

2017 Summary Report

for the

Town of Minto

PALMERSTON DRINKING WATER SYSTEM

TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	Background	1
1.2	Objective	2
1.3	Description of Drinking Water System	2
2.0	SUMMARY OF UPGRADES	3
2.1	Upgrades Completed in 2017	3
2.2	Upgrades Scheduled to be Completed in 2018	3
3.0	OPERATION OF THE DRINKING WATER SYSTEM	3
3.1	Summary of the Quantities and Flow Rates of Water Supplied	3
3.2	Comparison of Actual Flow and Maximum Allowable Rates	8
3.3	Raw Water Quality and Required Treatment	10
3.4	Summary of Treatment Chemicals Used	11
4.0	COMPLIANCE	12
4.1	Assessment of Compliance	12
4.2	Summary of Compliance	13

LIST OF TABLES

Table 3.1	Palmerston Drinking Water System – Well #1	4
Table 3.2	Palmerston Drinking Water System – Well #2	5
Table 3.3	Palmerston Drinking Water System – Well #3	6
Table 3.4	Palmerston Drinking Water System – Well #4	7
Table 3.5	Palmerston Drinking Water System - Well # 1 & 2 Combined	8
Table 3.6	Palmerston Drinking Water System - Well # 3 & 4 Combined	8
Table 3.7	Comparison of Flow Rates and Flow Capacities	9
Table 3.8	2017 Maximum Water Usage Per Day by Month	9
Table 3.9	2017 Annual Summary of Raw Water Turbidity	11
Table 3.10	2017 Annual Summary of Treatment Chemicals Used	12
Table 4.1	Adverse Water Quality Incidents	13
Table 4.2	Requirement the System Failed to Meet	14

2017 Summary Report for the Town of Minto PALMERSTON DRINKING WATER SYSTEM

1.0 INTRODUCTION

1.1 Background

In December 2002, the Safe Drinking Water Act (SDWA) was enacted. Subsequently, on June 1, 2003, under the SDWA, a new *'Drinking-Water Systems Regulation'*, Ontario Regulation 170/03 (O. Reg. 170/03), was enacted. In addition, several supporting regulations and procedures were also enacted to assist with the administration of O. Reg 170/03. The list of relevant drinking-water legislation is presented in Appendix A.

The SDWA identifies the responsibilities of owners and operating authorities of municipal drinking water systems (SDWA, Sections 11 and 19). Their duties include ensuring that:

- All water provided by the drinking-water system meets prescribed drinking-water quality standards;
- The drinking-water system is operated in accordance with the Act and regulations and is kept in a good state of repair;
- All facilities are appropriately staffed and supervised;
- All sampling, testing and monitoring requirements are complied with;
- All reporting requirements are complied with; and
- Only persons holding valid operator's certificates operate the drinking-water-system.

O. Reg. 170/03 establishes the standard for protection of drinking water. It includes sets of schedules, specific to municipal residential systems that define requirements for:

- Minimum treatment levels;
- Operational checks;
- Chemical and microbiological sampling and testing;
- Adverse results reporting;
- Corrective procedures; and
- Report documentation and retention.

The system's Municipal Drinking Water Licence (MDWL), Drinking Water Works Permit (DWWP) and Permit To Take Water (PTTW) imposes system specific rules and conditions applicable to the standards set out in O. Reg. 170/03.

1.2 Objective

This Summary Report for the Palmerston Drinking Water System is being prepared in fulfillment of Schedule 22 of O. Reg. 170/03, and will be given to members of the Municipal Council. It covers the period from January 1, 2017 to December 31, 2017.

This Summary Report lists any requirements of the Act, the regulations, the PTTW, the MDWL, the DWWP and any order that the system failed to meet, during the period of this report. For any such failure, the measures that were taken to correct the failure are detailed. The report also includes relevant information that will assist the Town of Minto to assess the water work's capability to meet existing and future planned uses of the system.

1.3 Description of Drinking Water System

Palmerston is located in the Town of Minto within the northwest corner of Wellington County, along the route of Provincial Hwy. No. 23.

The Palmerston Drinking Water System services a permanent population of approximately 2,579, comprised of approximately 910 residential premises, as well as Industrial, Commercial, Institutional premises. The municipal water system is also used for fire protection.

Palmerston is currently serviced by a waterworks that consists of: four drilled bedrock wells, two wellhouses, an elevated 2500 m³ steel storage tank and a distribution network of watermains, ranging in diameter from 100 mm to 350 mm. There are approximately 102 fire hydrants in the Town of Palmerston. In the event of a prolonged power outage, a portable generator is available to either wellhouse to supply back-up power.

The bedrock wells are equipped with submersible pumps that discharge directly into the William Street Wellhouse (Wells #1 and #2) or the Whites Road Wellhouse (Well #3 and #4). In the wellhouse, the raw water supply is injected with 12% sodium hypochlorite for disinfection and the chemical PW1680 for iron sequestering.

The wells are controlled (*start/stop*) automatically based on elevated storage tank liquid levels and pressures in the distribution system. Each wellhouse is equipped with alarms for chlorination system failure (*and corresponding lockout of well pumps*), low water level and intrusion. Each wellhouse has continuous monitoring analyzers for chlorine.

The treated water leaves the wellhouse and enters an underground contact pipe and is discharged into the distribution system after adequate contact time is achieved.

The Palmerston Drinking Water System operates under MDWL 106-103, DWWP 106-203 and PTTW #8374-8HSPD5.

2.0 SUMMARY OF UPGRADES

2.1 Upgrades Completed in 2017

The disinfection treatment system in the Palmerston Drinking Water System meets all of the standards imposed by 0. Reg. 170/03 and the MOECC's "*Procedures for Disinfection of Drinking Water in Ontario*".

Typically, maintaining the system includes repairs and/or replacement of individual components as necessary. In 2017 \$222,000 was spent replacing shallow, old cast iron watermain on Jane and Inkerman Streets, \$7,000 on design for replacing William Street watermain and \$2,200 on heating upgrades in Well #1 and #2 Pumphouse.

The following purchases were also made on equipment that is shared between all of Minto's water systems. \$11,500 on equipment, \$3,300 on SCADA equipment upgrades to improve data reporting and \$8,600 on the electronic data management system, \$19,600 on the water meter installation program.

Preventative maintenance measures are being followed to ensure proper operation of the Drinking Water System.

2.2 Upgrades Scheduled to be Completed in 2018

In 2018, the Town of Minto is planning to spend \$70,000.00 on William St. loop. In 2018 the following will be purchased to be shared within the water department. \$20,000 for water meters and \$90,000.00 on vehicle replacements.

3.0 OPERATION OF THE DRINKING WATER SYSTEM

3.1 Summary of the Quantities and Flow Rates of Water Supplied

O. Reg. 170/03 stipulates that a summary of the quantities and flow rates of the water supplied from each of Palmerston's wells be included in the Summary Report. Tables 3.1, 3.2, 3.3 and 3.4 provide a summary of quantities and flow rates supplied during 2017 for Wells #1, #2, #3 and #4 respectively, on a monthly basis. Wells #1 and #2 supply the William Street Wellhouse and the two wells alternate duties as primary supply. As such, Wells #1 and #2 are permitted as one and provide standby duty to each other. Well #3 and #4 supply the White's Road Wellhouse and the two wells alternate duties as primary supply.

Table 3.1 Palmerston Drinking Water System – Well #1 Treated Water Flow, Turbidity, and Disinfectant Residual January 1, 2017 – December 31, 2017

					Monthly Averages				Distribution	
	Rav (Max Flov	v Water Flow v Rate = 22.8	L/s)	Chlorine	Treate Turk	d Water bidity	Water Disinfectant dity Point of Entry		System Disinfectant	
Month	Operator Observed Peak Flow (L/s)	Maximum Day Flow (m³/day)	Monthly Total (m ³)	Monthly Total (L)	No. of Samples Collected	Monthly Average Turbidity	No. of Treated Samples Collected	Average Residual (mg/L)	No. of Samples Collected	
January	15.1	99	2,095	46	11	0.67	31	1.18		
February	15.1	110	2,095	56	14	0.59	28	1.34		
March	15.1	94	2,097	35	14	0.64	31	1.44		
April	15.1	89	1,823	53	12	0.68	29	1.37		
May	15.1	108	2,137	43	14	0.79	31	1.49	500	
June	15.1	98	1,903	46	16	0.86	30	1.24	See Polmorston Woll	
July	15.2	98	2,545	44	11	0.80	32	1.32	#2 Data	
August	15.1	131.5	2,098	66	17	0.86	31	1.28	#2 Data	
September	15.2	120	1,869	22	12	0.76	30	1.30		
October	15.0	92	2,055	53	16	0.73	31	1.47		
November	15.1	98	1,810	44	9	0.76	30	1.40		
December	15.0	97	2,002	43	19	0.74	31	1.37		
Total			24,529	551	165		365			
Average			2,044			0.74		1.35		
Maximum	15.2	132								

Disinfectant Compound Used: **12% Sodium Hypochlorite** Form of Residual Displayed: **Free** Quantity of Disinfectant Used During 2017: **551 L** Distribution System Minimum Target Residual: **0.2 mg/L**

Table 3.2 Palmerston Drinking Water System – Well #2 Treated Water Flow, Turbidity, and Disinfectant Residual January 1, 2017 – December 31, 2017

	_				Monthly Averages				
	Ra (Max Flo	aw Water Flow low Rate = 22.8 L/s)		Chlorine Treated Water Turbidity		Treated Water Disinfectant Point of Entry		System Disinfectant	
Month	Operator Observed Peak Flow (L/s)	Maximum Day Flow (m³/day)	Monthly Total (m ³)	Monthly Total (L)	No. of Samples Collected	Monthly Average Turbidity	No. of Treated Samples Collected	Average Residual (mg/L)	No. of Samples Collected
January	18.8	343.1	9,618	176	10	0.68	31	1.24	49
February	19.0	360	8,381	169	13	0.64	28	1.23	44
March	19.1	388	10,072	199	14	0.73	31	1.16	50
April	19.3	604	9,893	206	13	0.77	29	1.27	43
May	19.3	423	10,806	222	14	0.82	31	1.40	50
June	18.7	431	10,168	220	16	0.82	30	1.36	49
July	18.6	439	9,988	199	11	0.79	32	1.31	49
August	18.8	386	9,838	219	16	0.90	31	1.23	48
September	19.2	588	9,620	197	13	0.86	31	1.24	48
October	19.0	465	10,098	220	16	0.86	32	1.29	50
November	19.2	406	9,389	197	9	0.79	30	1.23	46
December	19.2	363	9,529	179	17	0.87	31	1.22	52
Total			117,400	2,403	162		367		578
Average	19.0		9,783			0.79		1.27	
Maximum		604							

Disinfectant Compound Used: **12% Sodium Hypochlorite** Form of Residual Displayed: **Free** Quantity of Disinfectant Used During 2017: **2,403 L** Distribution System Minimum Target Residual: **0.2 mg/L**

Table 3.3 Palmerston Drinking Water System – Well #3 Treated Water Flow, Turbidity, and Disinfectant Residual January 1, 2017 – December 31, 2017

	_			Monthly Averages					Distribution
	Ra (Max Flo	w Water Flow w Rate = 26.7	L/s)	Chlorine	Treated Water Turbidity		Treated Water Disinfectant Point of Entry		System Disinfectant
Month	Operator Observed Peak Flow (L/s)	Maximum Day Flow (m³/day)	Monthly Total (m ³)	Monthly Total (L)	No. of Samples Collected	Monthly Average Turbidity	No. of Treated Samples Collected	Average Residual (mg/L)	No. of Samples Collected
January	23.8	563	14,684	352	11	0.68	30	1.32	
February	24.0	556	12,447	264	13	0.73	28	1.35	
March	22.4	554	13,820	374	13	0.70	31	1.38	
April	22.0	734	12,863	295	13	0.65	29	1.31	
May	22.2	755	15,472	329	15	0.75	31	1.37	See
June	22.1	815	17,658	417	16	0.84	30	1.41	See Bolmoroton Woll
July	22.2	611	14,418	331	11	0.81	32	1.30	#2 Data
August	22.0	679	13,903	348	16	0.90	30	1.29	#2 Dala
September	22.4	791	16,060	348	13	0.89	31	1.24	
October	23.0	676	16,120	347	16	0.82	31	1.25	
November	23.0	537	13,255	243	8	0.62	30	1.23	
December	23.1	488	13,071	277	17	0.74	31	1.24	
Total			173,771	3,925	162		364		
Average	22.7		14,481			0.76		1.31	
Maximum		815							

Disinfectant Compound Used: **12% Sodium Hypochlorite** Form of Residual Displayed: **Free** Quantity of Disinfectant Used During 2017: **3,925 L** Distribution System Minimum Target Residual: **0.2 mg/L**

Table 3.4 Palmerston Drinking Water System – Well #4 Treated Water Flow, Turbidity, and Disinfectant Residual January 1, 2017 – December 31, 2017

						Monthly		Distribution System Disinfectant	
	Rav (Max Flov	v Water Flow v Rate = 26.7	L/s)	Chlorine	Treated Water Turbidity		Treated Water Disinfectant Point of Entry		
Month	Operator Observed Peak Flow (L/s)	Maximum Day Flow (m³/day)	Monthly Total (m ³)	Monthly Total (L)	No. of Samples Collected	Monthly Average Turbidity	No. of Treated Samples Collected	Average Residual (mg/L)	No. of Samples Collected
January	22.7	133	2,999		9	0.64	31	1.30	
February	22.7	166	3,144		13	0.54	28	1.33	
March	22.6	331	2,868		14	0.56	31	1.24	
April	22.6	120	2,651		12	0.66	29	1.26	
May	22.5	126	3,015		14	0.73	31	1.33	
June	22.5	154	2,843	See	17	0.80	30	1.40	Palmerston Well
July	22.4	123.1	2,911	Palmerston	11	0.81	32	1.39	#2 Data
August	22.4	139	3,717	Well #3	16	0.86	31	1.39	
September	22.8	154	2,742	Data	12	0.66	29	1.32	
October	23.1	133	3,234		16	0.67	31	1.28	
November	23.3	120	2,698		8	0.66	30	1.28	
December	23.5	130	3,073		18	0.73	31	1.31	
Total			35,895	3,925	160		364		
Average			2,991			0.69		1.32	
Maximum	23.5	331							

Disinfectant Compound Used: 12% Sodium Hypochlorite

Form of Residual Displayed: Free

Quantity of Disinfectant Used During 2017 for Wells #3 and #4 combined: **3,925 L** *(Wells #3 and #4 share the same Cl₂ storage container) Distribution System Minimum Target Residual: **0.2 mg/L**

Page 7

3.2 Comparison of Actual Flow and Maximum Allowable Rates

O. Reg. 170/O3 stipulates that a summary of the quantities and flow rates of the water supplied from each of Palmerston's wells be included in the Summary Report and compared against the rated capacity and flow rate for the system. As such, a comparison of the instantaneous peak flow to the PTTW's rated capacity is included and a comparison of the maximum daily flow to the MDWL's rated capacity is included in Table 3.5 & Table 3.6. Table 3.5 and Table 3.6 reflect the comparisons between the PTTW and MDWL.

> Table 3.5 Palmerston Drinking Water System Well #1 & 2 Combined Treated Water Flow January 1, 2017 – December 31, 2017

Table 3.6 Palmerston Drinking Water System Well #3 & 4 Combined Treated Water Flow January 1, 2017 – December 31, 2017

	Max	Chloring			
	Max F	Chionne			
		22.	83 L/s Well #	ŧ 2	
Month	Operator	Operator			
	Observed	Observed	Maximum	Monthly	Monthly
	Peak Flow	Peak Flow	Day Flow	Total	Total
	Well #1	Well #2			
	(L/s)	(L/s)	(m³/day)	(m³)	(I)
January	15.1	18.8	343	11,713	222
February	15.1	19.0	360	10,476	225
March	15.1	19.1	388	12,169	234
April	15.1	19.3	604	11,716	259
May	15.1	19.3	423	12,943	265
June	15.1	18.7	431	12,071	266
July	15.2	18.6	439	12,533	243
August	15.1	18.8	386	11,936	285
September	15.2	19.2	588	11,489	219
October	15.0	19.0	465	12,153	273
November	15.1	19.2	406	11,199	241
December	15.0	19.2	363	11,531	222
Total				141,929	2,954
Average				11,827	
Maximum	15.2	19.3	604		

	Treated Water Flow Max Daily Volume - 2291 m3/day Max Flow Rate = 26.7 L/s Well # 3 26.7 L/s Well # 4						
Month	Operator Observed Peak Flow Well #3 (L/s)	Operator Observed Peak Flow Well #4 (L/s)	Maximum Day Flow (m ³ /day)	Monthly Total (m ³)	Monthly Total (I)		
January	23.8	22.7	563	17,683	352		
February	24.0	22.7	556	15,591	264		
March	22.4	22.6	554	16,688	374		
April	22.0	22.6	734	15,514	295		
May	22.2	22.5	755	18,487	329		
June	22.1	22.5	815	20,501	417		
July	22.2	22.4	611	17,329	331		
August	22.0	22.4	679	17,620	348		
September	22.4	22.8	791	18,802	348		
October	23.0	23.1	676	19,354	347		
November	23.0	23.3	537	15,953	243		
December	23.1	23.5	488	16,144	277		
Total				209,666	3,925		
Average				17,472			
Maximum	24.0	23.5	815				

Table 3.7 Comparison of Flow Rates and Flow Capacities To Rated Flow Rate (PTTW) and Rated Capacity (MDWL)

Well Supply	PTTW Max. Flow Rate	Operator Observed Peak Flow	Percent of Maximum Allowable	MDWL Schedule C Maximum Daily Quantity	Maximum Daily Flow	Percent of Maximum Allowable
	L/s	L/s	%	m³/day	m³/day	%
Well #1	22.8	15.2	67	1,964	132	7
Well #2	22.8	19.3	72	1,964	604	31
Well #3	26.7	24.0	89.9	2,291	815	36
Well #4	26.7	23.5	88	2,291	331	17

The MDWL stipulates, "The maximum daily volume of treated water that flows from the treatment subsystem to the distribution system shall not exceed the value identified as the rated capacity in Schedule C Table 1."



Table 3.8Maximum Water Usage Per Day by Month

Short-term peaks, in excess of permitted values, may occur at pump start up, while doing specific maintenance procedures or during emergency demand situations. An occurrence of this nature is not considered an exceedance.

The time and duration of any flow exceedance is recorded for each event along with the reason for the occurrence. There were **no exceedances** of the allowable flow rates in the Palmerston Drinking Water System.

3.3 Raw Water Quality and Required Treatment

The Palmerston Drinking Water System has no naturally occurring chemical parameters that exceed MAC (maximum acceptable limit) or IMAC (interim maximum acceptable limit). The Palmerston Drinking Water System uses PW1680 to improve the disinfection process by controlling corrosion in water that is considered very hard and or contains high levels of iron.

The William Street Wellhouse (*Well #1 and #2*) and the Whites Road Wellhouse (*Well #3 and #4*) are equipped with continuous monitoring analyzers for measuring free chlorine residual. The chlorine analyzers are equipped with alarms. In the event of an adverse chlorine residual reading, a signal is sent to the SCADA system, which in turn, shuts down the respective well pump. The average monthly turbidity and free chlorine residual measurements for <u>treated</u> water are presented in Tables 3.1, 3.2, 3.3 and 3.4 for Well #1, Well #2, Well # 3 and Well # 4, respectively.

There were no high turbidity readings (>1.0 NTU) experienced in 2017. The minimum, maximum and average turbidity readings for <u>raw</u> water from each well are presented in Table 3.9.

12% Sodium Hypochlorite is the disinfectant used. Free chlorine residual is monitored continuously at the "*Point of Entry*" (*POE*) into the distribution system. Additional "*grab samples*" are taken daily (*excluding weekends and holidays*) within the distribution system and tested for the free chlorine residual. The minimum, maximum and average values of free chlorine residual at the POE are presented Table 3.9. Also included in Table 3.9 is the range of free chlorine residual within the distribution system.

The free chlorine residual in the distribution system ranged between 0.64 mg/L and 1.39 mg/L. O. Reg. 170/03, Schedule 1-2 stipulates that the free chlorine residual can never be less than 0.05 mg/L. In addition O. Reg. 170-03, Schedule 1-4 stipulates that the water treatment equipment must be "...capable of achieving, at all locations with the distribution system, a free chlorine residual of 0.2 mg/L ...". The Palmerston Drinking Water System meets both of these requirements.

Table 3.9 Palmerston Drinking Water System 2017 Annual Summary of Raw Water Turbidity and Free Chlorine Residual

Location	Range	<u>Raw</u> Water Turbidity	Free Chlorine Residual at POE
		NIU	mg/L
	Minimum	0.36	1.00
Well #1	Maximum	0.94	1.73
	Average	0.66	1.35
	Minimum	0.40	0.90
Well #2	Maximum	0.96	1.73
	Average	0.68	1.27
	Minimum	0.35	0.90
Well #3	Maximum	0.93	1.67
	Average	0.64	1.31
	Minimum	0.35	0.94
Well #4	Maximum	0.94	1.76
	Average	0.67	1.32

3.4 Summary of Treatment Chemicals Used

The disinfectant chemical used in the Palmerston Drinking Water System is 12% Sodium Hypochlorite. Measurements of free chlorine residual are recorded on a continuous basis. In 2017, 6,879 L of 12% Sodium Hypochlorite was used. The average dosage rates are presented in Table 3.10.

In 2017, 2,961 L of PW1680 was used for the sequestering of iron. Wells #1 and #2 share a common tank of PW1680. The average dosage rates are presented in Table 3.10.

Table 3.10 Palmerston Drinking Water System 2017 Annual Summary of Treatment Chemicals Used

Treatment Chemical	Well	Volume Used	Mass Used	Annual Flow	Dosage Rate
		L	kg	m³	mg/L
12 % Sodium	Well #1	551	66.1	24,529	2.70
	Well #2	2,403	288.4	117,400	2.46
(NaOCI)	Well #3 & 4	3,925	471.0	209,666	2.25
	Total	6,879	825.5	351,595	2.35
PW1680	Well #1 & Well #2	1,062	1,486.8	141,929	10.48
	Well #3 & Well #4	1,899	2,658.6	209,666	12.68
	Total	2,961	4,145.4	351,595	11.79

Wells #1 and #2 share the same PW1680 storage container; 2,365 L is the combined PW1680 usage for both wells
Wells #3 and #4 share the same PW1680 storage container; 2,285 L is the combined PW1680 usage for both wells

- 12% Sodium Hypochlorite = 120,000 mg/L = 120 kg/m³
- PW1680 has a specific gravity = 1.4

4.0 COMPLIANCE

4.1 Assessment of Compliance

The objective of the Summary Report is to list any requirements of the Act, the regulations, the PTTW, the MDWL, the DWWP and any MOECC Order that the system failed to meet from January 1, 2017 to December 31, 2017, and the corresponding corrective measure(s) taken. Compliance was assessed as follows:

- MOECC Completed Inspection of the Palmerston system completed Aug. 17/17, Final inspection rating 100%
- There were **no MOECC Orders** issued to the Palmerston Drinking Water System in 2017.
- The MDWL imposes the specific rules and conditions governing the standards set out in O. Reg. 170/03. It is an important instrument in defining the requirements of compliance of a Drinking Water System.

- 0. Reg. 170/03 establishes the standard for protection of drinking water; specifically, through 12 schedules that municipal residential drinking systems must follow to meet the requirements of the regulation.
- The SDWA identifies the responsibilities of owners and operating authorities of municipal drinking water systems. It places a recommended statutory standard of care on those who have oversight of municipal drinking-water systems. In essence, the standard of care has two themes: be informed and exercise diligent oversight.
- Adverse Test Results reported under the Safe Drinking Water Act, 18(1) or 0 Reg.170/03, Schedule 16-4
 - a) Adverse Water Quality Incidents (AWQI) refer to any unusual test results that do not meet provincial water quality standard or situation where the disinfection of the drinking water may be compromised.

	Tab	le 4.1	
Adverse	Water	Quality	Incidents

AWQI #	Date	Issue	Corrective Action
		No Adverse Issues	

4.2 Summary of Compliance

To the best of our knowledge and ability we are in, or diligently working towards, compliance, with all of the requirements of the SDWA, O. Reg. 170/03, as well as the Palmerston Water Work's MDWL 106-103, DWWP 106-203 and PTTW #8374-8HSPD5. Every attempt has been made to ensure this document is an accurate representation of how the Drinking Water System is operated.

To the best of our knowledge, Table 4.2 identifies all of the requirements of the SDWA, the regulations, the MDWL, the DWWP and the PTTW.

Table 4.2Palmerston Drinking Water SystemRequirements the System Failed to Meet

Compliance With	Description of Item the System Failed to Meet	Correction of This Situation How/When	
MDWL # 106-103	Palmerston Drinking Water System is in compliance with all of the requirements of the MDWL		
DWWP # 106-203	Palmerston Drinking Water System is in compliance with all of the requirements of the DWWP.		
0. Reg. 170/03	Palmerston Drinking Water System is in compliance with all of the requirements of 0. Reg. 170/03.		
SDWA	Palmerston Drinking Water System is in compliance with all of the requirements of the SDWA.		

Dated this 2nd day or March 2018.

Wayne Metzger Water Foreman