

2017 Annual Report

Marathon Drinking Water System

(Introduction p. 2)
(System Overview pp. 3 - 4)
(Water Quality pp. 5 - 10)
(Flow Monitoring pp. 11 - 13)
(Compliance pp. 14 - 15)

Prepared by



for the Corporation
of the Town of Marathon

Introduction

This consolidated Annual Report (the Report) has been prepared in accordance with both section 11 (Annual Reports) and Schedule 22 (Summary Reports for Municipalities) of Ontario Regulation 170/03 (Drinking Water Systems Regulation). This Report is intended to inform both the public and the Town Council on the operation of the system over the previous calendar year (January 1 to December 31, 2017).

Section 11 of O. Reg. 170/03 requires the development and adequate distribution to the public of an annual report summarizing water quality monitoring results, adverse water quality incidents, system expenses, and chemicals used in the water treatment process.

Schedule 22 of O. Reg. 170/03 requires the development and distribution to Town Council of an annual report summarizing incidents of regulatory non-compliance and associated corrective actions, in addition to providing flow monitoring results for the purpose of enabling the Owner to assess the capability of the system to meet existing and planned demand.

Report Availability

In accordance with section 11 of O. Reg. 170/03 this Report must be given, without charge, to every person who requests a copy. Effective steps must also be taken to advise users of water from the system that copies of the report are available, without charge, and of how a copy may be obtained. This Annual Report shall be made available for inspection by the public at the following locations:

- (1) Municipal Office, 4 Hemlo Drive, Marathon
- (2) Town of Marathon Website (www.marathon.ca)
- (3) NWI Website (www.nwi.ca/publications)

In accordance with Schedule 22 of O. Reg. 170/03, this Annual Report must be given to the members of Town Council. Section 19 (Standard of care, municipal drinking-water system) of Ontario's *Safe Drinking Water Act* also places certain responsibilities upon those municipal officials who oversee an accredited operating authority or exercise decision-making authority over a system. The examination of this Report is one of the methods by which municipal officials may fulfil the obligations required by section 19 of O. Reg. 170/03.

System users and members of Town Council are strongly encouraged to contact a representative of Northern Waterworks Incorporated (NWI) for assistance in interpreting this Report. Questions and comments may be directed to the local NWI Operations Manager or by email to compliance@nwi.ca.

System Overview

The Marathon Drinking Water System (DWS No. 220000255) must meet extensive treatment and testing requirements in order to ensure that human health is protected. The operation and maintenance of the system is governed by Ontario's *Safe Drinking Water Act* and the regulations therein, in addition to requirements within system-specific approvals.

System Description

The Marathon Drinking Water System (DWS) is classified as a large municipal residential system and is composed of five (5) active groundwater wells (wells 2, 3, 4, 5 & 6), the Industrial Park Booster Station (IPBS), the Penn Lake Heights Reservoir & Booster Station (PLBS), and the Marathon distribution system. As an operational subsystem, the Marathon distribution system is owned and operated by the Corporation of the Town of Marathon. The active wells, reservoir and booster stations comprise the Marathon Well Supply System (treatment subsystem), which is owned by the Town of Marathon and is operated by Northern Waterworks Incorporated (NWI). As a groundwater source, aquifer overburden and soil act as an effective filter that removes micro-organisms and other particles by straining and antagonistic effect, to a level where the water supply may already be potable, but disinfection is required as an additional health risk barrier. All wells use free chlorine disinfection to achieve primary disinfection.

The active groundwater wells 2, 3, 4, 5 and 6 are located throughout the community of Marathon; wells 1 and 7 were previously abandoned and decommissioned in 2002 and 2003, respectively. A single multi-stage vertical turbine pump at each active well is used to draw water from the aquifer. Each well also contains a disinfectant chemical feed system, where disinfectant is injected as groundwater is pumped from the well and directed to the chlorine contact loop. The contact loops are designed to provide the necessary amount of time required to achieve primary disinfection, and they are the last treatment step prior to water entering the distribution system.

The wells are cycled alternately to supply water to the distribution system and the reservoir. The PLBS includes an in-ground storage reservoir that balances system pressure and provides water during power outages and for fire flows. The reservoir has a capacity of 4,950 m³ and is filled by all the active wells according to programmable set points. Booster pumps at the facility are used to supply water to and maintain system pressure in the Penn Lake Heights subdivision. The IPBS is located on Peninsula Road and is used to supply water to Industrial Park via booster pumps.

The Marathon distribution system is comprised of various sized diameter water mains consisting of cast iron, ductile iron, high density polyethylene and PVC, totalling approximately 33 km in length and including over 200 fire hydrants. Secondary disinfection requirements in the distribution system are achieved by maintaining a free chlorine residual.

Water Treatment Chemicals

In accordance with section 11 of O. Reg. 170/03, this Report must include a list of all water treatment chemicals used by the system during the period covered by the report (**Table 1**). All chemicals used in the treatment process are NSF/ANSI 60 certified for use in potable water, as required by system approvals.

Table 1: Water treatment chemicals used in 2017.

Treatment Chemical	Application	Locations
sodium hypochlorite	disinfectant	Wells 2, 3, 4, 5 & 6

System Expenses

In accordance with section 11 of O. Reg. 170/03, this Report must describe any major expenses incurred during the reporting period to install, repair or replace required equipment. This Report also summarizes those expenses related to strengthening equipment inventories and to maintenance activities undertaken by subcontracted service providers. Major expenses incurred in 2017 are summarized in **Table 2**.

Table 2: Major expenses incurred in 2017.

Category	Description	Expense
Inventory	Molded case motor circuit breakers (2) and motor starter (1) for use at wells 3, 4, 5 and 6	\$4,795
Inventory	Free chlorine sensor (1) and pH sensors (4)	\$4,274
Maintenance	Flow meter calibration verifications (all sites)	\$4,180
Maintenance	Backflow prevention device testing and replacement (all sites)	\$3,727
Inventory	Assorted fittings and flow sensors (2) for the sodium hypochlorite chemical feed systems	\$3,537
Inventory	Miscellaneous upgrades and inventory purchases	\$2,456
Replace	Copper sample line piping at all wells	\$1,633
Maintenance	Interior painting at all wells	\$1,583
Replace	6-inch isolation gate valve (pump 1) at Penn Lake Reservoir & Booster Station	\$1,575

Water Quality

In accordance with section 11 of O.Reg. 170/03, this Report must summarize the results of water quality tests required by regulations, approvals, and orders. The following sections use technical term water quality terms, some of which the reader may not be familiar with. It is recommended that the reader refer to the *Technical Support Document for Ontario Drinking Water Standards, Objectives, and Guidelines* available at the following website: <http://www.ontla.on.ca/library/repository/mon/14000/263450.pdf>. Within this document the reader will find information on provincial water quality standards, objectives and guidelines, rationale for monitoring, and a brief description of water quality parameters.

Operational Parameters

In accordance with Schedule 7 (Operational checks) of O. Reg. 170/03, regulated operational parameters that must be monitored include raw water turbidity and the free chlorine residuals associated with primary and secondary disinfection. **Table 3** summarizes water quality results for regulated operational parameters. In accordance with Schedule 6 (Operational checks, sampling and testing – general) of O. Reg. 170/03, certain operational parameters are continuously monitored.

Table 3: Results summary for regulated operational parameters.

Parameter (Location) ¹	Sample Method	Units	Minimum Result	Maximum Result	Annual Average
Raw Water Turbidity (Well 2)	Grab (Weekly)	NTU	0.07	0.09	0.08
Raw Water Turbidity (Well 3)	Grab (Weekly)	NTU	0.07	0.10	0.08
Raw Water Turbidity (Well 4)	Grab (Weekly)	NTU	0.07	0.10	0.08
Raw Water Turbidity (Well 5)	Grab (Weekly)	NTU	0.05	0.10	0.08
Raw Water Turbidity (Well 6)	Grab (Weekly)	NTU	0.07	0.11	0.08
Treated Water FRC (Well 2)	Continuous	mg/L	0.31	1.82	1.42
Treated Water FRC (Well 3)	Continuous	mg/L	0.10	2.90	1.46
Treated Water FRC (Well 4)	Continuous	mg/L	0.00	2.16	1.40
Treated Water FRC (Well 5)	Continuous	mg/L	0.25	2.62	1.37
Treated Water FRC (Well 6)	Continuous	mg/L	0.27	1.42	1.09
Distribution Water FRC (IPBS)	Continuous	mg/L	0.76	1.49	1.18
Distribution Water FRC (PLBS)	Continuous	mg/L	0.90	1.68	1.17
Distribution Water FRC (WWTP)	Continuous	mg/L	0.96	1.78	1.37

1. FRC = Free Residual Chlorine; WWTP = Marathon Wastewater Treatment Plant.

Microbiological Parameters

Microbiological analyses are performed on source, treated, and distribution system water. 640 routine water samples were collected for microbiological analysis by an accredited laboratory in 2017, as required by Schedule 10 (Microbiological sampling and testing) of O. Reg. 170/03. These water samples were collected on a weekly basis, and included tests for E. coli (EC), total coliforms (TC), and heterotrophic plate counts (HPC). Results from microbiological analyses are provided in **Table 4**. All results were below the associated Ontario Drinking Water Quality Standards.

Table 4: Microbiological sampling results.

Sample Type (Location)	# of Samples	EC Results Range ¹ (MPN/100mL)	TC Results Range ¹ (MPN/100mL)	# of HPC Samples	HPC Results Range (CFU/mL)
Raw Water (Well 2)	34	absent	absent	---	---
Raw Water (Well 3)	52	absent	<1 to 1	---	---
Raw Water (Well 4)	52	absent	absent	---	---
Raw Water (Well 5)	52	absent	absent	---	---
Raw Water (Well 6)	52	absent	absent	---	---
Treated Water (Well 2)	34	absent	absent	34	0 to 2
Treated Water (Well 3)	52	absent	absent	52	0 to 2
Treated Water (Well 4)	52	absent	absent	52	0 to 2
Treated Water (Well 5)	52	absent	absent	52	0 to 2
Treated Water (Well 6)	52	absent	absent	52	0 to 1
Distribution	156	absent	absent	105	0 to 66
Distribution – Non-routine	11	absent	absent	4	0

1. The Ontario Drinking Water Quality Standard for E. Coli and Total Coliforms in a treated or distribution sample is 'not detectable'. The presence of either parameter in a treated or distribution sample is considered an exceedance.

Trihalomethanes & Haloacetic Acids

Trihalomethanes (THMs) and haloacetic acids (HAAs) are required to be sampled on a quarterly basis from a distribution system location that is likely to have an elevated potential for their formation, in accordance with Schedule 13 (Chemical sampling and testing) of O. Reg. 170/03. THM and HAA results are summarized in **Table 5** and **Table 6**, respectively.

Compliance with the provincial standard for trihalomethane concentrations is determined by calculating a running annual average (with a Maximum Acceptable Concentration of 0.100 mg/L or 100 µg/L). In 2017, the running annual average for THMs was 6.4 µg/L. A new provincial standard for haloacetic acids, also expressed as a running annual average with a Maximum Acceptable Concentration of 80 µg/L, will come into effect on January 1, 2020.

Table 5: Total THM results.

Sample Date	Result (µg/L)
15-Feb-2017	5.4
23-May-2017	6.2
14-Aug-2017	8.4
15-Nov-2017	5.6
Average	6.4
ODWQS (RAA)	100

Table 6: Total HAA results.

Sample Date	Result (µg/L)
15-Feb-2017	2.9
23-May-2017	2.6
15-Aug-2017	2.2
15-Nov-2017	2.2
Average	2.5
Future ODWQS (RAA)	80

Nitrate and Nitrite

Treated water is tested for nitrate and nitrite concentrations on a quarterly basis in accordance with Schedule 13 (Chemical sampling and testing) of O. Reg. 170/03. Nitrate and nitrite results are provided in **Table 7**. All results were below the Ontario Drinking Water Quality Standards.

Table 7: Nitrate and nitrite results.

Sample Date	Parameter	ODWQS (mg/L)	Well 2 (mg/L)	Well 3 (mg/L)	Well 4 (mg/L)	Well 5 (mg/L)	Well 6 (mg/L)
13-Feb-2017	Nitrate	10	0.654	0.728	0.449	0.901	1.13
	Nitrite	1	<0.010	<0.010	<0.010	<0.010	<0.010
23-May-2017	Nitrate	10	0.533	0.674	0.571	0.642	0.871
	Nitrite	1	<0.010	<0.010	<0.010	<0.010	<0.010
14-Aug-2017	Nitrate	10	0.623	0.607	0.489	0.494	1.02
	Nitrite	1	<0.010	<0.010	<0.010	<0.010	<0.010
15-Nov-2017	Nitrate	10	n/a	0.658	0.407	0.734	1.00
	Nitrite	1	n/a	<0.010	<0.010	<0.010	<0.010

Inorganic Parameters

With the exception of the parameters sodium and fluoride, inorganic parameters are sampled every three (3) years in treated water from each well in accordance with Schedules 13 (Chemical sampling and testing) and 23 (Inorganic parameters) of O. Reg. 170/03. The most recent inorganic parameter sampling results are provided in **Table 8**; results are identical for each well unless otherwise indicated. All results were below the associated Ontario Drinking Water Quality Standards.

Sodium and fluoride are sampled every five (5) years in treated water from each well in accordance with Schedules 13 and 23 of O. Reg. 170/03. The most recent sample results are also summarized in **Table 8**. Note that the parameter sodium is not associated with an Ontario Drinking Water Quality Standard as prescribed in O. Reg 169/03, but exceedances of 20 mg/L do require reporting and corrective actions. All fluoride results were below the associated Ontario Drinking Water Quality Standards. The sodium result listed for Well 6 is associated with Adverse Water Quality Incident No. 115920. A resample collected at Well 6 on February 5, 2014, yielded a sodium result of 22.8 mg/L.

Table 8: Inorganic sampling results.

Parameter	Sample Date	Units	Result	ODWQS
Antimony	17-Feb-2016	µg/L	<0.60	6
Arsenic	17-Feb-2016	µg/L	<1.0	10
Barium	17-Feb-2016	µg/L		1000
Well 2			16	
Well 3			23	
Well 4			20	
Well 5			22	
Well 6			18	
Boron	17-Feb-2016	µg/L	<50	5000
Cadmium	17-Feb-2016	µg/L	<0.10	5
Chromium	17-Feb-2016	µg/L	<1.0	50
Fluoride	27-Jan-2014	mg/L		1.5
Well 2			0.098	
Well 3			0.105	
Well 4			0.101	
Well 5			0.066	
Well 6			0.132	
Mercury	17-Feb-2016	µg/L	<0.10	1
Selenium	17-Feb-2016	µg/L	<1.0	50
Sodium	27-Jan-2014	mg/L		20
Well 2			19.9	
Well 3			14.7	
Well 4			17.3	
Well 5			14.7	
Well 6			22.9	
Uranium	17-Feb-2016	µg/L	<2.0	20

Organic Parameters

Organic parameters are sampled every three (3) years in treated water from each well in accordance with Schedules 13 (Chemical sampling and testing) and 24 (Organic parameters) of O. Reg. 170/03. These parameters include various acids, pesticides, herbicides, PCBs, volatile organics, and other organic chemicals. Organic parameter sampling results are provided in **Table 9**; results are identical for each well unless otherwise indicated. Sampling for all organic parameters was most recently conducted on February 17, 2016. All results were below the associated Ontario Drinking Water Quality Standards.

Table 9: Organic parameter sampling results.

Parameter	Result (µg/L)	ODWQS (µg/L)	Parameter	Result (µg/L)	ODWQS (µg/L)
Alachlor	<0.10	5	Diuron	<1.0	150
Atrazine + N-dealkylated metabolites	<0.20	5	Glyphosate	<5.0	280
Azinphos-methyl	<0.10	20	Malathion	<0.10	190
Benzene	<0.50	1	2-Methyl-4-Chlorophenoxy-acetic acid (MCPA)	<0.20	100
Benzo(a)pyrene	<0.010	0.01	Metolachlor	<0.10	50
Bromoxynil	<0.20	5	Metribuzin	<0.10	80
Carbaryl	<0.20	90	Monochlorobenzene	<0.50	80
Carbofuran	<0.20	90	Paraquat	<1.0	10
Carbon Tetrachloride	<0.50	2	Pentachlorophenol	<0.50	60
Chlorpyrifos	<0.10	90	Phorate	<0.10	2
Diazinon	<0.10	20	Picloram	<0.20	190
Dicamba	<0.20	120	Total Polychlorinated Biphenyls (PCBs)	<0.035	3
1,2-Dichlorobenzene	<0.50	200	Prometryne	<0.10	1
1,4-Dichlorobenzene	<0.50	5	Simazine	<0.10	10
1,2-Dichloroethane	<0.50	5	Terbufos	<0.20	1
1,1-Dichloroethylene	<0.50	14	Tetrachloroethylene	<0.50	10
Dichloromethane	<5.0	50	2,3,4,6-Tetrachlorophenol	<0.50	100
2,4 -Dichlorophenol	<0.30	900	Triallate	<0.10	230
2,4-Dichlorophenoxy acetic acid	<0.20	100	Trichloroethylene	<0.50	5
Diclofop-methyl	<0.20	9	2,4,6-Trichlorophenol	<0.50	5
Dimethoate	<0.10	20	Trifluralin	<0.10	45
Diquat	<1.0	70	Vinyl Chloride	<0.20	1

Lead Sampling

The Marathon DWS previously qualified for reduced lead sampling and ultimately became exempt from sampling at plumbing locations, in accordance with Schedule 15.1 (Lead) of O.Reg. 170/03. Six (6) distribution system samples must now be collected every year and analyzed for pH and alkalinity. Additionally, these samples must be analyzed for lead in every third 12-month period after the plumbing exemption was activated. **Table 10** summarizes lead sampling results and related tests.

Table 10: Distribution pH, alkalinity and lead sampling results.

Sample Date	07-Mar-17	07-Mar-17	07-Mar-17	28-Aug-17	28-Aug-17	28-Aug-17
Hydrant Number	123	56	19	123	56	19
pH	5.69	5.89	6.28	6.98	6.79	6.47
Alkalinity (mg/L CaCO ₃)	188	186	173	160	178	182
Lead Result (µg/L)	lead analyses not required ¹					

1. Lead will next be tested in distribution samples during the sampling period corresponding to December 15, 2017 to April 15, 2018, and again during the period corresponding to June 15, 2018 to October 15, 2018.

Flow Monitoring

In accordance with Schedule 22 (Summary Reports for Municipalities) of O. Reg. 170/03, this Annual Report must include certain information for the purpose of enabling the Owner to assess the capability of the system to meet existing and planned uses. Specifically, this Report must include a summary of the quantities and flow rates of the water supplied during the reporting period, including monthly average and maximum daily flows. The Report must also include a comparison of flow monitoring results to the rated capacity and flow rates approved in the system's Municipal Drinking Water Licence.

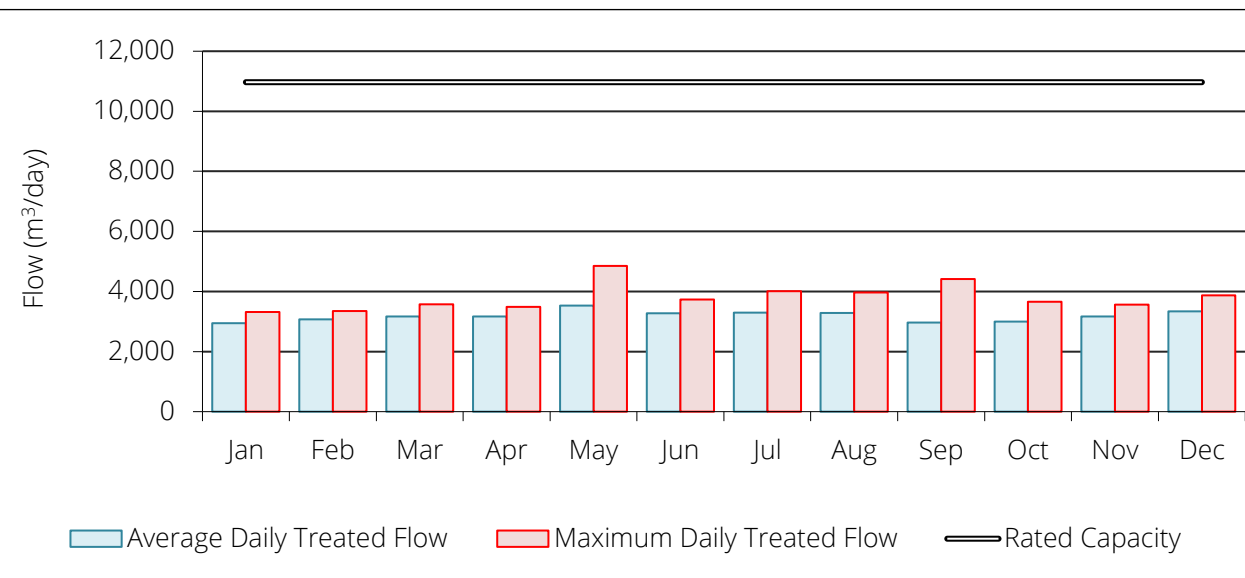
Throughout the reporting period, the Marathon DWS operated within its rated capacity and supplied a total of 1,162,053 m³ of treated water. On an average day in 2017, 3,184 m³ of treated water was supplied to the community, which represents 29% of the rated capacity of the Marathon Drinking Water System (10,968.64 m³/day). The maximum daily flow in 2017 was 4,852 m³/day, which represents 44% of the rated capacity of the system. 2017 flow monitoring results are summarized in **Table 11** and **Figure 1**.

Table 11: 2017 total volumes, daily flows, and capacity assessments.

Month	Total Volumes ¹ (m ³)		Daily Flows (m ³ /day)		Capacity Assessments ²	
	Raw Water	Treated Water	Average - Treated Water	Maximum - Treated Water	Average - Treated Water	Maximum - Treated Water
Jan	91,717	91,222	2,943	3,318	27%	30%
Feb	86,328	85,907	3,068	3,350	28%	31%
Mar	98,673	98,229	3,169	3,574	29%	33%
Apr	95,304	94,920	3,164	3,485	29%	32%
May	109,853	109,339	3,527	4,852	32%	44%
Jun	98,619	98,251	3,275	3,737	30%	34%
Jul	102,424	102,099	3,294	4,005	30%	37%
Aug	101,931	101,748	3,282	3,968	30%	36%
Sep	89,010	88,849	2,962	4,413	27%	40%
Oct	93,228	93,070	3,002	3,661	27%	33%
Nov	95,172	95,015	3,167	3,564	29%	32%
Dec	103,534	103,404	3,336	3,869	30%	35%
Total	1,165,792	1,162,053	---	---	---	---
Avg.	97,149	96,838	3,184	---	29%	---

1. The difference between raw water and treated water volumes corresponds to the amount of water that is automatically directed to waste at the beginning of a well production cycle. In 2017, this difference accounted for approximately 0.3% of the total amount of withdrawn groundwater.
2. Capacity assessments compare average and maximum daily treated water flows to the combined rated capacity of the system (10,968.64 m³/day), as provided within the Municipal Drinking Water Licence.

Figure 1: 2017 average and maximum daily treated water flows.



Throughout the reporting period, Wells 2, 3, 4, 5 and 6 contributed approximately 8%, 21%, 29%, 29% and 13% to overall water production, respectively. All treatment stations operated within their respective capacity limits. The water supplied to Industrial Park accounted for approximately 1% of the total amount of water produced; water supplied to the Penn Lake Heights subdivision accounted for approximately 2% of the total amount of water produced. **Table 12** summarizes flow monitoring results by location.

Table 12: 2017 total volumes, daily flows, and capacity assessments – results by location.

Location	Total Volumes (m ³)		Daily Flows (m ³ /day)			Capacity Assessments	
	Treated Water	% of Total	Rated Capacity	Average - Treated Water	Maximum - Treated Water	Average - Treated Water	Maximum - Treated Water
Treatment Stations							
Well 2	97,027	8%	1,962.28	266	662	14%	34%
Well 3	244,123	21%	1,662.36	669	909	40%	55%
Well 4	332,163	29%	2,289.60	910	1,529	40%	67%
Well 5	335,481	29%	2,289.60	919	1,579	40%	69%
Well 6	153,259	13%	2,764.80	420	2,172	15%	79%
All Wells	1,162,053	100%	10,968.64	3,184	4,852	29%	44%
Distribution Stations							
IPBS	8,705	1%	---	24	42	---	---
PLBS	25,802	2%	---	71	152	---	---

Table 13 summarizes recent historical flow monitoring results. There was a slight increase in the amount of treated water supplied in 2017 when compared to 2016. Total annual volumes of treated water supplied in the near future may be expected to be between 900,000 m³ and 1,300,000 m³, which represents approximately 22% to 32% of the rated capacity of the Marathon DWS. Note that Well 2 was effectively removed from service on August 13, 2017, following a mechanical failure.

Table 13: Recent historical flow monitoring results.

Year	Total Annual Treated Water Volumes (m ³)						Annual % Change
	Well 2	Well 3	Well 4	Well 5	Well 6	All Wells	
2013	127,933	125,120	150,560	145,715	123,256	672,584	---
2014	166,272	147,011	229,080	253,109	85,861	881,333	+31.0%
2015	187,933	234,863	277,281	289,556	113,690	1,103,323	+25.2%
2016	204,114	227,848	288,739	310,427	106,411	1,137,539	+3.1%
2017	97,027	244,123	332,163	335,481	153,259	1,162,053	+2.2%

Compliance

Northern Waterworks Incorporated and the Town of Marathon employ an operational strategy that is committed to achieving the following goals:

- 1) Providing a safe and reliable supply of drinking water to the community of Marathon;
- 2) Meeting or exceeding all applicable legislative and regulatory requirements;
- 3) Maintaining and continually improving the operation and maintenance of the system; and,
- 4) Maintaining and operating the Marathon Drinking Water System in a responsible manner in accordance with documented quality management system policies and procedures.

The following sections will summarize incidents of noncompliance and adverse water quality that occurred during the reporting period. NWI is committed to employing timely and effective corrective actions to prevent recurrence of all identified incidents of noncompliance and adverse water quality.

Adverse Water Quality Incidents

In accordance with section 11 (Annual Reports) of O. Reg. 170/03, this Report must summarize any reports made to the Ministry under subsection 18(1) (Duty to report adverse test results) of *the Act* or section 16-4 (Duty to report other observations) of Schedule 16 of O. Reg. 170/03. Additionally, this Report must describe any corrective actions taken under Schedule 17 of O. Reg. 170/03 during the period covered by the report.

There was one (1) adverse water quality incident during the reporting period for the Marathon DWS:

- **AWQI No. 133977 (July 12, 2017)**

An operational indicator of adverse water quality occurred following a loss of distribution system pressure originating at the Penn Lake Reservoir & Booster Station and lasting for approximately 62 minutes. Specifically, an automation system failure resulted in a pump fault and a sustained loss of pressure in the Penn Lake Heights subdivision. The issue was reported to the MOECC Spills Action Centre and to the Thunder Bay District Health Unit.

Corrective action was performed in accordance with Schedule 17 of O. Reg. 170/03, and included restoring distribution system pressure, correcting the automation failure, issuing a precautionary Boil Water Advisory, flushing watermains, and collecting microbiological samples throughout the subdivision. The Notice of Issue Resolution was provided on July 15, 2017.

Regulatory Noncompliance

In accordance with Schedule 22 (Summary Reports for Municipalities) of O. Reg. 170/03, this Report must list any requirements of the *Act*, the regulations, the system's approval, drinking water works permit, municipal drinking water licence, and any orders applicable to the system that were not met at any time during the period covered by the report (i.e. an incident of regulatory noncompliance). Additionally, this Report must specify the duration of the failure and the measures that were taken to correct the failure.

No incidents of regulatory noncompliance were identified during the most recent inspection by Ontario's Ministry of the Environment and Climate Change (MOECC) initiated on June 13, 2017.