

Rural Municipality of Dufferin



2021

PUBLIC WATER SYSTEM ANNUAL REPORT

TABLE OF CONTENTS

1. Description of the Water System	1.
2. Description of the Disinfection Methods	1.
3. Water Quality Standards and Analysis Requests	2.
4. Water System Incidents and Corrective Actions	3.
5. Summary of Additional Records required by the Office of The Drinking Water....	3.
6. Description of Drinking Water Safety Orders Issued	3.
7. Description of Boil Water Advisories	3.
8. Summary of Charges Laid or Pending	4.
9. Description of any Major Expenses	4.
10. Other Information	4.
3a. R.M. of Dufferin Addendum A – Manitoba Conservation & Climate Record of Non-Compliance	
3b. R.M. of Dufferin Bacti Report	
Current Operating License for a Public Water System	
RM of Dufferin Distribution System Map	

Contacts:

Sharla Murray	Chief Administrative Officer	cao@rmofdufferin.com
Blake Bell	Utility Operator	water@rmofdufferin.com
Jeanne Holmberg	Utility Supervisor	utility@rmofdufferin.com

12 -2ND STREET SW., PO Box 100, Carman, MB R0G 0J0
(204)745-2301 phone - office hours 8:30 – 4:30
(204)745-6348 fax
(204)750-2652 Blake cell – Emergency number

This report is viewable either in the office of the RM of Dufferin:
Paper copies are available at the office or call 204-745-2301 or e-mail
utility@rmofdufferin.com to arrange for an e-mail pdf copy.

OR can be viewed digitally at: <https://www.carmanmanitoba.ca/residents/government/rm-of-dufferin/rm-water-report/>

1. Description of The Drinking Water System

The primary water source for the Rural Municipality of Dufferin water distribution system is the Stephenfield water treatment plant located on the Stephenfield Reservoir approximately 4,000 meters northwest of Stephenfield, MB. The Stephenfield water treatment plant pumps treated water to the R.M. of Dufferin distribution system. The Stephenfield water treatment plant is owned and operated by the Pembina Valley Water Cooperative Inc. (PVWC), this facility falls under the water facility classification of the Environment Act's Water and Wastewater Facility Operators Regulation (MR 77/2003). The R.M. of Dufferin, which is a Level 2 Distribution system, purchases their water consumption on an as needed basis from the PVWC, and services approx. 700 metered water accounts providing high quality, potable, provincially regulated water to its residents.

2. Description of the Disinfection Methods

The Rural Municipality of Dufferin owns and operates the R. M. of Dufferin distribution system, PVWC owns and operates the Stephenfield water treatment plant, PVWC via the Stephenfield water treatment plant pumps and supplies treated water to the R.M. of Dufferin distribution system. Approximately 30% - 40% of the water provided by PVWC to the R.M. of Dufferin passes through a re-chlorination station, owned, and operated by the RM of Dufferin. It is located approximately 1,600 meters north of the Town of Carman, it's purpose was to provide re-chlorinated water to the northeast portion of the R.M. of Dufferin, and was designed to re-chlorinate the treated water to increase the chlorine residual to further enable disinfection and protection of the distribution system. With the upgrade to the new Stephenfield water treatment Membrane plant, we have found that the residual chlorine levels have stayed above regulatory requirements and been maintained throughout the system, thus we have not been required to re-chlorinate the water passing through the station. The chlorine residual continues to be tested and monitored.

Monthly chlorination reports are sent to the regional Drinking Water Officer at the end of each month. The R.M. of Dufferin has met regulatory requirements with regards to collecting and providing distribution treated water samples for bacteriological analysis. To ensure a safe water supply to all residents we flush the system twice a year and routinely do Bac'T and HPC testing throughout the municipality.

3. Water Quality Standards and Analysis Results

WATER QUALITY STANDARDS		Percent Compliance	Corrective Action
BACTERIOLOGICAL			
<i>E. Coli</i>	Less than one E. Coli bacteria detectable per 100ml in all distributed water	100%	n/a
<i>Total Coliform</i>	Less than one total coliform bacteria detectable per 100ml in all distributed water	100%	n/a
<i>Comments</i>	A bi-weekly sampling program with each set of samples consisting of a minimum of 3 distribution samples taken, the Distribution samples are taken at various locations. The bacterial water quality standard was met. See attached 3a . R.M. of Dufferin Addendum A & 3b .		
DISINFECTION			
<i>Chlorine Residual</i>	A free chlorine residual of at least 0.1 mg/L at all times at any point in the water distribution systems	100%	n/a
<i>Comments</i>	The disinfection water quality standard was met throughout 2021.		
PHYSICAL			
<i>Turbidity</i>	Not applicable		
CHEMICAL			
<i>Total Trihalomethanes</i>	The Trihalomethane (THM) standard of less than or equal to 0.10 mg/L as a locational annual average of samples (0.10mg/L-100 mg/L)	100%	n/a
<i>Comments</i>	The RM of Dufferin met the standard in 2020 with an annual average of 0.0500mg/L		
<i>Haloacetic Acids</i>	The Haloacetic Acids (HAA) standard of less than or equal to 0.08 mg/L as a locational annual average of samples (0.08mg/L-100 mg/L)	100%	n/a
<i>Comments</i>	The RM of Dufferin met the standard in 2020 with an annual average of 0.0055mg/L		

See attached

3a. R.M. of Dufferin Addendum A – Manitoba Conservation & Climate Record of Non-Compliance

3b. R.M. of Dufferin Bacti Report

4. Water System Incidents and Corrective Actions

There were no major system incidents or corrective actions required within the RM of Dufferin in 2021. The RM was non compliant in filing a 2021 Advisory Notification Plan.

5. Summary of Additional Records

Under Section 31 of The Act, the RM of Dufferin has no pertinent applicable information.

6. Description of Drinking Water Safety Orders Issued

The RM of Dufferin had no orders issued and therefore no actions were required to be taken.

7. Description of Boil Water Advisories

The RM of Dufferin issues several types of Advisories annually, there are **Pre-Cautious Maintenance Boil Water Advisories**, **Pre-Cautious Boil Water Advisories** and **Boil Water Advisories**. The Advisories will be issued by The Office of The Drinking Water and may be issued by a Medical Officer of Health if the person issuing the advisory reasonably believes the water from a water system is or may be unsafe for domestic purposes unless it is boiled or otherwise disinfected.

The Advisory will be rescinded by the Medical Officer of Health once the regulatory water standards are met, this is based on the results of two (2) sets of bacteriological tests including a minimum of two (2) distribution samples from the affected area submitted a minimum of 24 hours apart.

Advisories are caused due to scheduled and un-scheduled maintenance, typically causing a **Pre-Cautious Maintenance Boil Water Advisory** and affects very specific individuals. Scheduled and un-scheduled maintenance may have a **Pre-Cautious Maintenance Boil Water Advisory** issued but often results in a **Pre-Cautious Boil Water Advisory** and affects multiple individuals within a larger specified area in the municipality, and/or the entire Municipality. **Boil Water Advisories** are considered more serious and typically affect the entire Distribution System.

Advisories are issued when maintenance on the water system can lead to the loss of water pressure in portions of or all of the distribution system, since distribution depressurization can compromise the safety of the water supply, boil water advisories are issued to ensure the protection of public health as a precautionary measure.

The RM of Dufferin routinely monitors and tests the potable water supply to ensure safe, clean drinking water is available to all users.

The RM of Dufferin issued **three (3) Maintenance Pre-Cautious Boil Water Advisories** to the pertinent water consumers as a precautionary effort for safety during repairs. The

RM was issued **two (2) Pre-Cautionary Boil Water** Advisories by the ODW that affected larger areas within the Municipality due to Maintenance on both Dufferin and PVWC Co-op lines, the advisories were issued and consumers notified.

In 2021 No **Boil** Water Advisories were issued for the RM of Dufferin Water System; therefore no actions were required.

8. Summary of Charges Laid or Pending

In 2021, The RM of Dufferin had no charges laid or any pending offences in regard to section 31 of the Act.

9. Description of any Major Expenses

In 2021 The RM of Dufferin incurred a total of 54.5 internal man hours for repairs of water breaks/maintenance, as well a cost of parts and labour hired of \$25,993.00.

The projected and anticipated costs for 2021 water breaks was increased for in the 2021 budget based on the increased breaks in 2020. The 2022 projected and anticipated costs in the 2022 proposed budget has remained the same based on numbers reflected through 2021.

No major purchases were incurred in 2021 nor are projected for in 2022.

10. Other Information

The RM of Dufferin has found that with the completion of the new PVWC water treatment plant at Stephenfield, our anticipation of the new treatment system and the quality of water supplied to the RM of Dufferin has been a positive. The THM levels have now met the required standards, which for Dufferin has been an ongoing concern. Some discolored water throughout certain area's within the RM continues to be a concern, however the RM of Dufferin is trying to work with the Stephenfield Water Treatment Plant and PVWC to resolve this issue.

The only other concern is our Bulk Water fill Station at the PVWC Stephenfield Treatment Plant,

This station is operated on an honor system recording process and unfortunately is becoming less and less reliable and is affecting the overall cost effectiveness. Losses are becoming an ongoing issue that going forward will need to be addressed.

2021 Annual Compliance Audit

Water System: RURAL MUNICIPALITY OF DUFFERIN (STEPHENFIELD REGIONAL) - PWS	Code: 55.25
Water System Owner: Rural Municipality of Dufferin	Address: 12 - 2nd Avenue SW, Carman, MB R0G0J0
Operating Licence: PWS-09-304-02	Expiry Date: February 29, 2024
Water System Assessment Due Date: March 1, 2025	
Public Water System Annual Report Due Date: March 31, 2022	Advisory Notification Plan Due Date: May 1, 2022

- 1) This report documents compliance of the Rural Municipality Of Dufferin (Stephenfield Regional) Public Water System for the period from January 1 to December 31, 2021.
- 2) This report provides specific information on the non-compliance incidents identified in the summary below.
- 3) Other than the information provided in this report, the water supplier has complied with The Drinking Water Safety Act, its supporting regulations, and the terms and conditions of the water system's current operating licence.
- 4) This report is based on information submitted by the water supplier, agents of the water supplier, and / or the Province of Manitoba.
- 5) Where non-compliance items are identified, the issues do not necessarily translate into increased public health risk. The Office of Drinking Water uses processes, including boil water advisories, to notify water users of a public health risk.

Non-compliance with Treatment Standards:

Water system was compliant in the audited time period.

Non-compliance Incidents:

Date	Incident	Outcome
2021	Failure to submit a Advisory Notification Plan	Non-compliant

If you have any questions, please do not hesitate to contact me at (204) 795-6908.

Sincerely,



Kale Black
Senior Regional Drinking Water Officer

RM OF DUFFERIN 3 - DISTRIBUTION @ 2 INCH FLUSHOUT SW 25-7-3	L2661485-2	11/10/2021 2:30:00 PM	Water	0.59	0.86	14.1	-	-	-	0	0
RM OF DUFFERIN 3 - DISTRIBUTION @ 4 INCH FLUSHOUT SE 36-7-5	L2661485-3	11/10/2021 2:45:00 PM	Water	0.9	1.03	14.1	-	-	-	0	0
RM OF DUFFERIN 3 - DISTRIBUTION @ 3 INCH FLUSHOUT NW 33-7-5	L2661485-4	11/10/2021 3:05:00 PM	Water	0.83	1	14.1	-	-	-	0	0
RM OF DUFFERIN 3 - DISTRIBUTION @ 4 INCH FLUSHOUT NW 36-6-6	L2661485-5	11/10/2021 2:10:00 PM	Water	1.19	1.25	14.1	-	-	-	0	0
RM OF DUFFERIN 3 - DISTRIBUTION @ ROSEISLE COOP	L2662585-1	11/15/2021 9:10:00 AM	Water	0.91	1.12	12.7	-	-	-	0	0
RM OF DUFFERIN 3 - DISTRIBUTION @ HOMEWOOD BULK WATER	L2662585-2	11/15/2021 9:50:00 AM	Water	0.84	1.04	12.7	-	-	-	0	0
RM OF DUFFERIN 3 - DISTRIBUTION @ DUFFERIN SHOP	L2662585-3	11/15/2021 10:00:00 AM	Water	0.99	1.16	12.7	-	-	-	0	0
RM OF DUFFERIN 3 - DIST @ JIM ABBOT SERVICELINE REPAIR	L2665173-1	11/23/2021 9:00:00 AM	Water	0.88	1.07	10.5	-	-	-	0	0
RM OF DUFFERIN 3 - DISTRIBUTION @ HOMEWOOD BULK WATER	L2667221-1	11/29/2021 8:30:00 AM	Water	0.98	1.13	7.4	-	-	-	0	0
RM OF DUFFERIN 3 - DISTRIBUTION @ ROSEISLE COOP	L2667221-2	11/29/2021 9:30:00 AM	Water	0.78	0.92	7.4	-	-	-	0	0
RM OF DUFFERIN 3 - DISTRIBUTION @ DUFFERIN SHOP	L2667221-3	11/29/2021 10:00:00 AM	Water	0.81	0.99	7.4	-	-	-	0	0
RM OF DUFFERIN 3 - DIST @ GEORGE VERHAEGHE NEW HOOKUP	L2667221-4	11/29/2021 9:00:00 AM	Water	0.68	0.7	7.4	-	-	-	0	0
RM OF DUFFERIN 3 - DISTRIBUTION @ HOMEWOOD BULK WATER	L2671855-1	12/13/2021 8:30:00 AM	Water	0.97	1.12	8.6	-	-	-	0	0
RM OF DUFFERIN 3 - DISTRIBUTION @ ROSEISLE COOP	L2671855-2	12/13/2021 9:00:00 AM	Water	1.12	1.22	8.6	-	-	-	0	0
RM OF DUFFERIN 3 - DISTRIBUTION @ DUFFERIN SHOP	L2671855-3	12/13/2021 9:30:00 AM	Water	0.9	1.19	8.6	-	-	-	0	0
RM OF DUFFERIN 3 - DISTRIBUTION @ HOMEWOOD BULK WATER	L2675823-1	12/29/2021 8:15:00 AM	Water	0.85	1.1	9	-	-	-	0	0
RM OF DUFFERIN 3 - DISTRIBUTION @ ROSEISLE COOP	L2675823-2	12/29/2021 9:00:00 AM	Water	0.34	0.67	9	-	-	-	0	0
RM OF DUFFERIN 3 - DISTRIBUTION @ DUFFERIN SHOP	L2675823-3	12/29/2021 9:30:00 AM	Water	0.41	0.59	9	-	-	-	0	0



Conservation and Climate

Office of Drinking Water

1007 Century Street, Winnipeg, Manitoba R3H 0W4

**OPERATING LICENCE FOR
A PUBLIC WATER SYSTEM**

LICENCE NUMBER: PWS-09-304-02

**THE DRINKING WATER SAFETY ACT
CHAPTER D101, C.C.S.M.**

WATER SYSTEM CODE: 55.25
OPERATION ID: 28053
EFFECTIVE DATE: DECEMBER 1, 2019
EXPIRY DATE: FEBRUARY 29, 2024

IN ACCORDANCE WITH *THE DRINKING WATER SAFETY ACT*, THIS OPERATING LICENCE IS ISSUED PURSUANT TO SUBSECTION 8(1) TO:

RURAL MUNICIPALITY OF DUFFERIN: "THE LICENSEE"

FOR THE OPERATION OF THE **RURAL MUNICIPALITY OF DUFFERIN (STEPHENFIELD REGIONAL) PUBLIC WATER SYSTEM**, WHICH INCLUDES TREATMENT FACILITIES AND DISTRIBUTION LINES, SUBJECT TO THE ATTACHED TERMS AND CONDITIONS.

THIS LICENCE DOES NOT AFFECT THE LICENSEE'S OBLIGATIONS WITH RESPECT TO COMPLIANCE WITH ALL APPLICABLE MUNICIPAL, PROVINCIAL, AND FEDERAL LEGISLATION. THIS LICENCE SUPERSEDES ALL PREVIOUS LICENSES FOR THIS PUBLIC WATER SYSTEM.

DATE: October 30, 2020


Kim Philip, P.Eng.
Director

ROG OJO
Ph: (204) 745-2301
Fax: (204) 745-6348

DUFFERIN NO. 120



Legend:
Dirt Maintained (dashed line)
Trail (dotted line)
Undeveloped (dotted line)

