



Rural Municipality of Dufferin

2025

PUBLIC WATER SYSTEM ANNUAL REPORT

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This report can also be viewed digitally on our website at:

<https://carmandufferin.com/rmd-water>

Water consumers will be notified via social media and within our quarterly newsletter that the Annual report is available for viewing.

1. Description of The Drinking Water System

The primary water source for the Rural Municipality of Dufferin water distribution system is the Stephenfield Regional Water Treatment Plant located on the Stephenfield Reservoir approximately 4,000 meters northwest of Stephenfield, MB.

The Stephenfield Regional Water Treatment Plant pumps treated water to the R.M. of Dufferin distribution system. The Stephenfield Regional 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).

A detailed description of The Pembina Valley Water Co-operative (PVWC) – Stephenfield Water Treatment Plant treatment process can be obtained directly from PVWC at 204-324-1931 or email water@pvwc.ca

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. 717 metered water accounts providing high quality, potable, provincially regulated water to its residents. The Dufferin distribution system is a network of underground PVC and HDPE pipeline which delivers water pumped through various sizes of pipe, 2"- 8" to each service lined consumer. Most service lines are either LDPE or HDPE and range in size from 1" – 2". The total distribution network consists of approximately 80 kms. Gate valves are installed throughout the system to be able to isolate sections of line for emergency or maintenance purposes. Curbstops are installed on each service line to be able to shut off residential or business lines in case of emergencies. The Dufferin distribution system has been divided into 12 zones, each zone flows are monitored through meter chambers, a total of 8, which are used to keep track of water losses.

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 Regional 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 R.M. of Dufferin. It is located approximately 1,600 meters north of the Town of Carman, its 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.		
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 2025.		
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 (0.10 mg/L-100 mg/L)	100%	n/a
<i>Comments</i>	The R.M. took 4 samples and the water quality monitoring and standards were met.		
<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 (0.08 mg/L-100 mg/L)	100%	n/a
<i>Comments</i>	The R.M. took 4 samples and the water quality monitoring and standards were met.		
LEAD			
<i>Lead</i>	The Lead standard of less than or equal to 0.005 mg/L.	100%	n/a
<i>Comments</i>	The R.M. of Dufferin took 20 samples and the water quality monitoring and standards were met.		
<i>Metals</i>	One sample every two years at mid-point in the distribution system.	100%	n/a
<i>Comments</i>	The R.M. took 1 sample and the standards were met for water quality and monitoring.		

**2025 Lead Sampling Results
RM of Dufferin**

Acceptable Level < 0.005		
Date	Location	Results
Jan 30/25	Location 1	0.000363mg/L
Feb 3/25	Location 2	0.00179mg/L
Feb 3/25	Location 3	0.000384mg/L
Mar 12/25	Location 4	0.00174mg/L
Mar 31/25	Location 5	0.000802mg/L
Apr 29/25	Location 6	0.00116mg/L
May 26/25	Location 7	0.000475mg/L
May 26/25	Location 8	not detected
July 7/25	Location 9	0.000557mg/L
July 7/25	Location 10	0.000342mg/L
July 21/25	Location 11	0.000881mg/L
July 21/25	Location 12	0.00127mg/L
July 21/25	Location 13	0.000904mg/L
Aug 1/25	Location 14	0.00493mg/L
Oct 1/25	Location 15	0.000632mg/L
Oct 14/25	Location 16	0.000243mg/L
Oct 14/25	Location 17	0.000359mg/L
Nov 12/25	Location 18	0.00140mg/L
Nov 12/25	Location 19	0.000431mg/L
Nov 12/25	Location 20	0.000319mg/L

There were no samples collected for THM or HAA in 2025, these are collected in even years only.

Work Order : WP2506634
Client : Manitoba Conservation & Climate
Project : DWQ-A



Analytical Results Evaluation

Matrix: Water				Client sample ID	Rural Municipality of Dufferin 3 - Distribution						
Client sampling date / time				15-May-2025 00:00							
Sub-Matrix				Drinking Water							
Analyte	CAS Number	Method/Lab	Unit	WP2506634-001							
				Result							
Total Metals											
Aluminum, total	7429-90-5	E420WP	µg/L	2.4	---	---	---	---	---	---	---
Antimony, total	7440-36-0	E420WP	µg/L	0.063	---	---	---	---	---	---	---
Arsenic, total	7440-38-2	E420WP	µg/L	0.19	---	---	---	---	---	---	---
Barium, total	7440-39-3	E420WP	µg/L	18.9	---	---	---	---	---	---	---
Beryllium, total	7440-41-7	E420WP	µg/L	0.0015	---	---	---	---	---	---	---
Bismuth, total	7440-69-9	E420WP	µg/L	0.00055	---	---	---	---	---	---	---
Boron, total	7440-42-8	E420WP	µg/L	61	---	---	---	---	---	---	---
Cadmium, total	7440-43-9	E420WP	µg/L	0.0030	---	---	---	---	---	---	---
Calcium, total	7440-70-2	E420.Ca-LWP	µg/L	27600	---	---	---	---	---	---	---
Cesium, total	7440-46-2	E420WP	µg/L	<0.010	---	---	---	---	---	---	---
Chromium, total	7440-47-3	E420WP	µg/L	<0.50	---	---	---	---	---	---	---
Cobalt, total	7440-48-4	E420WP	µg/L	<0.10	---	---	---	---	---	---	---
Copper, total	7440-50-8	E420WP	µg/L	28.7	---	---	---	---	---	---	---
Iron, total	7439-89-6	E420WP	µg/L	<10	---	---	---	---	---	---	---
Lead, total	7439-92-1	E420WP	µg/L	1.09	---	---	---	---	---	---	---
Lithium, total	7439-93-2	E420.Li-LWP	µg/L	14.2	---	---	---	---	---	---	---
Magnesium, total	7439-95-4	E420WP	µg/L	10000	---	---	---	---	---	---	---
Manganese, total	7439-96-5	E420WP	µg/L	1.95	---	---	---	---	---	---	---
Molybdenum, total	7439-98-7	E420WP	µg/L	0.152	---	---	---	---	---	---	---



Matrix: Water

Client sample ID			Rural Municipality of Dufferin 3 - Distribution	---	---	---	---	---	---
Client sampling date / time			15-May-2025 00:00	---	---	---	---	---	---
Sub-Matrix			Drinking Water	---	---	---	---	---	---
Analyte	CAS Number	Method/Lab	Unit	WP2506634-001	---	---	---	---	---
				Result	---	---	---	---	---
Total Metals									
Nickel, total	7440-02-0	E420WP	µg/L	0.21	---	---	---	---	---
Phosphorus, total	7723-14-0	E420.P-LWP	µg/L	<30	---	---	---	---	---
Potassium, total	7440-09-7	E420WP	µg/L	4510	---	---	---	---	---
Rubidium, total	7440-17-7	E420WP	µg/L	1.31	---	---	---	---	---
Selenium, total	7782-49-2	E420WP	µg/L	0.130	---	---	---	---	---
Silicon, total	7440-21-3	E420WP	µg/L	6630	---	---	---	---	---
Silver, total	7440-22-4	E420WP	µg/L	0.0057	---	---	---	---	---
Sodium, total	7440-23-5	E420WP	µg/L	11800	---	---	---	---	---
Strontium, total	7440-24-6	E420WP	µg/L	103	---	---	---	---	---
Sulfur, total	7704-34-9	E420WP	µg/L	730	---	---	---	---	---
Tellurium, total	13494-80-9	E420WP	µg/L	0.022	---	---	---	---	---
Thallium, total	7440-28-0	E420WP	µg/L	<0.010	---	---	---	---	---
Thorium, total	7440-29-1	E420WP	µg/L	<0.10	---	---	---	---	---
Tin, total	7440-31-5	E420WP	µg/L	<0.10	---	---	---	---	---
Titanium, total	7440-32-6	E420WP	µg/L	<0.30	---	---	---	---	---
Tungsten, total	7440-33-7	E420WP	µg/L	<0.10	---	---	---	---	---
Uranium, total	7440-61-1	E420WP	µg/L	0.136	---	---	---	---	---
Vanadium, total	7440-62-2	E420WP	µg/L	0.96	---	---	---	---	---
Zinc, total	7440-66-6	E420WP	µg/L	8.6	---	---	---	---	---
Zirconium, total	7440-67-7	E420WP	µg/L	<0.20	---	---	---	---	---

2025 Bacteriological Testing Results					
Date Sampled	Work Order	Lab	Sample ID	MPN/100ml	MPN/100ml
06-Jan-25	D15261	Duracan	RMD - Distribution @ Roseisle Rink	0	0
20-Jan-25	D15876	Duracan	RMD - Distribution @ Roseisle Rink	0	0
30-Jan-25	D16404	Duracan	RMD - Distribution @ Labelle	0	0
03-Feb-25	D16479	Duracan	RMD - Distribution @ Homewood bulk	0	0
18-Feb-25	D17248	Duracan	RMD - Distribution @ Dufferin Shop	0	0
03-Mar-25	D17976	Duracan	RMD - Distribution @ Roseisle Coop	0	0
12-Mar-25	D18455	Duracan	RMD - Distribution @ Obrien-DCS-Takvam	0	0
31-Mar-25	D19249	Duracan	RMD - Distribution @ Park-OwenPotato	0	0
14-Apr-25	D19906	Duracan	RMD - Distribution @ Roseisle Rink	0	0
22-Apr-25	D20185	Duracan	RMD - Distribution @ McIntosh	0	0
29-Apr-25	D20598	Duracan	RMD - Distribution @ Dufferin Shop	0	0
29-Apr-25	D20601	Duracan	RMD - Distribution @ Vanderluis-Doell	0	0
12-May-25	D21503	Duracan	RMD - Distribution @ Roseisle Rink	0	0
26-May-25	D22605	Duracan	RMD - Distribution @ Roseisle Rink	0	0
09-Jun-25	D23795	Duracan	RMD - Distribution @ Homewood bulk	0	0
23-Jun-25	D24681	Duracan	RMD - Distribution @ Dufferin Shop-Myers	0	0
25-Jun-25	D25056	Duracan	RMD - Distribution @ Dufferin Shop	0	0
07-Jul-25	D25743	Duracan	RMD - Distribution @ Blooming Prairie Honey	0	0
07-Jul-25	D25744	Duracan	RMD - Distribution @ Sunrise Honey Ltd	0	0
21-Jul-25	D26648	Duracan	RMD - Distribution @ Roseisle Rink	0	0
01-Aug-25	D27553	Duracan	RMD - Distribution @ DCS-Vanderveen-Sawatzki	0	0
05-Aug-25	D27639	Duracan	RMD - Distribution @ Homewood bulk	0	0
11-Aug-25	D28074	Duracan	RMD - Distribution @ DCS	0	0
25-Aug-25	D29223	Duracan	RMD - Distribution @ DCS-Sawatzki	0	0
02-Sep-25	D29825	Duracan	RMD - Distribution @ CHL Stn	0	0
15-Sep-25	D30642	Duracan	RMD - Distribution @ 305 & 25	0	0
24-Sep-25	D31330	Duracan	RMD - Distribution @ Dyck-Roseisle Washroom	0	0
01-Oct-25	D31575	Duracan	RMD - Distribution @ Krunek	0	0
14-Oct-25	D32325	Duracan	RMD - Distribution @ OwenPotato	0	0
27-Oct-25	D32961	Duracan	RMD - Distribution @ RM Shop	0	0
05-Nov-25	D33549	Duracan	RMD - Distribution @ Vanderluis	0	0
05-Nov-25	D33551	Duracan	RMD - Distribution @ OwenPotato-29193PR245	0	0
12-Nov-25	D33832	Duracan	RMD - Distribution @ Roseisle Rink	0	0
24-Nov-25	D34539	Duracan	RMD - Distribution @ Homewood bulk	0	0
08-Dec-25	D35316	Duracan	RMD - Distribution @ Dufferin Shop	0	0
10-Dec-25	D35435	Duracan	RMD - Distribution @ Minty-Takvam-Concrete	0	0
23-Dec-25	D36071	Duracan	RMD - Distribution @ Roseisle Rink	0	0

4. Water System Incidents and Corrective Actions

The R.M. of Dufferin had no water system incidents and therefore no actions were required to be taken.

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 R.M. of Dufferin had no orders issued and therefore no actions were required to be taken.

7. Description of Boil Water Advisories

The R.M. 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 or a very large, specified area.

Advisories are issued when maintenance on the water system can lead to the loss of water pressure in portions of or all 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 R.M. of Dufferin routinely monitors and tests its potable water supply to ensure safe, clean drinking water is available to all users. In 2025, the R.M. of Dufferin Water System issued (7) Boil Water Advisories (BWAs) affecting areas within the municipality due to breaks on both Dufferin and PVWC lines. In each case, advisories were issued promptly, and consumers were notified of both the initial advisory and the subsequent rescind notices. For all seven BWAs issued during the 2025 fiscal year, appropriate remedial actions were taken, samples and/or resamples were collected, and all results met regulatory standards. All advisories were subsequently rescinded.

8. Summary of Charges Laid or Pending

In 2025, The RM of Dufferin had no charges laid or any pending offences regarding section 31 of the Act.

9. Description of any Major Expenses

In 2025, the R.M. of Dufferin had to upgrade their utility software, this upgrade consisted of a subscription to Neptune and new MRX mobile data collector for \$25,785.19.

10. Other Information

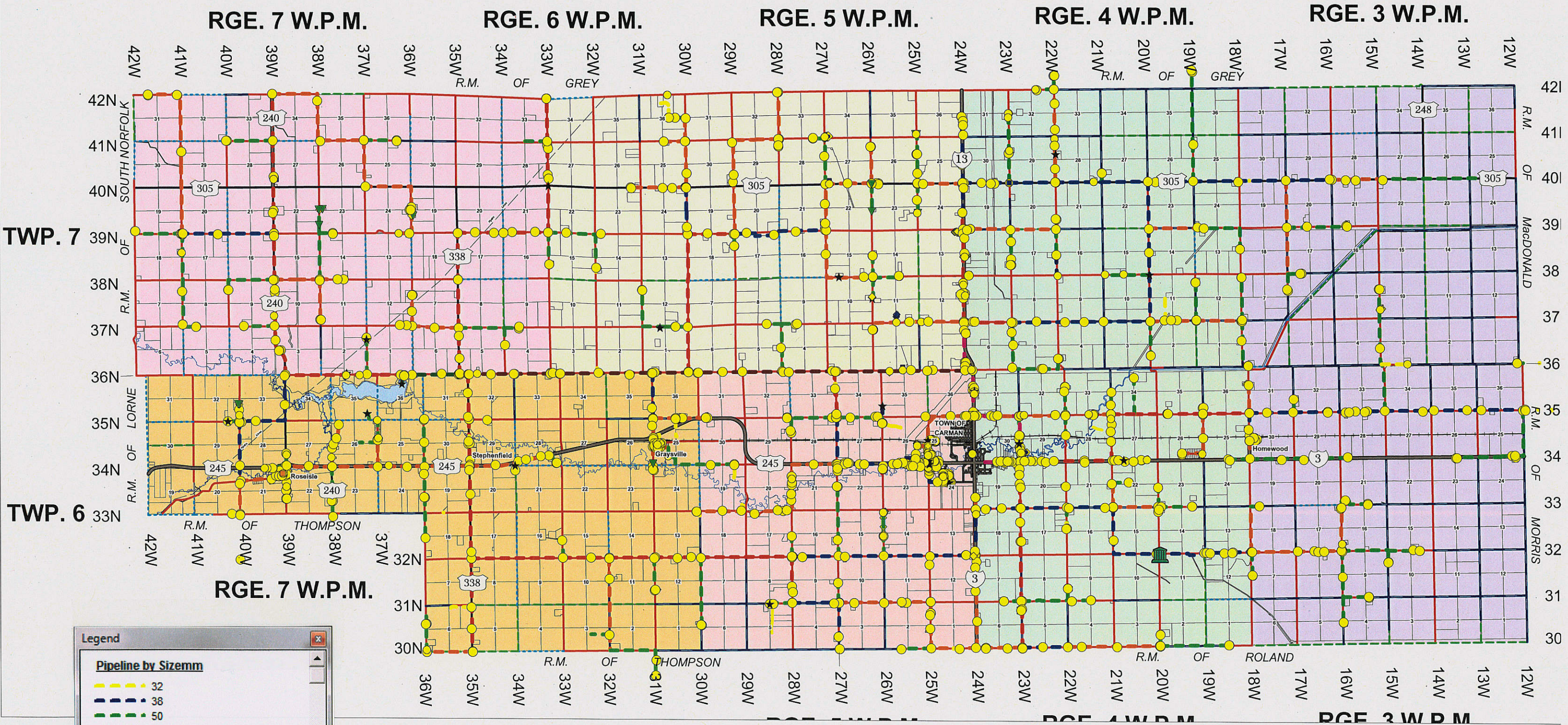
The R.M. of Dufferin has found that with the completion of the new PVWC water treatment plant at Stephenfield, our anticipation of the new treatment system and the quality of water supplied to the R.M. of Dufferin has been positive. Some discolored water and pressure throughout certain areas within the RM can be an ongoing concern, however the RM of Dufferin is working with the Stephenfield Water Treatment Plant and PVWC to resolve any issues that arise.

ROG 0J0
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DUFFERIN NO. 120



Grey Road
Dirt Maintained
Trail
Undeveloped



Legend

Pipeline by Sizemm

- 32
- 38
- 50
- 75
- 100
- 150
- 200
- 250
- 300