	DAUPHIN 3 DIST @ BOOSTER STN CHLORINATING BLDG	0	0
24-Aug-10	DAUPHIN 3 DIST @ CIVIC OFFICE	0	0
7-Sep-10	DAUPHIN 1 RAW	109	2
7-Sep-10	DAUPHIN 2 TTD	0	0
7-Sep-10	DAUPHIN 3 DIST @ BROWN AVE RESERVOIR MAIN LINE	0	0
7-Sep-10	DAUPHIN 4 DIST @ CITY SHOP	0	0
7-Sep-10	DAUPHIN 5 DIST @ BOOSTER STATION CHLORINATING BLDG	0	0
7-Sep-10	DAUPHIN 2 DIST @ CIVIC OFFICE	0	0
14-Sep-10	DAUPHIN 1-RAW	95	16
14-Sep-10	DAUPHIN 2-TREATED	0	0
14-Sep-10	DAUPHIN 3-DIST@CIVIC OFFICE #4	0	0
14-Sep-10	DAUPHIN 3-DIST@CIVIC OFFICE #5	0	0
14-Sep-10	DAUPHIN 3-DIST@CIVIC OFFICE #6	0	0
14-Sep-10	DAUPHIN 3-DIST@CIVIC OFFICE #7	0	0
21-Sep-10	DAUPHIN 1-RAW	43	0
21-Sep-10	DAUPHIN 2-TTD	0	0
21-Sep-10	DAUPHIN 3-DIST@BROWN AVE RESERVIOR EAST CELL	0	0



Collection Date	Sample Identification	Total Coliform	E.Coli
21-Sep-10	DAUPHIN 3-DIST@CITY SHOP	0	0
21-Sep-10	DAUPHIN 3-DIST@BOOSTER STATION CHLORINATING BLDG	0	0
21-Sep-10	DAUPHIN 3-DIST@CIVIC OFFICE	0	0
5-Oct-10	DAUPHIN 1-RAW	34	2
5-Oct-10	DAUPHIN 2-TTD	0	0
5-Oct-10	DAUPHIN 3-DIST@BROWN AVE RESERVIOR EAST ALL	0	0
5-Oct-10	DAUPHIN 3-DIST@CITY SHOP	0	0
5-Oct-10	DAUPHIN 3-DIST@BOOSTER STATION CHLORINATING BLDG	0	0
5-Oct-10	DAUPHIN 3-CIVIC OFFICE	0	0
12-Oct-10	DAUPHIN 1-RAW	>200	0
12-Oct-10	DAUPHIN 2-TTD	0	0
12-Oct-10	DAUPHIN 3-DIST@CIVIC OFFICE #4	0	0
12-Oct-10	BROWN RES WEST CELL#5	0	0
12-Oct-10	TUXEDO DR #6	0	0
12-Oct-10	COOP BULK GAS #7	0	0
19-Oct-10	DAUPHIN 1-RAW	59	3
19-Oct-10	DAUPHIN 2-TTD	0	0
19-Oct-10	DAUPHIN 3-DIST@BROWN AVE RESERVIOR MAIN LINE	0	0
19-Oct-10	DAUPHIN 4-DIST@CITY SHOP	0	0
19-Oct-10	DAUPHIN 5-DIST@BOOSTER CHLORINATING BLDG	0	0
19-Oct-10	DAUPHIN 6-DIST@CIVIC OFFICE	0	0
2-Nov-10	DAUPHIN 1-RAW	>200	21
2-Nov-10	DAUPHIN 2-TTD	0	0
2-Nov-10	DAUPHIN 3-DIST@BROWN AVE RES. MAIN LINE	0	0
2-Nov-10	DAUPHIN 3-DIST@CITY SHOP	0	0
2-Nov-10	DAUPHIN 3-DIST@BOOSTER STN CHLORINATING BLDG	0	0
2-Nov-10	DAUPHIN 3-DIST@CIVIC OFFICE	0	0

Collection Date	Sample Identification	Total Coliform	E.Coli
16-Nov-10	DAUPHIN 1-RAW	130	5
16-Nov-10	DAUPHIN 2-TTD	0	0
16-Nov-10	#4 DAUPHIN 3@CIVIC OFFICE	0	0
16-Nov-10	#5 BROWN AVE RES EAST CELL	0	0
16-Nov-10	#6 TUXEDO DR.	0	0
16-Nov-10	#7 COOP BULK GAS	0	0
23-Nov-10	DAUPHIN 1-RAW	89	2
23-Nov-10	DAUPHIN 2-TTD	0	0
23-Nov-10	DAUPHIN 3-DIST@CITY SHOP	0	0
23-Nov-10	DAUPHIN 3-DIST@BOOSTER STATION CHLORINATING BLDG	0	0
23-Nov-10	DAUPHIN 3-DIST@CIVIC OFFICE	0	0
23-Nov-10	DAUPHIN 3-34 MACNEILL PLACE	0	0
7-Dec-10	DAUPHIN 1-RAW	48	0
7-Dec-10	DAUPHIN 2-TTD	0	0
7-Dec-10	DAUPHIN 3-DIST@CITY SHOP	0	0
7-Dec-10	DAUPHIN 3-DIST@BOOSTER STATION CHLORINATING BLDG	0	0
7-Dec-10	DAUPHIN 3-DIST@CIVIC OFFICE	0	0
7-Dec-10	DAUPHIN 34-MACNEILL PLACE	0	0
14-Dec-10	DAUPHIN 1-RAW	78	0
14-Dec-10	DAUPHIN 2-TTD	0	0
14-Dec-10	DAUPHIN 3-DIST@CIVIC OFFICE	0	0
14-Dec-10	DAUPHIN BROWN AVE WEST CELL	0	0
14-Dec-10	DAUPHIN TUXEDO DRIVE	0	0
14-Dec-10	DAUPHIN COOP BULK GAS	0	0
21-Dec-10	DAUPHIN 1-RAW	48	0
21-Dec-10	DAUPHIN 2-TTD	0	0
21-Dec-10	DAUPHIN 3-DIST@BROWN AVE RESERVOIR	0	0

Collection Date	Sample Identification	Total Coliform	E.Coli
21-Dec-10	DAUPHIN 3-DIST@BOOSTER STATION CHLORINATING BLDG	0	0
21-Dec-10	DAUPHIN 3-DIST@CIVIC OFFICE	0	0
21-Dec-10	261 BROWN AVE EAST	0	0
14-Dec-10	DAUPHIN TUXEDO DRIVE	0	0
14-Dec-10	DAUPHIN COOP BULK GAS	0	0
21-Dec-10	DAUPHIN 1-RAW	48	0
21-Dec-10	DAUPHIN 2-TTD	0	0
21-Dec-10	DAUPHIN 3-DIST@BROWN AVE RESERVOIR	0	0
21-Dec-10	DAUPHIN 3-DIST@BOOSTER STATION CHLORINATING BLDG	0	0
21-Dec-10	DAUPHIN 3-DIST@CIVIC OFFICE	0	0
21-Dec-10	261 BROWN AVE EAST	0	0

### Appendix B – Fluoridation Certificate of Commendation

**Certificate of Commendation**

**Water Treatment Plant Staff**

In recognition of achieving a high standard of operating efficiency with respect to the Community Water Fluoridation Program as administered by Manitoba Health.

**Certificat de mérite**

**Personnel des installations de traitement des eaux**

En reconnaissance de la grande efficacité de son installation de traitement des eaux, dans le cadre du Programme de fluoridation de l'eau dans les localités qui relèvent de Santé Manitoba.

We award this certificate of commendation to:

**Staff of the DAUPHIN Water Treatment Plant**

this/le 22 day of/jour de October 2010

*Simon Leclerc*  
Associate Deputy Minister  
Public Health and Primary Health Care  
Sous-ministre associé  
Santé publique et Soins de santé primaires

*Ronald*  
Minister of Health  
Ministre de la Santé

