



Village of Somers
Somers Water Utility
2022
Annual Water Diversion Report

Prepared for the Wisconsin Department of Natural Resources
per the requirements of the
Village of Somers and Somers Water Utility
Great Lakes Water Diversion

March 2023

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Village of Somers and Somers Water Utility
Great Lakes Water Diversion Annual 2022 Report

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Summary

The Village of Somers and Somers Water Utility (Village) is submitting this annual report to satisfy the Application requirements of the Wisconsin Department of Natural Resources (DNR)'s approval to the Village's Great Lakes Water Diversion.

Stipulation of the Approval is that the Village must annually report on the following items:

- 1.) The total amount of water diverted monthly within the approved diversion area.
- 2.) The total amount of water sold quarterly (or sold monthly if monthly data is available) to each category of customer within the approved diversion area.
- 3.) The total monthly sewerage flow to the City of Kenosha Wastewater Plant from the diversion area.
- 4.) The total consumptive use as specified by the DNR.
- 5.) A summary of the impact of the implemented Conservation and Efficiency Measures (CEMS) required under Wis. Admin. Code NR 852.04 and NR 852.05, including quantifiable impacts to water use intensity, as defined in Wis. Admin. Code NR 852.03(29).
- 6.) A description of any additional CEMS implemented.

General

In 2022 the Village built and put into operation a water transfer station to serve the area west of 88th Ave, including the diversion area. Since there are currently no customers west of 88th Avenue and east of the subcontinental divide, all water that passes into the Diversion Area is metered at the transfer station. In the future, there will be customers west of 88th Avenue that are not within the Diversion Area; these individual customer meters will be deducted from the meter reading at the water transfer station. Also in 2022, the Village installed a sanitary lift station (Lift Station 1A) that collects all sewage generated in the Diversion Area. The sewage flow meter at the lift station will be utilized to measure all sewage that is returned out of the Diversion Area and sent to the Kenosha Water Utility for processing.

The following were completed in 2022 that reflect water sent into the Diversion Area without wastewater returning to the Great Lakes Basin:

- the filling and flushing of water main for the Becknell Development.
- flushing and flow testing of the new distribution system after the water transfer station became operational.
- lawn watering for the Archives and Armory.
- lawn watering for the Kwik Trip Development.

Two locations in the Diversion Area did receive water meters in 2022, both locations fall into the Commercial Category of Customer. The Archives and Armory PMML Wisconsin LLC, at 10475, 12th Street received one water meter. Kwik Trip at 11350, 28th Street received three water meters. Kwik Trip received water meters for their car wash, irrigation, and potable water usage. The water meters at these locations will be utilized to measure water usage for the category of customer requirement.

Table 1 summarizes the water introduced into the Diversion Area, subtracts metered customers outside of the Diversion Area and subtracts the sewage flow returned to the Great Lakes Basin.

Table 1. Total Water Introduced and Returned from the Diversion Area

2022	Water Transfer Station gal/month	Metered Customers Outside of Diversion Area (gal/month)	Sanitary Lift Station gal/month	Water Diverted (gal/month)
January	0	0	0	
February	0	0	0	
March	0	0	0	
April	0	0	0	
May	0	0	0	
June	0	0	0	
July	2,401,000	0	3,278,600	-877,600
August	1,069,000	0	672,000	397,000
September	1,459,000	0	267,000	1,192,000
October	1,103,000	0	281,000	822,000
November	374,000	0	299,000	75,000
December	324,000	0	324,000	0
Total =	6,730,000	0	5,121,600	1,608,400

Table 2 summarizes the metered customers within the Diversion area and water used in 2022.

Table 2. Customer Usage

2022	Archives and Armory gal/quarter	Kwik Trip Car Wash gal/quarter	Kwik Trip Irrigation gal/quarter	Kwik Trip Potable gal/quarter
January				
February				
March	0	0	0	0
April				
May				
June	0	0	0	0
July				
August				
September	8,294	66,352	235,248	115,362
October				
November				
December	65,598	210,366	125,918	373,984
Total =	73,892	276,718	637,884	1,127,230

Consumptive Use

The WDNR defines consumptive use as the sum of the water sold and the water used for flushing minus the total return gallons. There was negligible consumptive use within the Diversion Area in 2022.

Conservation and Efficiency Measures

The recommended 5-year implementation plan from the Water Conservation and Efficiency Plan includes the following elements: expanded public education and information, additional customer water audits to design specific customer demand management strategies and increasing program data gathering and monitoring to measure program effectiveness.

Water conservation goals and public education are shared on the Village’s webpage. The annual water use audit conducted in accordance with PSC 185 is required to be submitted by March 31st. The report including 2022 data will be available with the next annual diversion report.

The Village is in the process of ordering new meters and a meter reading system.

The Village completed construction on water main replacements on Sheridan Road in 2022. Table 3 summarizes the water sold by month to Somers from the Kenosha Water Utility before and after the construction during dry weather years; this data is illustrated in Figure 1. Additional data on residential metering will be available in future reports. Based on Table 3 and Figure 1, preliminary indications are that the water main replacement on Sheridan Road may have reduced unaccounted water as much as 15 percent.

Table 3. Water Sold to the Sheridan Road Area

Month in Year 2021	Metered Use (thousands of gals)	Month in Year 2022	Metered Use (thousands of gals)
10/31/2021	5295	10/31/2022	4643
9/30/2021	6206	9/30/2022	4729
8/31/2021	6191	8/31/2022	5366
7/31/2021	6849	7/31/2022	5646
6/30/2021	6517	6/30/2022	5179
5/31/2021	6451	5/31/2022	4898
4/30/2021	5739	4/30/2022	4502
3/31/2021	6242	3/31/2022	4707
2/28/2021	5377	2/28/2022	4367
1/31/2021	5143	1/31/2022	4885
12/30/2020	5448	12/31/2022	4809
11/30/2020	5100	11/30/2021	5301
Total	70558		59032

Figure 1. Metered Water and Sewerage - Sheridan Road

