



**Ontario Clean Water Agency**  
**Agence Ontarienne Des Eaux**

February 23<sup>rd</sup>, 2024

Lisa Higgs  
CAO  
Corporation of the Township of Southwold  
35663 Fingal Line  
Fingal, ON N0L 1K0

**Re: Safe Drinking Water Act, O. Reg. 170/03 Section 11 and Schedule 22 Summary Report**

Dear Mrs. Higgs,

Attached is the 2023 Summary Report for the Southwold Distribution System for January 1st to December 31st, 2023. This report is completed in accordance with Section 11 and Schedule 22 of O. Reg. 170/03, under the Safe Drinking Water Act.

This Summary Report is to be provided to the members of the Southwold Municipal Council. Please ensure this distribution by March 31, 2024.

Section 12 of O. Reg. 170/03, requires the Annual Report required under Section 11 of O. Reg. 170/03 and the Summary Report be made available for inspection by any member of the public during normal business hours, without charge. The reports should be made available for inspection at the office of the township, or at a location that is reasonably convenient to the users of the water system.

Please feel free to contact me should you require any additional information regarding these reports. I can be reached at 519-870-7841.

Sincerely,

Matthew Belding  
Process and Compliance Technician

c.c.     Dale LeBritton, OCWA's Regional Hub Manager  
         Vitaliy Talashok, OCWA's Senior Operations Manager  
         Maegan Garber, Safety, Process and Compliance Manager  
         Aaron VanOorspronk, Director of Infrastructure & Development Service (Southwold)  
         Kevin Goodhue, Water/Wastewater & Compliance Superintendent (Southwold)

# Southwold Distribution System

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Waterworks # 210001362  
System Category – Large Municipal Residential

## Annual Water Report

Prepared For: The Corporation of the Township of Southwold

Reporting Period of January 1<sup>st</sup> – December 31<sup>st</sup>, 2023

Issued: Feb 23<sup>rd</sup>, 2024

Revision: 0

Operating Authority:



This report has been prepared to satisfy the annual reporting requirements in O.Reg 170/03 Section 11 and Schedule 22.

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## Revision History

Date	Revision #	Revision Notes
02-23-2024	0	Report Issued

## Report Availability

This system does not serve more than 10,000 people and the annual reports will be available to residents at the Township of Southwold Municipal Office. Notification will be at the Municipal Office and copies provided free of charge, if requested. The Southwold Municipal Office is located at, 35663 Fingal Line in the Town of Fingal.

## Compliance Report Card

Compliance Event	Date	# of Events
Ministry of Environment Inspections	10-05-2023	1
Ministry of Labour Inspections	N/A	0
QEMS External Audit	12-13-2023	1
AWQI's/BWA	N/A	0
Non-Compliance	N/A	0
Community Complaints	Various	8
Spills	N/A	0
Watermain Breaks	N/A	0

## System Process Description

### Distribution

The Southwold Distribution System receives water from the St. Thomas Area Secondary Water Supply System through interconnection points:

- Talbot Line and Ford Line
- Talbot Line and Ford Line feeding Talbotville
- Wonderland Road and Clinton Line

The St. Thomas Area Secondary Water Supply System receives water from the Elgin Area Primary Water Supply System, where the raw water from Lake Erie is treated to supply potable water to the systems it serves.

The Southwold Distribution System is monitored at the Shedden Re-Chlorination Facility on Talbot Line. At this facility the distribution system chlorine residuals are monitored (inlet and outlet) and increased if necessary. The facility has two chlorine pumps (duty/standby) to increase the chlorine residual based on set points and flow in the distribution system. This facility also provides a potable water fill station for consumers.

The distribution system contains pressure reducing valves, sample stations, hydrants and auto flushers throughout the system in order to monitor distribution pressures and water quality.

The Southwold Distribution System also provides water to:

- Dutton Dunwich Distribution System at Talbot Line and Iona Road interconnect
- St. Thomas Distribution System on Fingal Line at the St. Thomas/Southwold border
- Middlesex Centre Distribution System at Southdel Drive

### Treatment Chemicals

Treatment Chemicals used during the reporting year:

Chemical Name	Use	Supplier
Sodium Hypochlorite	Secondary Disinfection	Jutzi

## Summary of Non-Compliance

### Adverse Water Quality Incidents

Date	AWQI #	Location	Problem	Details	Legislation	Corrective Action Taken
There were no adverse water quality incidents reported during the reporting period.						

### Non-Compliance

Legislation	requirement(s) system failed to meet	duration of the failure (i.e. date(s))	Corrective Action	Status
There were no non-compliance issues reported during the reporting period.				

### Non-Compliance Identified in a Ministry Inspection:

Legislation	requirement(s) system failed to meet	duration of the failure (i.e. date(s))	Corrective Action	Status
There were no non-compliance issues noted during the inspection.				

## Flows

In 2023, the total flow through the Southwold DS was 663,774m<sup>3</sup>. This is a decrease of 1.2% compared to 2022. The average daily flow to the Southwold Distribution System in 2023 was 1,763m<sup>3</sup>/d.

The following table provides an overview of the monthly flow totals for the Southwold Distribution System. Appendix A contains monthly flow readings from various meters throughout the distribution system.

**Table 1: Southwold Distribution Flows**

MONTH	TOTAL (m <sup>3</sup> )	Average Daily Flow (m <sup>3</sup> /d)
January	49,728	1,604
February	42,396	1,368
March	46,222	1,491
April	44,121	1,423
May	65,231	2,104
June	69,325	2,236
July	55,399	1,787
August	58,012	1,871
September	52,043	1,679
October	67,885	2,190
November	58,160	1,876
December	47,420	1,530
Average Daily	-	<b>1,763</b>
Annual Total	<b>655,943</b>	-

The flow is measured at the Shedden Re-Chlorination Facility. Below is a summary of flow through this facility.

**Table 2: Shedden Re-chlorination Facility Flows**

Month	Total Monthly Flow (m <sup>3</sup> )	Average Daily Flow (m <sup>3</sup> /d)	Maximum Daily Flow (m <sup>3</sup> /d)
January	25,615.5	826.3	1044.0
February	16,899.0	603.5	1094.5
March	29,555.0	953.4	1138.0
April	29,771.8	992.4	1332.0
May	26,242.6	846.5	1138.5
June	25,451.8	848.4	1162.0
July	25,679.2	828.4	1106.0
August	25,486.4	822.1	1068.5
September	28,156.0	938.5	1661.0

Month	Total Monthly Flow (m <sup>3</sup> )	Average Daily Flow (m <sup>3</sup> /d)	Maximum Daily Flow (m <sup>3</sup> /d)
October	24,638.0	794.8	1007.0
November	22,957.0	765.2	1052.0
December	25,313.8	816.6	971.0
Annual Total	305,766.1	-	-
Average Daily	-	837.7	-
Maximum Day Flow	-	-	1661.0

## Regulatory Sample Results Summary

### Microbiological Testing

	No. of Samples Collected	Range of E.Coli Results		Range of Total Coliform Results		Range of HPC Results	
		Min	Max	Min	Max	Min	Max
Distribution Water	263	0	0	0	0	<10	<2000

### Operational Testing

	No. of Samples Collected	Range of Results	
		Minimum	Maximum
Free Chlorine Residual, DW Field (mg/L)	410	0.40	1.15

### Summary of Lead Testing:

Schedule 15 sampling is required under O.Reg 170/03. This system is under reduced sampling. No plumbing samples were collected.

Distribution System	Number of Samples	Range of Results		MAC (ug/L)	Number of Exceedances
		Minimum	Maximum		
Alkalinity (mg/L)	6	95	99	N/A	N/A
pH	6	7.06	7.37	N/A	N/A
Lead (ug/l)	6	0.25	0.79	10	0

### Organic Parameters

These parameters are tested quarterly as a requirement under O.Reg 170/03.

Distribution Water	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Trihalomethane: Total (ug/L) Annual Average-DW	2023	30.9	100	0	0
Haloacetic Acids: Total (ug/L) Annual Average-DW	2023	15.7	80	0	0

MAC = Maximum Allowable Concentration as per O.Reg 169/03

### Additional Legislated Samples

There is no additional sampling required in the Southwold Distribution System.

## **Major Maintenance Summary**

### Distribution Maintenance

Details	
-	Hydrant repair
-	Phone line for dialer replaced
-	PRV inspection and repairs
-	Chlorine pump de-gas valves replaced
-	Watermain commissioning



# Appendix A

Summary of flow volumes in the Southwold Distribution System (values in m<sup>3</sup> unless indicated).

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Month	Talbot & Ford (Southwold Interconnect Chamber)	Talbot & Ford (Talbotville Chamber)	Wonderland & Clinton (Clinton Line Interconnect Chamber)	Other	Talbot & Iona (Iona Chamber)	Fingal Line (St. Thomas Chamber)	TOTAL	Average Daily Flow (m <sup>3</sup> /d)
January	47,331	5,570	7,907	2,993	-13,984	-89	49,728	1,604
February	34,333	4,070	5,739	2,508	-4,191	-63	42,396	1,368
March	48,415	5,675	8,071	2,741	-18,609	-71	46,222	1,491
April	45,299	5,275	7,554	2,688	-16,621	-74	44,121	1,423
May	61,496	7,220	10,195	3,871	-17,412	-139	65,231	2,104
June	73,779	8,635	0	4,073	-16,918	-244	69,325	2,236
July	62,585	7,365	0	3,082	-17,494	-139	55,399	1,787
August	64,695	7,550	0	3,461	-17,564	-130	58,012	1,871
September	65,163	7,610	0	2,967	-23,511	-186	52,043	1,679
October	73,453	8,565	0	3,288	-17,279	-142	67,885	2,190
November	64,391	7,480	0	2,832	-16,209	-334	58,160	1,876
December	49,979	5,980	7,693	2,557	-18,678	-111	47,420	1,530
Annual Total	690,919	80,995	47,159	37,061	-198,469	-1722	655,943	1,763