

# Water Diversion Supplemental **REPORT**



## **2020 Supplemental Report on Water Diversion**

*May 10<sup>th</sup>, 2021*

**Prepared by City of Racine Water Utility**

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## 2020 SUPPLEMENTAL REPORT ON WATER DIVERSION

### PURPOSE

The information below is provided as a response to the April 20<sup>th</sup>, 2021 Wisconsin DNR correspondence from Section Chief Adam Freihoefer requesting additional information regarding the City of Racine 2020 Report on Water Diversion.

Based on the DNR review of the City's initial report, the DNR has requested the following additional information, numbered for ease:

1. The dates that the Foxconn permanent water and wastewater service connections were established and activated. If these were not at the same time, please explain.
2. Tables of temporary water meters describing the volume of water diverted, wastewater generated, consumptive, purpose of water use, fate of wastewater, and explanation of consumptive use, similar to Tables 1 and 2 provided in the 2019 supplemental report. The City's 2019 supplemental report indicated that there were temporary customers in the diversion area in 2020, however the 2020 diversion report does not indicate any temporary customers other than meters for flushing.
3. A monthly report on the volume of water sold to permanent customers in the diversion area and monthly volume of wastewater return, from December 2020 through March 2021. This information may help clarify the consumptive use from the Foxconn facility under normal operation.
4. Clarification on the status of the wastewater meter that was malfunctioning in 2020. Has this meter been repaired and recalibrated?
5. Please provide a table like table 4 from your 2019 report that includes, residential water use, population served and per capita residential water for 2011-2020.

Please find the requests in **bold**, and the additional information requested below.

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#### **1. The dates that the Foxconn permanent water and wastewater service connections were established and activated. If these were not at the same time, please explain.**

- Water connection: 3 permanent meters installed 9/11/2020 (temporary meter installed 12/5/2018 and inactivated 9/21/2020).
- Wastewater connection: 3 permanent meters; gate 5 meter installed 11/19/2020, meters at gate 6 and gate 7 both installed 1/10/2021.
- The Foxconn site water connection was installed prior to the wastewater metering as much water onsite was used for construction and landscape irrigation purposes prior to occupancy.

#### **2. Tables of temporary water meters describing the volume of water diverted, wastewater generated, consumptive, purpose of water use, fate of wastewater, and explanation of consumptive use.**

- Table updated for 2020.
- All temporary meters used in 2019 were for customers that closed operations and did not return in 2020. These include 2 concrete batch plants and an operation to install mortar and drywall. The Foxconn campus was the only permanent water customer for 2020. All other uses were for flushing hydrants to raise chlorine levels in new water mains and for testing fire loop piping.

2020 Diversion Area Water Use Summary		Date	Supply Gallons	Return Gallons	Consumptive Use	Consumptive Use Explanation
Water supplied to Foxconn campus:						
1 Water sold to Foxconn campus (metered annual)						
2	Flow tested 5 each 10' services at Foxconn Fab building	2/17/2020	125,050	0	74.9%	Site landscape irrigation - plants/trees/grass uptake
3	Fill new service to large globe on Foxconn property	9/29/2020	3,000	0	100.0%	To a retention basin - evaporation or Miss River tributary
4	Flushed hydrant at Foxconn campus (unit S)	2/11/20-6/9/20	136,136	0	100.0%	To a retention basin - evaporation or Miss River tributary
5	Flushed hydrant at Foxconn campus (unit R)	5/11/20-9/9/20	1,683,000	0	100.0%	To a retention basin - evaporation or Miss River tributary
6	Flushed hydrant at Foxconn gate 1 (unit U)	7/14/20-7/23/20	47,124	0	100.0%	To a retention basin - evaporation or Miss River tributary
7	Flushed hydrant at Foxconn Fill data (unit S)	6/9/20-8/6/20	436,084	0	100.0%	To a retention basin - evaporation or Miss River tributary
8	Flushed hydrant at Foxconn SMC (unit S)	8/6/20-9/9/20	14,212	0	100.0%	To a retention basin - evaporation or Miss River tributary
9	Flushing for Foxconn area chlorine - South Side Fab Bldg.	6/1/20-6/5/20	500,000	0	100.0%	To a retention basin - evaporation or Miss River tributary
Water main flushing for fire testing (various locations):						
10	Foxconn - Fab Bldg. Part 1 - 12" Potable South Side	1/10/2020	80,000	0	100.0%	To a retention basin - evaporation or Miss River tributary
11	Foxconn - Fab Bldg. Part 1 - 12" Potable Retest	1/15/2020	40,000	0	100.0%	To a retention basin - evaporation or Miss River tributary
12	Foxconn - Fab Bldg. Part 2 Potable 6" Service South Side	1/10/2020	60,000	0	100.0%	To a retention basin - evaporation or Miss River tributary
13	Foxconn - Fab Bldg. Potable 4" Service (North Side)	1/10/2020	50,000	0	100.0%	To a retention basin - evaporation or Miss River tributary
14	Foxconn - Fab Bldg. Fire Loop Part 1 - North Side	1/27/2020	110,000	0	100.0%	To a retention basin - evaporation or Miss River tributary
15	Foxconn - Fab Bldg. Fire Loop Part 2 - North Side/West Side	1/30/2020	100,000	0	100.0%	To a retention basin - evaporation or Miss River tributary
16	Foxconn - Fab Bldg. Fire Loop Part 3 - SE Half	1/30/2020	150,000	0	100.0%	To a retention basin - evaporation or Miss River tributary
17	Foxconn - Fab Bldg. Fire Loop Final Section - SW Half	2/5/2020	120,000	0	100.0%	To a retention basin - evaporation or Miss River tributary
18	Foxconn - Fill Smart Mfg. Center - Part 1	2/5/2020	135,000	0	100.0%	To a retention basin - evaporation or Miss River tributary
19	Foxconn - Fill Smart Mfg. Center - Part 2	2/21/2020	85,000	0	100.0%	To a retention basin - evaporation or Miss River tributary
20	Foxconn - Fill Smart Mfg. Bldg. Hyd. On NW Corner & Fire Test	4/8/2020	45,000	0	100.0%	To a retention basin - evaporation or Miss River tributary
21	Foxconn - Fill Smart Mfg. Building (12001 Braun Rd.)	5/7/2020	200,000	0	100.0%	To a retention basin - evaporation or Miss River tributary
22	Braun Rd. @ Wisconn Valley Way - SE Cor. Retest From 2019	6/16/2020	240,000	0	100.0%	Discharge to Mississippi River Basin ditch
23	Foxconn - Main Rd. W.M. East/West Road South Of Fab Bldg.	8/1/2020	900,000	0	100.0%	To a retention basin - evaporation or Miss River tributary
24	Foxconn - Main Rd. W.M 1st Hyd/E Of W Rd/On N Rd/To 1st Hyd/E On S Rd	8/6/2020	400,000	0	100.0%	To a retention basin - evaporation or Miss River tributary
Flushed hydrants to freshen main and boost chlorine levels (1000 gpm):						
25	Hydrant no. 2587 - flushed 10 min	12/16/2020	10,000	0	100.0%	Discharge to Mississippi River Basin ditch
26	Hydrant no. 2587 - flushed 10 min	12/22/2020	10,000	0	100.0%	Discharge to Mississippi River Basin ditch
27	Hydrant no. 2587 - flushed 10 min	12/28/2020	10,000	0	100.0%	Discharge to Mississippi River Basin ditch
28	Hydrant no. 2539 - flushed 10 min	12/16/2020	10,000	0	100.0%	Discharge to Mississippi River Basin ditch
29	Hydrant no. 2590 - flushed 480 min	12/11/2020	480,000	0	100.0%	Discharge to Mississippi River Basin ditch
30	Hydrant no. 2592 - flushed 240 min	7/31/2020	240,000	0	100.0%	Discharge to Mississippi River Basin ditch
31	Hydrant no. 2615 - flushed 15 min	6/2/2020	15,000	0	100.0%	Discharge to Mississippi River Basin ditch
32	Hydrant no. 2615 - flushed 10 min	12/16/2020	10,000	0	100.0%	Discharge to Mississippi River Basin ditch
33	Hydrant no. 2539 - flushed 10 min	12/22/2020	10,000	0	100.0%	Discharge to Mississippi River Basin ditch
34	Hydrant no. 2539 - flushed 10 min	12/22/2020	10,000	0	100.0%	Discharge to Mississippi River Basin ditch
35	Hydrant no. 2615 - flushed 10 min	12/22/2020	10,000	0	100.0%	Discharge to Mississippi River Basin ditch
36	Hydrant no. 2615 - flushed 10 min	12/28/2020	10,000	0	100.0%	Discharge to Mississippi River Basin ditch
Total wastewater return to Great Lakes Basin - Metered			0	5,215,541	0.0%	Foxconn return + inflow/infiltration + WE gas line testing
Overall Consumptive Use			9,003,122	5,215,541	42.1%	
Avg			24,666	17,561		

**3. A monthly report on the volume of water sold to permanent customers in the diversion area and monthly volume of wastewater return, from December 2020 through March 2021.**

- Table for water sold for the months of January 2021 through March 2021 is provided. Foxconn remains the only permanent customer.
- Table for wastewater return for the months of January 2021 through March 2021 is provided.
- The consumptive use for this period is a negative (-195%) indicating that almost 3 times more water is being returned from the diversion. The only plausible explanation is inflow/infiltration. The wastewater collection system belongs to the Village of Mount Pleasant Sewer Utility.

Foxconn	Water Sold		Diversion Area Wastewater Return			
	2021	month gal	quarter gal	2021	month gal	quarter gal
January	112,200			January	576,373	
February	210,936			February	599,727	
March	268,532	591,668		March	613,531	1,789,631
April	0			April	0	
May	0			May	0	
June	0	0		June	0	0
July	0			July	0	
August	0			August	0	
September	0	0		September	0	0
October	0			October	0	
November	0			November	0	
December	0	0		December	0	0
TOTAL	591,668	591,668		TOTAL	1,789,631	
AVG	6,574			AVG	19,885	

**4. Clarification on the status of the wastewater meter that was malfunctioning in 2020 in regard to repair and recalibration.**

- A permanent wastewater flow laser meter was installed by the Village of Mount Pleasant at the Hwy H metering site on 3/1/2020. The Hwy H site records all wastewater return flow from the diversion area Mississippi River basin back to the Great Lakes basin. However, the Hwy H meter malfunctioned and did not provide accurate readings requiring estimated flow based on pump runtime and pump curve output ratings at the Mount Pleasant KR lift station just downstream from the Hwy H meter site. The Hwy H meter was recalibrated 2/24/2021 and is believed to be accurate from that point forward. The KR lift station estimate is to be used from 1/1/2021 through 2/24/2021.

**5. Provide a table that includes residential water use, population served, and per capita residential water for 2011-2020.**

- Table provided for the years 2011-2020. The population served is an estimate as an unknown number of residents remain on a private well and not utility municipal water supply. This is particularly the case in Mount Pleasant.

Residential Water Use			
	Residential	Total	Gallons
	Demand	Service Area	Per Person
Year	Mgal/Yr	Population	Per Day
2011	1,824	99,284	50
2012	1,909	112,104	47
2013	1,714	98,903	47
2014	1,678	98,786	47
2015	1,667	98,413	46
2016	1,687	98,342	47
2017	1,625	98,435	45
2018	1,664	98,504	46
2019	1,600	98,301	45
2020	1,674	111,510	41

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In addition to the aforementioned data requests, the Racine Water Utility (RWU) will include the number of high-water use mailers that were sent and the number of customers requesting leak detection as information is available. As requested, the RWU will provide water sales information for future reports on a monthly time scale unless only quarterly information is available.