

Union Water Supply System Inc.

P.O. Box 340, 1615 Union Avenue, Ruthven, Ontario, NOP 2G0 Tele: 519-326-1668

Email: <u>rbouchard@unionwater.ca</u> www.unionwater.ca

> SENT BY: EMAIL February 14, 2024

Town of Kingsville 2021 Division Road North Kingsville, Ontario N9Y 2Y9

Attention: Mr. John Norton, Chief Administrative Officer

Mr. Norton,

RE: Annual Report (2023) Requirement Section 11, Reg. 170/03 and Summary Report (2023) Requirement Schedule 22, Reg. 170/03

Attached are the following items for the <u>Kingsville Water Distribution System</u> supplied by the Union Water Supply System (UWSS):

- 1. Annual Report (Section 11, Reg. 170/03)
- 2. Summary Report (Schedule 22, Reg. 170/03).

Annual Report

The Annual Report must be prepared before February 28, 2024, which requirement is now satisfied. It must also be provided to all members of Council, given at no charge to the public on request and posted on the municipal website.

Summary Report

The Summary Report must be provided to all members of Council before March 31, 2024. Although the Report gives information for all parts of the UWSS, the information that refers to the Kingsville Water Distribution System satisfies the requirements of Schedule 22, Reg. 170/03.

Please call me if you have any questions or comments.

Yours truly,

Al KA

Rodney Bouchard, CEO Union Water Supply System Inc.

kmj

CC: Shaun Martinho







Annual Performance Report Kingsville Distribution System Drinking Water System # 220003403

Prepared for the Corporation of the Town of Kingsville

By the Ontario Clean Water Agency



UNION WATER SUPPLY SYSTEM SUMMARY REPORT 2023

Made under Schedule 22 of Ontario Regulation 170/03, a regulation made under the Safe Drinking Water Act, 2002

EXPLANATION

Schedule 22 of Ontario Regulation 170/03, a regulation made under the Safe Drinking Water Act, 2002 requires that a large municipal residential drinking-water system that is owned by a municipality, municipal board or municipal corporation must provide to its councillors or board members a Summary Report on various aspects of the system before March 31st of the following year. The Union Water Supply System is classed as a large municipal residential drinking-water system and is therefore subject to Schedule 22.

THE SUMMARY REPORT MUST CONTAIN THE FOLLOWING:

- Requirements of the Safe Drinking Water Act, 2002 that the system failed to meet during 2023
- Any requirements of the regulations made under the Safe Drinking Water Act, 2002 that the system failed to meet in 2023
- Any condition of the drinking-water system's drinking water works permit or municipal drinking water license that the system failed to meet during 2023
- Any order that the system failed to meet in 2023, the duration of any such failure and any measures that were taken to correct such failure.
- A summary of the quantities and flow rates of water supplied by the drinking-water system by monthly average and maximum daily flow rates and instantaneous peak flow rates.
- A comparison of actual flow rates with rated capacity and flow rates in the systems approval

A drinking-water system that supplies water to another drinking water system must provide a copy of the Summary Report to that system's owner by March 31st of the year following the year covered in the Summary Report.

The sections below detail the occasions on which the Union Water Supply System (UWSS) and the connected municipal water systems failed to meet the requirements of the Safe Drinking Water Act 2002, associated regulations, system approvals and provincial officer orders in 2023.

UNION WATER SUPPLY SYSTEM (UWSS)

The following provides details of occurrences where the UWSS was not in compliance with the requirements of the Safe Drinking Water Act 2002, associated regulations, system approvals and provincial officer orders.

Non-Compliance Item:

There was one (1) instance of non-compliances or Adverse Water Quality Incidents (AWQIs) identified for the portion of the Union Water Supply System:

Low pressure event in the distribution system, caused by storm event. Outage caused loss of communications and the Kingsville Water Tower eventually emptied. Event took place on August 24, 2023 between 3:30 am and 4:30 am. Pressure dropped below 20 psi for 66 minutes. A precautionary boil water advisory was put into place on the morning of August 24th, 2024 for water users within the Kingsville Water tower service area. This was conducted in consultation with the Windsor Essex County Health Unit (WECHU). OCWA operations staff collected samples from the distribution system in the affected area and submitted the samples to an accredited laboratory for bacteriological testing. Laboratory results for these samples were returned late afternoon of August 25th, 2023 with negative results for Total Coliforms and E. coli. Based on these results, WECHU agreed to lift the boil water advisory for the affected area.

LEAMINGTON WATER DISTRIBUTION SYSTEM

Non-Compliance Item:

There were no non-compliances or Adverse Water Quality Incidents (AWQIs) identified for the portion of the Learnington Distribution System that is supplied by the Union Water Supply System.

KINGSVILLE WATER DISTRIBUTION SYSTEM

Non-Compliance Item:

There were no non-compliances or Adverse Water Quality Incidents (AWQIs) identified for the portion of the Kingsville Distribution System that is supplied by the Union Water Supply System.

ESSEX WATER DISTRIBUTION SYSTEM

Non-Compliance Item:

There were no non-compliances or Adverse Water Quality Incidents (AWQIs) identified for the portion of the Essex Distribution System that is supplied by the Union Water Supply System.

LAKESHORE WATER DISTRIBUTION SYSTEM

Non-Compliance Item:

There were no non-compliances or Adverse Water Quality Incidents (AWQIs) identified for the portion of the Lakeshore Distribution System that is supplied by the Union Water Supply System.

SUMMARY OF THE QUANTITIES

The following sections provide information in regard to the Union Water Supply System's Permit to Take Water, issued under Ontario Regulation 387/04 and Drinking Water License issued under the Safe Drinking Water Act, 2002. Information includes the following:

- Flow Rates of Water
- Monthly Average
- Maximum Daily Flows
- Daily Instantaneous Peak Flow Rates

PERMIT TO TAKE WATER

The Union Water Supply System operated under Permit to Take Water (PTTW) Number 0816-9T9SVT, which expires January 31st, 2025. The PTTW has the following flow conditions:

Maximum Allowable Amount Taken per Minute (Litres/Min)
 Maximum Allowable Amount Taken Per Day (Litres/Day)
 113,650
 163,656,000

The maximum amounts of raw water taken during 2023 (see Table 1 below) are as follows:

Maximum Amount Taken per Minute in 2023 (Litres/Min) 88,844
Maximum Amount Taken Per Day in 2023 (Litres/Day) 115,662,000

The system did not exceed the PTTW limits in 2023.

DRINKING WATER LICENSE

The UWSS operates under Municipal Drinking Water Licence 041-101; issue Number 7 which has been issued for the period July 18, 2021 to July 17, 2024. The Certificate of Approval and licence had the following condition:

- The drinking water system shall not be operated to exceed 124,588 m³/d (27.4 MIGD) on any calendar day, conveyed from the treatment system to the distribution system.
- The maximum daily volume of water pumped into the distribution system was 108,676m³ (23.91 MIGD).

Tables 1A through 3B below provide the monthly average, maximum and peak flows for raw and treated water for the Union Water Supply System.

TABLE 1A					
2023 RAW WATER TAKING FROM LAKE FRIE IN METRIC	INITS				

	Maximum Allowed Flow Rate (m3/Day)	Average Flow (m3/Day)	Maximum Flow (m3/Day)	Maximum Flow (Litres/Day)	Maximum Allowed Flow Rate (Litres/ Minute)	Peak Flow (Litres/ Minute)
January	163,656	42,504.48	49,749.00	49,749,000	113,650	41,084
February	163,656	47,846.75	58,115.00	58,115,000	113,650	48,234
March	163,656	61,248.29	75,668.00	75,668,000	113,650	59,645
April	163,656	61,651.73	80,244.00	80,244,000	113,650	68,845
May	163,656	77,170.74	106,759.00	106,759,000	113,650	88,844
June	163,656	83,022.30	115,662.00	115,662,000	113,650	88,708
July	163,656	76,728.81	97,729.00	97,729,000	113,650	80,424
August	163,656	72,192.10	95,129.00	95,129,000	113,650	85,586
September	163,656	73,200.67	88,528.00	88,528,000	113,650	79,145
October	163,656	60,178.81	78,684.00	78,684,000	113,650	68,621
November	163,656	52,407.83	65,680.00	65,680,000	113,650	62,677
December	163,656	38,499.94	45,625.00	45,625,000	113,650	54,314

TABLE 1B

2023 RAW WATER TAKING FROM LAKE ERIE IN IMPERIAL UNITS

	Maximum Allowed Flow Rate (MGD)	Average Flow (MGD)	Maximum Flow (MGD)	Maximum Allowed Flow Rate (Gallons/Minute)	Peak Flow (Gallons/ Minute)	
January	36.00	9.35	10.94	25,000	9,037	
February	36.00	10.52	12.78	25,000	10,610	
March	36.00	13.47	16.64	25,000	13,120	
April	36.00	13.56	17.65	25,000	15,144	
May	36.00	16.98	23.48	25,000	19,543	
June	36.00	18.26	25.44	25,000	19,513	
July	36.00	16.88	21.50	25,000	17,691	
August	36.00	15.88	20.93	25,000	18,826	
September	36.00	16.10	19.47	25,000	17,410	
October	36.00	13.24	17.31	25,000	15,095	
November	36.00	11.53	14.45	25,000	13,787	
December	36.00	8.47	10.04	25,000	11,947	

TABLE 2A
2023 TREATED WATER FLOW INTO DISTRIBUTION SYSTEM IN METRIC UNITS

		Maximum Allowed Flow Rate (m3/Day)	Average Daily Flow (m3/Day)	Maximum Daily Flow (m3/Day)	Peak Instantan eous Flow (Litres/ Second)	
Janua	ary	124,588	39,183	47,039	907	
Febru	ary	124,588	44,216	50,368	1,217	
Marc	h	124,588	50,777	60,295	1,332	
Apr	il	124,588	58,633	77,233	1,506	
May	/	124,588	74,985	105,072	1,768	
Jun	е	124,588	80,101	108,676	1,748	
Jul	/	124,588	71,461	88,099	1,900	
Augı	ıst	124,588	66,820	87,607	1,726	
Septen	nber	124,588	67,972	82,557	1,563	
Octol	oer	124,588	55,406	71,008	1,368	
Novem	ber	124,588	43,440	52,313	1,047	
Decem	ber	124,588	38,525	46,015	979	

TABLE 2B
2023 TREATED WATER FLOW INTO DISTRIBUTION SYSTEM IN IMPERIAL UNITS

	Maximum Allowed Flow Rate (MGD)	Average Daily Flow (MGD)	Maximum Daily Flow (MGD)	Peak Instantaneous Flow (Gallons/ Second)
January	27.4	8.62	10.35	199
February	27.4	9.73	11.08	268
March	27.4	11.17	13.26	293
April	27.4	12.90	16.99	331
May	27.4	16.50	23.12	389
June	27.4	17.62	23.91	384
July	27.4	15.72	19.38	418
August	27.4	14.70	19.27	380
September	27.4	14.95	18.16	344
October	27.4	12.19	15.62	301
November	27.4	9.56	11.51	230
December	27.4	8.48	10.12	215

	<u>Leamin</u>	gton	<u>King</u> s	<u>sville</u>	<u>Essex</u>		<u>Lakes</u>	<u>hore</u>
	Monthly Total (m3)	Average Day (m3/day)	Monthly Total (m3)	Average Day (m3/day)	Monthly Total (m3)	Average Day (m3/day)	Monthly Total (m3)	Average Day (m3/day
January	690,894	22,287	430,377	13,883	73,940	2,385	54,962	1,773
February	699,975	24,137	444,613	15,331	62,313	2,149	47,837	1,650
March	870,883	28,093	574,918	18,546	88,356	2,850	52,618	1,697
April	911,393	30,380	620,896	20,697	84,347	2,812	49,584	1,653
May	1,343,652	43,344	862,049	27,808	114,547	3,695	72,992	2,355
June	1,397,026	46,568	855,690	28,523	103,126	3,438	77,452	2,582
July	1,319,391	42,561	764,680	24,667	80,570	2,599	65,369	2,109
August	1,228,808	39,639	729,012	23,517	75,038	2,421	61,883	1,996
September	1,138,387	37,946	723,264	24,109	68,797	2,293	59,305	1,977
October	1,058,497	34,145	613,341	19,785	73,230	2,362	60,326	1,946
November	793,903	26,463	403,918	13,464	61,713	2,057	54,111	1,804
December	707,304	22,816	386,549	12,469	66,340	2,140	57,682	1,861
Total	12,160,113	33,198	7,409,307	20,233	952,317	2,600	714,121	1,950
		·	·		·			

TABLE 3B 2023 TREATED FLOW TO LOCAL MUNICIPALITIES IN IMPERIAL UNITS

	<u>Leamin</u>	<u>gton</u>	<u>Kings</u>	<u>ville</u>	Ess	<u>ex</u>	<u>Lakes</u>	<u>hore</u>
	Monthly Total (Imperial Gallons)	Average Day (MGD)	Monthly Total (Imperial Gallons)	Average Day (MGD)	Monthly Total (Imperial Gallons)	Average Day (MGD)	Monthly Total (Imperial Gallons)	Average Day (MGD)
January	151,975,434	4.90	94,669,705	3.05	16,264,526	0.52	12,089,950	0.39
February	153,972,975	5.31	97,801,187	3.37	13,706,944	0.47	10,522,669	0.36
March	191,567,479	6.18	126,464,280	4.08	19,435,603	0.63	11,574,342	0.37
April	200,478,433	6.68	136,578,026	4.55	18,553,746	0.62	10,906,955	0.36
May	295,562,120	9.53	189,624,271	6.12	25,196,817	0.81	16,055,995	0.52
June	307,302,759	10.24	188,225,486	6.27	22,684,549	0.76	17,037,058	0.57
July	290,225,446	9.36	168,206,085	5.43	17,722,922	0.57	14,379,170	0.46
August	270,299,972	8.72	160,360,222	5.17	16,506,052	0.53	13,612,357	0.44
September	250,410,133	8.35	159,095,838	5.30	15,133,224	0.50	13,045,276	0.43
October	232,836,789	7.51	134,916,159	4.35	16,108,348	0.52	13,269,865	0.43
November	174,634,246	5.82	88,849,539	2.96	13,574,962	0.45	11,902,756	0.40
December	155,585,129	5.02	85,028,893	2.74	14,592,760	0.47	12,688,266	0.41
Total	2,674,850,916	7.30	1,629,819,691	4.45	209,480,455	0.57	157,084,660	0.43



ANNUAL REPORT

Drinking Water System Name:

Drinking Water System Name:

Drinking Water System Owner:

Drinking Water System Category:

Drinking Water System Owner:

Drinking Water System Owner:

Drinking Water System Owner:

Drinking Water System Name:

Drinking Water System Owner:

Drinking Water System Category:

Drinking Water System Category

Complete if your Category is Large
Municipal Residential or Small Municipal
Residential

Does your Drinking Water System serve
more than 10,000 people? Yes [X] No []

Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No []

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

Town of Kingsville Municipal Office 2021 Division Rd. North, Kingsville, Ontario

Complete for all other Categori	ies
---------------------------------	-----

Number of Designated Facilities served:

N/A

Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No []

Number of Interested Authorities you report to: N/A

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []

Note: For the following tables below, additional rows or columns may be added, or an appendix may be attached to the report

List all Drinking Water Systems (if any), which receive all their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
N/A	N/A

Did you provide a copy of your annual report to all Drinking Water System owners that are connected to you and to whom you provide all drinking water? Yes [N/A]



Indicate how you notified system users that your annual report is available and is free of charge. [X] Public access/notice via the web [] Public access/notice via Government Office [] Public access/notice via a newspaper [X] Public access/notice via Public Request [] Public access/notice via a Public Library [X] Public access/notice via other method as, and when requested Describe your Drinking Water System
Distribution only. Water Distribution Class II serving approximately 22,119 people through approximately 8500 service connections fed from approximately 315 km of system infrastructure water main.
List all water treatment chemicals used over this reporting period
N/A
Were any significant expenses incurred to?
[X] Install required equipment[] Repair required equipment[X] Replace required equipment
Please provide a brief description and a breakdown of monetary expenses incurred
Road 2 E Water Main- \$2,889,660.00 Hwy 3 Water Main- \$786,527.00 Banar Subdivision Phase 2- \$1,160,479.00 Bulk Water Filling Station Repairs- \$23,597.00 Water Meter Upgrade Program- \$121,673.00



Provide details on the notices submitted in accordance with subsection 18 (1) of the Safe Drinking Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
None					

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period

	Number of Samples	Range of E. Coli Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)	
Raw	See annua	I report for the Uni	on Water Supply S	System # 210000	853	
Treated	See annual report for the Union Water Supply System # 210000853					
Distribution	472	0-0	0-0	210	<10 - <20	

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

	Number of	Range of	Unit of
	Grab Samples	Results	Measure
		(min #)-(max #)	
Turbidity	Please see the Annual Report for the Union Water Supply System # 210000853		
Chlorine	624	0.74 - 1.72	mg/L
Fluoride (If the DWS provides fluoridation)	N/A		

NOTE: For continuous monitors use 8760 as the number of samples

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
None				



Summary of Inorganic parameters tested during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Nitrite (N)		<0.1	mg/L	No
Nitrate (N)	03-Jan-2023	0.4	mg/L	No
Ammonia N-Total		<0.01	mg/L	No
Nitrite (N)		< 0.05	mg/L	No
Nitrate (N)	03-Apr-2023	0.81	mg/L	No
Ammonia N-Total		< 0.05	mg/L	No
Nitrite (N)		< 0.05	mg/L	No
Nitrate (N)	04-July-2023	0.44	mg/L	No
Ammonia N-Total		0.07	mg/L	No
Nitrite (N)		<0.05	mg/L	No
Nitrate (N)	03-Oct-2023	< 0.05	mg/L	No
Ammonia N-Total		0.06	mg/L	No

Summary of lead testing under Schedule 15.1 during this reporting period

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Unit of Measure	Number of Exceedances
Plumbing	N/A			
Distribution	21	0.02 - 0.95	ug/L	None

Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample	Result	Unit of	Exceedance
	Date	Value	Measure	
ТНМ	Annual Average	27.25	ug/L	No
НАА	Annual Average	10.63	ug/L	No

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards

Parameter	Result Value	Unit of Measure	Date of Sample
None			