CITY OF ST. JOSEPH WATER FILTRATION PLANT

OPERATIONAL REPORT

APRIL 2021

Mission Statement

WSJOB- The City and Authority working together to provide safe drinking water of the highest quality to all of our customers at the lowest possible price.

WATER PLANT/DISTRIBUTION REPORT- APRIL 2021

Water demand in April was up by 8,921,579 million gallons representing an 11.1% increase from 2020. This year 90196764 gallons were delivered which compares to 81,275,185 gallons in 2020. The April 2021 pumpage ranks 24th in the thirty-year tabulation dating back to 1992.

GENERAL ACTIVITIES

SCIP Project

The resonance plates for the two 5 MGD high service pumps #2 and #4 were installed. Testing was conducted and unusual vibration was found in HS#2 after installation of the plate which had been running fine prior to installation but showed abnormal wear in the seal upon inspection by factory field representatives. Further tests will be conducted on this pump in May. Pump #4 which was the pump that originally exhibited vibration in the motor performed within specification with the plate and was cleared for operation.

North Settled Water Maintenance Access Platform

An aluminum maintenance access bridge to the new chlorine feed quills in the north settled water line was installed as part of the SCIP. The vendor was a subcontractor to Davis. A second competitive quote was obtained. There was no change order for the work thereby saving a 15% markup.

AWIA-American Water Infrastructure Act

Work continued on AWIA. The Utility Resiliency Index was calculated using VSAT 2.0 and will be part of the submittal. The URI uses 12 indicators to calculate the index. Responses to the indicators are assigned values and weights, which are aggregated to provide a characterization of a utility's resilience on a scale from 0% to 100%. The indicators are: Emergency Response Plan, NIMS compliance, Mutual Aid and Assistance, Emergency Power, Minimum Daily Demand/Treatment, Critical Parts and Equipment, Business Continuity Plan, Utility Bond Rating, GASB Assessment, unemployment and median household income.

Work on the qualitative risk assessment is underway. The asset categories under study include physical barriers, source water, pipe and constructed conveyances, intake, pretreatment, filtration, storage and distribution facilities, electronic computer, monitoring practices, financial infrastructure, use and storage of chemicals, and operation/maintenance.

Travel and Training

Lyndsey is taking Water Treatment Operation Volume 1 from Sacramento State University online.

Greg attended the Ontario Section AWWA Annual Conference online. A partial list of the sessions attended included the following: Successful Delivery of King City Booster Pumping Station with Proactive Administration and Site Inspection. The Reduction of Organics and Disinfection Byproducts in Red Rock Indian Band's Drinking Water Supply. A Pilot Study Comparing Sodium Silicates to Orthophosphate and pH. Environmental Benefits of Ductile Iron Pipe. Alternatives to Chlorine-Based Solutions for Mussel Control. Frazil Ice at the Lemieux Island WPP. Getting the Lead Out of the Watermains? How a Small System Solved a Legacy Deposit Problem. Understanding Microplastics as Contaminant Vectors.

Environmental Benefits of Ductile Iron Pipe-by Sam Ghosn, DIPRA

A century ago, dedicated American engineers installed iron pipe to create the country's water systems. This strong, safe, and reliable product has stood the test of time. Modern ductile iron pipe is made to last at least 100 years, and is an environmentally preferable product, both in its recycled content and its own recyclability. With up to 98% recycled content, Ductile Iron Pipe is the smart, sustainable solution for delivering clean water to communities in North America. Being a durable and an environmentally friendly choice for water utilities, ductile iron has earned a coveted Gold rating as a sustainable product by the Institute for Market Transformation to Sustainability's ("MTS") SMaRT certification. Ductile Iron Pipe is only the second product in the buried infrastructure industry to earn this certification. Ductile Iron Pipe is not prone to permeation, which result in contaminating drinking water. In addition, ductile iron pipe does not leach toxic chemicals into drinking water. Because one of the biggest expenses a utility has is the cost of pumping of water through the piping distribution network, utility decision-makers are being cautious in their selection of pipeline material and expected costs over time. Approximately 80% to 85 % of municipal water processing and distribution costs are for electricity. Ductile Iron has a larger than nominal inside diameter than other piping materials thereby increasing its flow capacity. This leads lower pumping costs and significant energy savings. These energy savings also translate into less CO2 production, reducing carbon dioxide emissions. Fifty years ago, corrosion and corrosion control in the water works industry was not fully appreciated. As a result, infrastructure tended to be installed without any corrosion protection. Today, utilities have grown accustomed to protecting their infrastructure using polyethylene encasement. This corrosion control method has been used easily, effectively and economically for over 50 years. Utilities across Canada and the United States are protecting their infrastructure with this method. In this presentation, we will discuss the environmental benefits of ductile iron pipe, from manufacturing, sustainability, and energy savings. We will also present the benefits of V-Bio polyethylene encasement, which is the innovative product from DIPRA that expands on the success of traditional polyethylene encasement.

DISTRIBUTION REPORT *For the Month of April 2021*

Activity	Number/Description	
Water Main Breaks	3	
MISS DIGS	616	
Delinquent Shut Off	0	No delinquent shut off's per Governor Exeuctive Order
Hydrants (Repaired/Replaced)		Completed repairs on hydrants identified in leak survey.
Valve Turning		
Valves	1	Clearwood & Cleveland (LCT) on 6" main
Taps (1")		4361 S. Royal curve. Royalton twp. new house old development.
		390 Upton. City New house Old Street.
		1529 Moccasin trl. New house old development St. Joseph twp. East
		927 Greenfield new house old Development Lincoln twp.
		6084 Longhorn new house old development. Lincoln twp.
Cross Connection Control		
Service Retirement		
Service Replacement (Lead)	2	2901 Willa (City) High lead sample result, public side only
		333 Ridgeway-public side only, owner changed out private side.
Service Repair		3992 Woodlyn (RCT) Repaired service line damaged MISS DIG.
Frozen services	0	
Repair of Curb box/Shut-Off Valves	8	Various; froze up, bent curb box, rod broken, adjust.
Replace Curb box		
Meter pit/service replacement	0	
Water Quality complaints	4	Water quality/pressure
Hydrant flushing to maintain water quality	0	
Service line complaints (customer side)	6	leaks, high water use, misreported stormwater, snowbirds, low pressure
Private Service break	0	
Staff Education/Training	0	No training in April
Overtime-Total	61.3	

Turn Off			Defective meter	
Turn On			Sensors bad	
Finals			Downsize meter	
Meter Repair/Replacement			TRT missing	
Meter Repair			Audit Meter	
Per detail			Verify Read	
Meter leaking			Move Mxu Box	
Stopped Meter			New Installation	
Faulty Register				
Frozen Meter			Replaced/various reasons (e.g.,downsize, defective)	
Move Meter Inside			Rockwell Replacement	
Hard to read			Mxu Replaced	
Replace/Adding Sprinkler Meter			Sprinkler meter removed/line capped	
Damage to Meter/TRT/wire damaged			Removals/demo	
New Plumbing			Curb box location	
New siding			Broken Remote	
Lead services			Noisy Meter	
			Upgrade 5/8" to 3/4" (upgrade to 1")	

CITY OF ST. JOSEPH WATER MAIN BREAK REPORT-April 2021

Date	Location	Main Size	Gallons Lost	Break Type	Valves Turned	City Twp	Labor	Remarks
	There were no main breaks in April.							
TOTALS			-				0	

Monthly Maintenance Notes

April 2021

Normal PM Maint. done Monthly	Check all High Service and Low Service Pumps, BPS pumps, Service BPS Chlorinators, Change out air filters on VFD Drives and Air Handlers. Grounds work at Plant, Booster Stations and Water Towers
04/06/21	Mead & White - Repaired Obstruction Light on Lincoln Tower
04/06/21	Installed new battery back up units at Royalton and Lincoln Tower
4/6 & 4/7/21	DC Byers - Repaired wall in Bleach Storage Room.
04/08/21	Changed Oil, Oil Filter, Air Filters and serviced "Z"Mower
04/13/21	FHC/Pentair - Installed tunning plates on HS Pumps 2 & 4. Pump # 4 issues with vibration was corrected and pump now performs perfectly through the entire operating range. Pump # 2 developed Vibration issues after installing the tunning plates. Pentair performed numerus vibration tests on both pumps after the tunning plate installation. Data collected will be sent to Pentair Engineers to determine corrective action for Pump # 2.
04/16/21	Dixon Eng - Inspection and evaluation of Clarifier # 2
04/28/21	Boelcke - installed new Thermostat for East HVAC unit and Removed Condenser fan motor on East HVAC unit, waiting on replacement motor

ST. JOSEPH WATER FILTRATION PLANT
1701 LIONS PARK DRIVE
SAINT JOSEPH, MI. 49085

By: Greg Alimenti
St. Joseph Water Plant
700 Broad St.
Saint Joseph, MI. 49085-1276
(269) 983-1240

APRIL 2021

DISTRIBUTION:	
Total Gallons	90,196,764
Average Day	3,006,559
Maximum Day	3,517,011
Minimum Day	2,752,059

TREATMENT:	
Total Low Service	90,447,168
Wash Water Gals.	388,562
Wash Water %	0.44%
Plant Use Gals.	9,222
Plant Use %	0.01%

FILTRATION:		
Ave. Filter Run	72.0	hours
Ave. Filter Rate	1.77	g/sqft/min
Filter Eff. Index	624.0	
Ave. Loss of Head	0.7	feet
Plant Sewer Useage		

LABRATORY REPORT		
Average of	Raw	Tap
Chlorides mg/L	18.6	21.0
Fluoride mg/L	0.13	0.70
Alkalinity mg/L	121	110
Hardness mg/L	152	149
pH	8.1	7.5
Calcium mg/L	40	39
Magnesium mg/L	13	13
Turbidity NTU	0.59	0.03
Temperature `F	52	
Total Coliform		0.0
Chlorine Residual		mg/L Free
Mixing Basin		0.83
Applied		0.77
Tap		1.12
Distribution		1.06

TREATMENT CHEMICAL SUMMARY:

	Applied mg/L	Total Lbs.	Cost	Inventory lbs.	Days Supply
		CHEMICAL			
Alum (Al^{+3})	19.00	14,332	$4,674.28	62,056	63
Chlorine (Cl_2)	2.43	1,830	$1,366.36	5,690	93
Fluoride (F_2)	0.60	453	$793.97	23,861	300

Total Cost all Chemicals		$6,834.61
Chemical Cost per Mil. Gallon Treated		$75.56
Chemical Cost per Mil. Gallon Delivered		$75.77

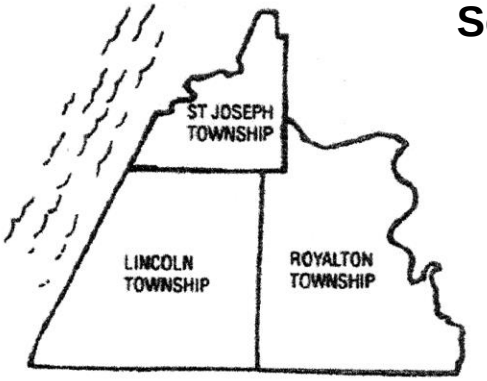
PLANT UTILITIES SUMMARY

Electric:		
Total KWH		200,400
Total Power Cost		$ 14,028.00
Power Cost per Million Gallon Treated		$ 155.10
Power Cost per Million Gallon Delivered		$ 177.00
Gallons Pumped per KWH		402
Natural Gas:		
Metered Cubic Feet		
Natural Gas Cost		
Emergency Power Diesel Fuel Inv., Gals.	North	700
	South	2100

REMARKS:

***includes measure of melted snow
visit the City of Saint Joseph's Home page at www.sjcity.com
e-mail comments to either: operator@sjcity.com or galimenti@sjcity.com

WEATHER CONDITIONS AT THE PLANT		Air Temp. 'F		
SJWW Weather Computer		Avg.	49.5	
Rain Guage, Inches	0.9	Max.	83	
days it rained***	10	Min.	24.5	
Wind Speed, Avg	8.4	Lake Temp.'F		
Wind Speed, Max	23.7	Avg.	51.8	
Prevailing Wind Dir.	North	Max	55.1	
Lake Level (USACE)	580.54	Min	48.2	



Southwest Michigan Regional Sanitary Sewer and Water Authority

980 Miners Road
St. Joseph, MI 49085

St. Joseph Township, Lincoln Township, Royalton Township

May 7, 2021

Re: WSSN 3726 Monthly Operational Report for the Month of April 2021

Attached please find the April 2021 Monthly Operations Report for the Southwest Michigan Regional Sanitary Sewer and Water Authority. The SMRSS&WA receives finished water from the City of St. Joseph WSSN 6310. The supply points are at the Cleveland Booster Station, the Hilltop Booster Station and at the Napier Avenue and Riverview River Crossings. The flows given in the report are from master meters at the supply points. Chlorine is added at the booster stations. The chlorine feed, dosages and residuals are included in the report.

Max Day Demand: 2.583 MG
Average Day Demand: 2.105 MGD
Total Month: 63.162 MG

Sincerely,

Greg Alimenti

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Greg Alimenti, F-1, S-1 (MI License #2014)
Water Plant Superintendent
City of St. Joseph
700 Broad St.
St. Joseph, MI 49085
(269) 983-1240
galimenti@sjcity.com

April 2021

SOUTHWEST MICHIGAN REGIONAL SANITARY SEWER & WATER AUTHORITY — WSSN 3726

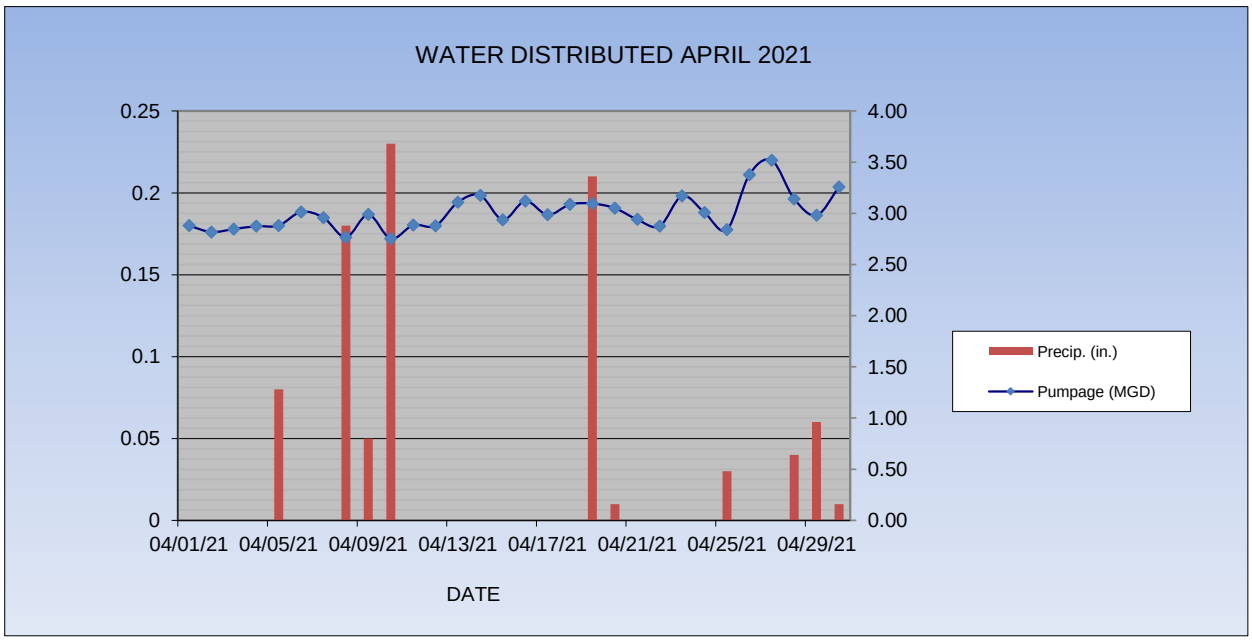
	CLEVELAND BOOSTER STATION								HILLTOP BOOSTER STATION							
DATE	FLOW MGD	FEED GAL	CHL LBS/DAY	CHLORINE APPLIED mg/l	Cl_2 PRE mg/l	Cl_2 POST mg/l	Cl_2 MON mg/l		FLOW MGD	FEED GAL	CHL LBS/DAY	CHLORINE APPLIED mg/l	Cl_2 PRE mg/l	Cl_2 POST mg/l	Cl_2 MON mg/l	BOOSTER MGD
1-Apr	1.965	308	43.67	2.67	1.16	1.04	1.03		0.002	2	0.28	14.78	0.79	0.88	0.93	1.967
2-Apr	0.994	143	20.27	2.45					1.048	103	14.60	1.67				2.042
3-Apr	0.994	143	20.27	2.45					1.048	103	14.60	1.67				2.042
4-Apr	0.994	143	20.27	2.45					1.048	103	14.60	1.67				2.042
5-Apr	0.994	143	20.27	2.45	1.22	1.02	1.04		1.048	103	14.60	1.67	1.79	1.58	1.72	2.042
6-Apr	0.000	0	0.00	0.00	1.28	0.97	0.95		2.071	215	30.48	1.76	0.92	0.96	1.04	2.071
7-Apr	1.995	255	36.15	2.17	0.83	1.00	1.03		0.004	0	0.00	0.00	1.04	0.90	0.93	1.998
8-Apr	0.000	0	0.00	0.00	0.93	1.01	0.93		2.079	201	28.50	1.64	1.32	1.10	1.22	2.079
9-Apr	1.875	265	37.57	2.40	0.96	1.03	1.06		0.000	0	0.00	0.00	1.40	1.45	1.53	1.875
10-Apr	0.684	104	14.75	2.59					1.407	136	19.28	1.64				2.090
11-Apr	0.684	104	14.75	2.59					1.407	136	19.28	1.64				2.090
12-Apr	0.684	104	14.75	2.59	0.85	0.89	0.90		1.407	136	19.28	1.64	1.48	0.93	1.01	2.090
13-Apr	2.016	315	44.66	2.66	0.91	1.00	1.06		0.000	0	0.00	0.00	0.90	1.01	0.96	2.016
14-Apr	0.000	0	0.00	0.00	0.85	0.93	0.97		2.288	238	33.74	1.77	0.84	1.00	1.07	2.288
15-Apr	2.114	338	47.92	2.72	1.15	1.01	1.06		0.000	0	0.00	0.00	0.86	1.39	1.35	2.114
16-Apr	0.000	0	0.00	0.00	0.91	0.95	0.95		2.149	214	30.34	1.69	1.72	1.17	1.21	2.149
17-Apr	1.410	221	31.33	2.66					0.762	77	10.92	1.72				2.172
18-Apr	1.410	221	31.33	2.66					0.762	77	10.92	1.72				2.172
19-Apr	1.410	221	31.33	2.66	1.07	1.01	1.03		0.762	77	10.92	1.72	0.98	1.15	1.01	2.172
20-Apr	0.000	0	0.00	0.00	0.89	0.93	0.93		2.129	217	30.77	1.73	0.98	0.94	1.01	2.129
21-Apr	2.015	335	47.50	2.83	1.07	1.02	1.06		0.007	0	0.00	0.00	0.86	1.24	1.33	2.022
22-Apr	0.003	0	0.00	0.00	1.16	0.94	0.99		2.094	222	31.48	1.80	1.04	1.00	1.04	2.097
23-Apr	2.009	307	43.53	2.60	1.01	1.01	1.07		0.001	0	0.00	0.00	0.92	1.04	1.06	2.011
24-Apr	0.678	105	14.89	2.63					1.479	147	20.84	1.69				2.157
25-Apr	0.678	105	14.89	2.63					1.479	147	20.84	1.69				2.157
26-Apr	0.678	105	14.89	2.63	0.87	0.86	0.92		1.479	147	20.84	1.69	1.14	1.09	1.25	2.157
27-Apr	2.291	361	51.18	2.68	0.81	0.96	1.09		0.000	0	0.00	0.00	0.87	1.17	1.39	2.291
28-Apr	0.000	0	0.00	0.00	1.01	1.04	1.01		2.410	0	0.00	0.00	0.93	0.93	0.98	2.410
29-Apr	2.100	358	50.76	2.90	0.93	1.02	1.06		0.000	0	0.00	0.00	0.63	1.02	1.06	2.100
30-Apr	0.000	0	0.00	0.00	1.20	0.91	0.93		2.125	215	30.48	1.72	0.95	1.18	1.17	2.125
TOTAL	30.669	4,704	666.9						32.493	3,016	427.61					63.162
AVE DAY	1.022		22.2	1.90	1.0	1.0	1.0		1.0831		14.3	1.62	1.06	1.10	1.16	2.105
MAX	2.291		51.2	2.90	1.3	1.0	1.1		2.4104		33.7	14.78	1.79	1.58	1.72	2.410
MIN	0.000		0.0	0.00	0.8	0.9	0.9		0.0000		0.0	0.00	0.63	0.88	0.93	1.875

MONTHLY TOTALS:	Cleveland	Total MG		SJCT EAST			Hilltop	Total MG		Cleveland Pump Station:	30.699
		Chl Add	30.669	Average Day	0.172			Chl Add	32.481	Hilltop Pump Station:	32.481
Total Authority Flow:	63.162	No Chl Add	0.000	Month Total	5.164			No Chl Add	0.012	TOTAL AUTHORITY (Trted.)	63.18

ST JOSEPH WATER PLANT PUMPAGE-WATER DELIVERED/RAINFALL
APRIL 2021

				Day to Day Comparison 2021/2020	
DATE	PUMPAGE (gallons)	PUMPAGE (MGD)	Rainfall (in)	2021	2020
04/01/21	2,879,186	*2.88*	0	2,879,186	2,376,954
04/02/21	2,817,374	*2.82*	0	2,817,374	2,926,858
04/03/21	2,846,172	*2.85*	0	2,846,172	2,588,570
04/04/21	2,873,914	*2.87*	0	2,873,914	2,985,677
04/05/21	2,880,772	*2.88*	0.08	2,880,772	2,831,985
04/06/21	3,013,594	*3.01*	0	3,013,594	2,782,352
04/07/21	2,957,695	*2.96*	0	2,957,695	2,955,279
04/08/21	2,766,023	*2.77*	0.18	2,766,023	2,537,550
04/09/21	2,987,951	*2.99*	0.05	2,987,951	2,771,706
04/10/21	2,752,059	*2.75*	0.23	2,752,059	2,589,031
04/11/21	2,884,512	*2.88*	0	2,884,512	2,505,699
04/12/21	2,877,531	*2.88*	0	2,877,531	2,655,445
04/13/21	3,109,639	*3.11*	0	3,109,639	2,677,261
04/14/21	3,174,276	*3.17*	0	3,174,276	2,672,433
04/15/21	2,936,163	*2.94*	0	2,936,163	2,679,186
04/16/21	3,120,248	*3.12*	0	3,120,248	2,627,872
04/17/21	2,985,060	*2.99*	0	2,985,060	2,659,462
04/18/21	3,086,349	*3.09*	0	3,086,349	3,026,051
04/19/21	3,095,330	*3.10*	0.21	3,095,330	2,555,310
04/20/21	3,050,113	*3.05*	0.01	3,050,113	2,863,932
04/21/21	2,939,809	*2.94*	0	2,939,809	2,625,916
04/22/21	2,874,820	*2.87*	0	2,874,820	2,762,626
04/23/21	3,169,912	*3.17*	0	3,169,912	2,753,262
04/24/21	3,006,304	*3.01*	0	3,006,304	2,564,824
04/25/21	2,839,774	*2.84*	0.03	2,839,774	2,536,009
04/26/21	3,377,211	*3.38*	0	3,377,211	2,588,085
04/27/21	3,517,011	*3.52*	0	3,517,011	2,817,232
04/28/21	3,141,489	*3.14*	0.04	3,141,489	2,683,879
04/29/21	2,980,220	*2.98*	0.06	2,980,220	2,919,933
04/30/21	3,256,252	*3.26*	0.01	3,256,252	2,754,806
TOTAL	90,196,764	90.20	0.90	90,196,764	81,275,185

Average Day	**3,006,559**
Maximum Day	**3,517,011**
Minimum Day	**2,752,059**

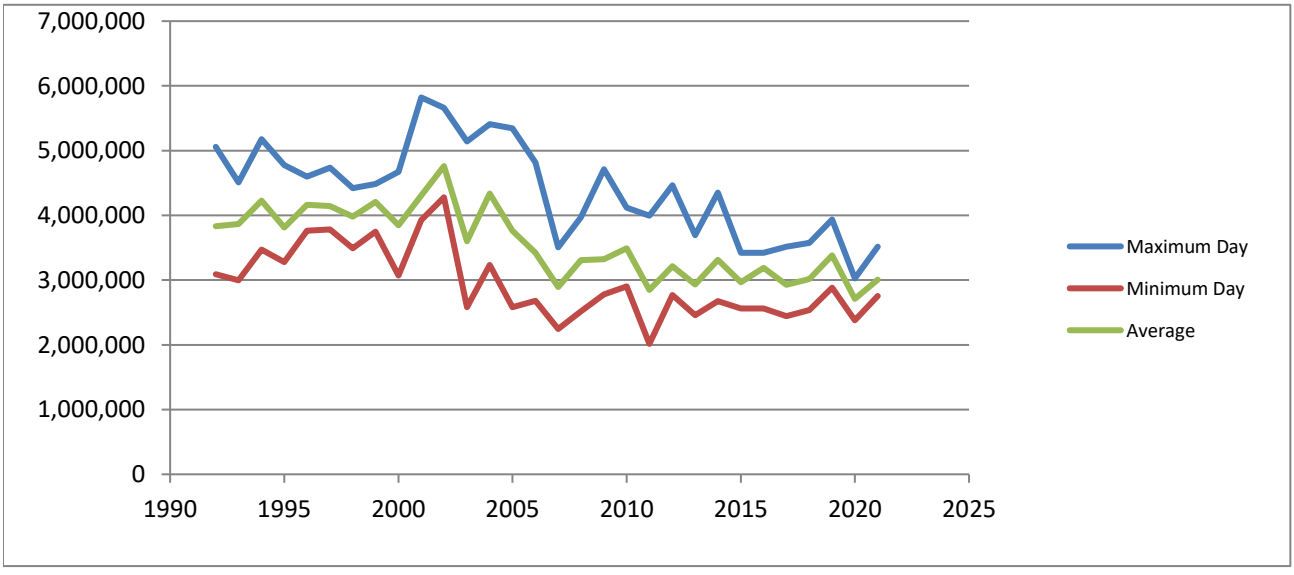


ST JOSEPH WATER PLANT PUMPAGE-WATER DELIVERED

APRIL 2021

Year	Average	Maximum Day	Minimum Day	Monthly Total
1992	3,830,540	5,058,100	3,092,500	114,916,200
1993	3,867,257	4,510,000	2,995,700	116,017,700
1994	4,226,717	5,175,600	3,468,700	126,801,500
1995	3,813,150	4,775,300	3,278,300	114,394,500
1996	4,160,767	4,600,100	3,760,250	124,823,000
1997	4,143,047	4,737,000	3,782,950	124,291,400
1998	3,982,177	4,422,050	3,492,300	119,465,300
1999	4,208,870	4,483,600	3,749,750	126,266,100
2000	3,846,682	4,673,250	3,070,300	115,400,450
2001	4,308,365	5,820,850	3,927,950	129,250,950
2002	4,760,498	5,661,000	4,278,600	142,814,950
2003	3,598,427	5,143,250	2,580,250	107,952,820
2004	4,336,191	5,410,250	3,232,750	130,085,740
2005	3,761,613	5,342,000	2,579,750	112,848,390
2006	3,421,883	4,813,020	2,680,500	102,656,500
2007	2,894,947	3,508,000	2,244,000	86,848,410
2008	3,306,528	3,968,250	2,514,750	99,195,850
2009	3,321,686	4,712,250	2,777,150	99,650,580
2010	3,490,279	4,120,407	2,901,472	104,708,365
2011	2,849,967	3,996,000	2,015,000	85,499,000
2012	3,212,837	4,463,210	2,767,357	96,385,121
2013	2,934,656	3,695,486	2,458,231	88,039,671
2014	3,311,996	4,349,621	2,672,815	99,359,878
2015	2,969,177	3,422,810	2,560,707	86,504,069
2016	3,190,977	3,422,810	2,560,707	95,729,302
2017	2,924,947	3,514,753	2,442,973	87,748,418
2018	3,018,028	3,574,038	2,535,462	90,540,829
2019	3,384,434	3,936,708	2,880,804	101,533,031
2020	2,709,173	3,026,051	2,376,954	81,275,185
2021	3,006,559	3,517,011	2,752,059	90,196,764

Rank	Year	Monthly Total
1	2002	142,814,950
2	2004	130,085,740
3	2001	129,250,950
4	1994	126,801,500
5	1999	126,266,100
6	1996	124,823,000
7	1997	124,291,400
8	1998	119,465,300
9	1993	116,017,700
10	2000	115,400,450
11	1992	114,916,200
12	1995	114,394,500
13	2005	112,848,390
14	2003	107,952,820
15	2010	104,708,365
16	2006	102,656,500
17	2019	101,533,031
18	2009	99,650,580
19	2014	99,359,878
20	2008	99,195,850
21	2012	96,385,121
22	2016	95,729,302
23	2018	90,540,829
24	**2021**	**90,196,764**
25	2013	88,039,671
26	2017	87,748,418
27	2007	86,848,410
28	2015	86,504,069
29	2011	85,499,000
30	2020	81,275,185



APRIL 2021 **CITY OF ST. JOSEPH** **WSSN 6310**

	TOC Compliance								
	Treated Tap	Source Tap	Formula Ratio	Alka-linity	Req. TOC Removal	**Actual** Ratio/ Remov	Alternative Criteria Complied Y/N	**Compl. Perf.** Ratio/Removal	
Qtr Average									
May	1.60	1.97	18.8	110	25	0.75	Yes	1.00	5/20/2020
June	1.44	1.72	16.3	112	25	0.65	Yes	1.00	6/17/2020
Qtr Average						**0.70**			
July	1.65	1.92	14.1	109	25	0.56	Yes	1.00	7/15/2020
August	1.72	2.01	14.4	109	25	0.58	Yes	1.00	8/6/2020
September	1.49	1.83	18.6	110	25	0.74	Yes	1.00	9/16/2020
Qtr Average						**0.63**	Yes		
October	1.47	1.98	25.8	131	15	1.72	N(Removal)	1.72	10/19/2020
November	1.42	1.77	19.8	112	25	0.79	Yes	1.00	11/10/2020
December	1.57	1.98	20.7	116	25	0.83	Yes	1.00	12/8/2020
Qtr Average						**1.11**			
January	1.40	1.99	29.6	110	25	1.19	N(Removal)	1.19	1/20/2021
February	1.40	1.80	22.2	112	25	0.89	Yes	1.00	2/22/2021
March	2.15	2.71	20.7	130	15	1.38	N(Removal)	1.38	3/17/2021
						1.15			
April	1.59	2.14	25.7	112	25	1.03	N(Removal)	1.03	4/12/2021
Qtr Average						**1.19**			
Annual Avg.	1.58	1.99				0.91		**1.11**	

STAGE 2 D/DBPR MONITORING-HALOACETIC ACIDS

APRIL 2021

WSSN 3726

Date	07/15/20	07/15/20
Site	Lincoln Twp Hall (DBP-1)	JR Automation (DBP-2)
Dibromoacetic acid	<1	<1
Dichloroacetic acid	14	9.5
Monobromoacetic acid	<1	<1
Monochloroacetic acid	<2	<2
Trichloroacetic acid	10	16
Total HAA5	*24*	*25.5*

Date	10/02/20	10/02/20
Site	Lincoln Twp Hall (DBP-1)	JR Automation (DBP-2)
Dibromoacetic acid	<1	<1
Dichloroacetic acid	3.1	2.9
Monobromoacetic acid	<1	<1
Monochloroacetic acid	<2	<2
Trichloroacetic acid	8	4.2
Total HAA5	*11.1*	*7.1*

Date	01/13/21	01/13/21
Site	Lincoln Twp Hall (DBP-1)	JR Automation (DBP-2)
Dibromoacetic acid	<1	<1
Dichloroacetic acid	7	7.5
Monobromoacetic acid	<1	<1
Monochloroacetic acid	<2	<2
Trichloroacetic acid	9.4	11
Total HAA5	*16.4*	*18.5*

Date	04/14/21	04/14/21
Site	Lincoln Twp Hall (DBP-1)	JR Automation (DBP-2)
Dibromoacetic acid	<1	<1
Dichloroacetic acid	16	14
Monobromoacetic acid	<1	<1
Monochloroacetic acid	2.1	<2
Trichloroacetic acid	16	14
Total HAA5	*18.1*	*28.0*

	Lincoln Twp Hall (DBP-1)	Dane (DBP-2)
RAA (ppb)	**17.4**	**19.8**

STAGE 2 D/DBPR MONITORING-TTHM

APRIL 2021

WSSN 3726

Date	07/15/20	07/15/20
Site	Lincoln Twp Hall (DBP-1)	JR Automation (DBP-2)
Bromodichloromethane	10	17
Bromoform	<0.5	<0.5
Chloroform	29	62
Dibromochloromethane	3.7	5.3
Total Trihalomethanes	*42.7*	*84.3*

Date	10/02/20	10/02/20
Site	Lincoln Twp Hall (DBP-1)	JR Automation (DBP-2)
Bromodichloromethane	15	15
Bromoform	<0.5	<0.5
Chloroform	44	43
Dibromochloromethane	6.4	6.5
Total Trihalomethanes	*65.4*	*64.5*

Date	01/13/21	01/13/21
Site	Lincoln Twp Hall (DBP-1)	JR Automation (DBP-2)
Bromodichloromethane	14	13
Bromoform	<0.5	<0.5
Chloroform	39	36
Dibromochloromethane	6.5	6
Total Trihalomethanes	*59.5*	*55*

Date	04/14/21	04/14/21
Site	Lincoln Twp Hall (DBP-1)	JR Automation (DBP-2)
Bromodichloromethane	14	13
Bromoform	<0.5	<0.5
Chloroform	50	46
Dibromochloromethane	4.7	4.7
Total Trihalomethanes	*68.7*	*63.7*

	Lincoln Twp Hall (DBP-1)	Dane (DBP-2)
RAA (ppb)	**59.1**	**66.9**

Samples were collected at nearby hydrants.
Access was denied due to Executive Order 2020-15 Covid 19.

DISTRIBUTION REPORT *For the Month of April 2021*

Activity	Number/Description	
Water Main Breaks	3	
MISS DIGS	616	
Delinquent Shut Off	0	No delinquent shut off's per Governor Exeuctive Order
Hydrants (Repaired/Replaced)		Completed repairs on hydrants identified in leak survey.
Valve Turning		
Valves	1	Clearwood & Cleveland (LCT) on 6" main
Taps (1")		4361 S. Royal curve. Royalton twp. new house old development.
		390 Upton. City New house Old Street.
		1529 Moccasin trl. New house old development St. Joseph twp. East
		927 Greenfield new house old Development Lincoln twp.
		6084 Longhorn new house old development. Lincoln twp.
Cross Connection Control		
Service Retirement		
Service Replacement (Lead)	2	2901 Willa (City) High lead sample result, public side only
		333 Ridgeway-public side only, owner changed out private side.
Service Repair		3992 Woodlyn (RCT) Repaired service line damaged MISS DIG.
Frozen services	0	
Repair of Curb box/Shut-Off Valves	8	Various; froze up, bent curb box, rod broken, adjust.
Replace Curb box		
Meter pit/service replacement	0	
Water Quality complaints	4	Water quality/pressure
Hydrant flushing to maintain water quality	0	
Service line complaints (customer side)	6	leaks, high water use, misreported stormwater, snowbirds, low pressure
Private Service break	0	
Staff Education/Training	0	No training in April
Overtime-Total	61.3	

Turn Off			Defective meter	
Turn On			Sensors bad	
Finals			Downsize meter	
Meter Repair/Replacement			TRT missing	
Meter Repair			Audit Meter	
Per detail			Verify Read	
Meter leaking			Move Mxu Box	
Stopped Meter			New Installation	
Faulty Register				
Frozen Meter			Replaced/various reasons (e.g.,downsize, defective)	
Move Meter Inside			Rockwell Replacement	
Hard to read			Mxu Replaced	
Replace/Adding Sprinkler Meter			Sprinkler meter removed/line capped	
Damage to Meter/TRT/wire damaged			Removals/demo	
New Plumbing			Curb box location	
New siding			Broken Remote	
Lead services			Noisy Meter	
			Upgrade 5/8" to 3/4" (upgrade to 1")	

CITY OF ST. JOSEPH WATER MAIN BREAK REPORT-April 2021

Date	Location	Main Size	Gallons Lost	Break Type	Valves Turned	City Twp	Labor	Remarks
	There were no main breaks in April.							
TOTALS			-				0	

MAIN BREAKS WINTER 2020/2021

DATE	LOCATION	MAIN DIA.	GALLONS LOST	TYPE OF BREAK	VALVES TURNED	CITY/ TWP	HOURS	REMARKS
11/18/2020	Alpine Ridge & Caribou Trail	6	55,922	Hole	3	LCT	19	Sand 6' deep, Corner of AR and S. intersection of CT. hole in bottom
11/27/2020	444 Montezuma	6	17,475	Circumferential	3	SJT	14	Sand 5' deep, half moon hole on bottom of pipe.
12/1/2020	Lupine and Iris	6	27,961	Circular crack	3	LCT	12	Sand 6' deep, circular crack, no cathodic
12/4/2020	2816/2820 Sunnydale	6	7,174	Circular crack	2	CITY	7.5	Clay 5' deep, no cathodic
12/9/2020	2902 Willa	6	34,951	Circular crack	3	CITY	21	Clay 5' deep, no cathodic
12/8/2020	2721 Thayer	6	48,932	Circular crack	2	CITY	18	Clay 5' deep, no cathodic
12/16/2020	3381 Celina	6	17,145	Circular crack	2	SJCT	9.5	Sand 6' deep, no cathodic
12/20/2020	517 Petrie	6	34,975	Circular crack	2	CITY	14.25	Clay 6' deep, no cathodic
12/21/2020	2806 Thayer	6	46,602	Circular crack	2	CITY	15.5	Clay 5' deep, no cathodic
12/23/2020	Kimmel and Ridge	4	255,251	Circular crack	4	LCT	30	Sand 5' deep, no cathodic. Two circular cracks. Repl 9 ft. of pipe
12/24/2020	2376 Riverbend	6	69,903	Circular crack	4	SJCT	12	Sand 5' deep, no cathodic. SJCT East side
1/4/2021	185 Anchors Way	10	44,317	Circumferential	2	City	17	4 ft. deep, rubbish, loamy soil, no cathodic.
1/25/2021	2008 Sunset Dr.	6	17,475	Circumferential	3	City	9	5 ft. deep, clay, no cathodic
1/26/2021	1310 Lewis	6	40,840	Circumferential	3	City	19	4.5 ft deep, clay, no cathodic
1/27/2021	2839 Kimmel	6	50,000	Circumferential	3	LCT	21	6 ft. deep, sand, Village of Stevensville
1/29/2021	Hawthorn & Cleveland	10	76,575	Circumferential	4	SJCT	22	6.5 ft. deep, St. Joseph Township West
1/30/2020	5506 Ridge Rd.	6	20,000	Circumferential	3	LCT	24	6.5 ft. sand Village of Stevensville
1/31/2021	1680 Sun Prairie	6	80,000	Circumferential	1	SJCT	39	9 ft sand. Difficult due to depth
1/31/2021	Dennis & John Beers	6	90,000	Circumferential	2	LCT	21	6 ft. deep, sand
2/5/2021	2408 Lake Shore Drive	6	12,427	Circumferential	7	City	34.5	5 ft cover, sand, no cathodic
2/5/2021	Carrie Lane S. of Wedgewood	6	24,466	Circumferential	4	SJCT	17.5	5.5 ft. cover, sand, no cathodic
2/5/2021	1225 Mohawk/1920 Langley	6	27,961	Circumferential	2	City	32	4.5 ft cover, clay, no cathodic
2/8/2021	2460 Lake Shore Dr.	6	18,640	Circumferential	2	City	27.5	4.0 ft. cover, no cathodic
2/9/2021	2880 Veronica	6	15,310	Circumferential	3	City	13.25	4.0 ft cover, loose clay, no cathodic
2/12/2021	5237 St. Joseph Ave.	6	29,779	Circumferential	2	LCT	63.75	5.0 ft cover, no cathodic, Behind Center St.
2/14/2021	1915 Langley	6	31,906	Circumferential	1	City	19	5 ft cover, clay, circular crack, no cathodic, Manley Ct WM
2/17/2021	2507/2511 S. State	10	42,541	Circumferential	7	City	46.25	6 ft. cover, clay, cathodic yes
2/17/2021	2909 Thayer	6	40,100	Circumferential	2	City	5	5 ft. cover, clay, B&Z did most of the work
2/17/2021	1105/1111 Napier	6	100,804	Two Circ Cracks	4	City	36	5 ft. cover, clay, no cathodic
2/20/2021	714 Myrtle	6	26,588	Hole		City	18	5 ft. cover, clay, 2 in. hole

2/21/2021	2810 Willa	6	83,074	Circumferential	3	City	14.25	5 ft. cover, clay, no cathodic
2/24/2021	5468 Ridge Road	6	37,281	Circumferential		City	35	6 ft. cover, sand, circ crack and hole around copper service
2/25/2021	3425 Lake Shore Dr.	6	34,033	Hole	3	City	3	5 ft. cover, clay, no cathodic
2/26/2021	470 S. Ottowa	6	12,760	Circumferential	7	SJCT	15.25	6.5 ft cover, sand
2/27/2021	Wolcott and Pixley	6	21,270	Circumferential	3	City	11.25	5 ft. cover, sand, nc, found left hand valve at Langley closed
3/1/2021	Lakeshore Dr. & N. Sunnybank	6	21,270	Circumferential	2	City	16	Crack, 5 ft. cover, sand, cathodic
3/16/2021	618 Main St.	6	600,000	Circumferential	3	City	45	Crack, 5 ft. cover, clay, no cathodic
3/18/2021	618 Main St.	6	15,156	Circumferential	3	City	55.5	Crack, 5 ft. cover, clay, no cathodic. Six feet from 3/16 break
			2,230,864				852.75	

Total # Breaks: 39 City 24 Authority 15

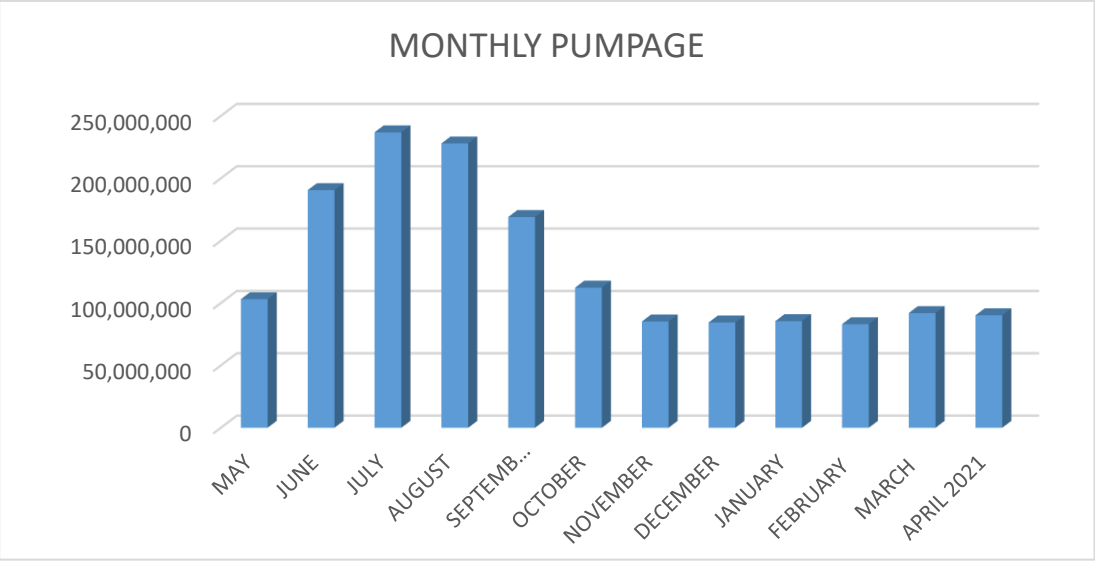
Total Water Lost: 2,230,864 gallons

Total Labor: 852.75 hrs.

ST. JOSEPH WATER PLANT-YEAR TO DATE PUMPAGE

April 2021

	Pumpage Month	Pumpage FISCAL YTD	By Quarter
MAY	103,081,905		
JUNE	190,552,034		293,633,939
JULY	236,887,854	236,887,854	
AUGUST	227,968,057	464,855,911	
SEPTEMBER	168,999,470	633,855,381	1,335,599,146
OCTOBER	112,348,772	746,204,153	
NOVEMBER	85,192,969	831,397,122	
DECEMBER	84,424,836	915,821,958	281,966,577
JANUARY	85,545,876	1,001,367,834	
FEBRUARY	83,066,087	1,084,433,921	
MARCH	92,000,552	1,176,434,473	260,612,515
APRIL 2021	90,196,764	1,266,631,237	
TOTAL	1,209,455,897		



MONTHLY CLIMATOLOGICAL SUMMARY **March** **2021**

NAME: sjwweather **St. Joseph Water Plant - 1701 Lions Park Drive - St. Joseph, MI**

DAY	MEAN TEMP	NORM MEAN TEMP	HIGH TEMP	TIME	NORM HIGH TEMP	REC HIGH TEMP	YEAR	LOW TEMP	TIME	NORM LOW TEMP	REC LOW TEMP	YEAR	HEAT DEG DAYS	COOL DEG DAYS	RAIN	AVG WIND SPEED	HIGH	TIME	DOM DIR
1	30.9	33	**36.4**	12:30a	53	83	1986	**27.9**	8:00p	33	17	1984	34.1	0	**0**	**15.7**	**32**	12:00p	WNW
2	32	31.3	**40.2**	12:00m	53	79	1963	**21.8**	6:00a	33	20	1992	33	0	**0**	**8.5**	**25**	11:00p	S
3	38	31.3	**43.2**	4:30p	54	80	1956	**34.2**	10:30p	33	18	1954	27	0	**0**	**7.2**	**25**	12:30a	SSW
4	32.2	35.7	**34.7**	12:30a	54	75	1956	**30.4**	8:00a	34	8	2019	32.8	0	**0**	**14.9**	**29**	12:30p	N
5	33.2	34	**43.6**	2:30p	55	82	1988	**24.6**	7:30a	34	13	2019	31.8	0	**0**	**5.2**	**22**	8:00p	ENE
6	34.9	35.1	**45.9**	2:00p	55	82	1988	**28.7**	12:00m	34	14	1982	30.1	0	**0**	**2.5**	**11**	2:30p	NE
7	34.6	35.9	**42.6**	9:30p	55	78	1991	**24.4**	7:30a	35	9	1982	30.4	0	**0**	**3.1**	**19**	12:00m	E
8	46.5	37.1	**51.7**	5:30p	56	77	1991	**41.6**	2:00a	35	15	1972	18.5	0	**0**	**7.7**	**32**	9:30a	SSE
9	54.1	42.3	**68**	3:30p	56	74	1967	**41.3**	7:30a	35	15	1985	11.2	0.3	**0**	**5.5**	**25**	5:30p	SSE
10	61.3	53	**69.1**	4:00p	57	80	1977	**55.7**	8:00a	36	15	1997	4.1	0.4	**0**	**11.8**	**40**	3:00p	S
11	48.2	51.4	**63.2**	1:00a	57	79	1977	**40.6**	11:00p	36	18	1952	16.8	0	**0.04**	**10**	**46**	1:00a	SSW
12	39.9	36.3	**49.5**	1:30p	57	82	1971	**32.5**	12:00m	36	21	1982	25.1	0	**0**	**5.4**	**15**	2:00a	SW
13	39.2	32.6	**50.4**	8:30p	58	77	1960	**26.5**	7:30a	36	18	1950	25.8	0	**0**	**3.6**	**14**	8:00p	SSW
14	40.1	36.2	**44.7**	12:30a	58	79	1976	**36.8**	8:00p	37	18.6	2017	23.8	0	**0**	**10.1**	**32**	3:00p	NNE
15	33.9	38.1	**38.9**	12:30a	59	83	1976	**29.7**	8:30a	37	16	1957	31.1	0	**0**	**4.4**	**35**	4:00p	ESE
16	34.3	37.6	**36.3**	11:30a	59	86	1976	**32.8**	4:00a	37	24	1990	30.7	0	**0.03**	**5.2**	**17**	4:30p	N
17	38.6	38.3	**48.3**	11:00p	59	84	1976	**34.3**	8:30a	38	25	1949	26.4	0	**0.01**	**6.3**	**22**	5:00p	NNE
18	41.9	35.5	**49**	5:30p	60	86	2002	**37.3**	12:00m	38	19	1990	23.1	0	**0.07**	**9.1**	**31**	3:30p	NE
19	36.4	33.2	**47.3**	1:30p	60	84	1985	**29.9**	8:30a	38	18	1988	28.6	0	**0**	**7.3**	**24**	12:30a	NNE
20	40.1	30.8	**53.8**	1:30p	60	84	1985	**29.6**	9:00a	39	22	1951	24.9	0	**0**	**2.9**	**14**	11:00a	SSE
21	51.6	30.5	**67.3**	5:00p	61	86	1985	**38.6**	8:30a	39	23	1953	13.5	0.1	**0**	**4.3**	**18**	9:30a	SSE
22	56	34.3	**67.7**	6:30p	61	86	1985	**47**	7:30a	39	21	1993	9.1	0.1	**0**	**6.1**	**21**	12:30p	SSE
23	59.6	35	**73.3**	3:30p	62	85	1980	**52.7**	7:00a	39	18	1986	6.7	1.2	**0.11**	**4**	**25**	5:30p	SE
24	53.6	38.5	**59.6**	11:00a	62	85	1990	**44.9**	12:00m	40	28	1999	11.4	0	**0.01**	**9.1**	**26**	9:30p	SSW
25	43.9	36	**48.6**	12:00p	62	86	1990	**40.7**	11:30p	40	24	2018	21.1	0	**0.28**	**7.3**	**31**	11:30p	NNE
26	38.6	36.8	**42**	2:30a	63	88	1986	**36.2**	9:30a	40	24	1997	26.4	0	**0.28**	**11.3**	**35**	4:30a	N
27	49.8	40.6	**65.2**	4:00p	63	87	1994	**37**	7:30a	41	27	1988	15.2	0	**0.01**	**4.9**	**30**	9:30p	ESE
28	41.2	40.9	**55.8**	12:30a	64	85	1990	**37**	12:00m	41	24	1992	23.8	0	**0.01**	**18.4**	**42**	1:30p	WNW
29	44.9	43.1	**58.9**	5:30p	64	82	1970	**30.9**	6:00a	41	27	1979	20.1	0	**0**	**8**	**31**	6:30p	SSE
30	53.3	52.8	**63**	12:30p	64	87	1962	**46.3**	11:30p	42	30	1971	11.7	0	**0**	**11.2**	**31**	10:00a	S
31	40.2	50.6	**47.4**	12:30a	64	84	1986	**34.8**	10:00p	42	18	1954	24.8	0	**0**	**16**	**30**	9:30a	WNW
AVE	**42.7**	**38.0**											**22.4**	**0.1**	**0.0**	**8.0**	**26.8**		NNE
MAX	**61.3**	**53**	**73.3**			**88**		**55.7**		**42**	**30**		**34.1**	**1.2**	**0.28**	**18.4**	**46.0**		
MIN	**30.9**	**30.5**	**34.7**					**21.8**		**33**	**8**		**4.1**	**0**	**0**	**2.5**	**11**		
TOTAL															**0.85**				

Max Rain: 0.28 ON 03/25/21
Days of Rain: 6 (>.01 in) 3 (>.1 in) 0 (>1 in)

MONTHLY CLIMATOLOGICAL SUMMARY **April** **2021**

NAME: sjwwweather **St. Joseph Water Plant - 1701 Lions Park Drive - St. Joseph, MI**

DAY	MEAN TEMP	NORM MEAN TEMP	HIGH TEMP	TIME	NORM HIGH TEMP	REC HIGH TEMP	YEAR	LOW TEMP	TIME	NORM LOW TEMP	REC LOW TEMP	YEAR	HEAT DEG DAYS	COOL DEG DAYS	RAIN	AVG WIND SPEED	HIGH	TIME	DOM DIR
1	31.9	43	**35.6**	1:00a	53	83	1986	**28.3**	10:00a	33	17	1984	33.1	0	**0**	**23.7**	**39**	6:00a	N
2	37	44	**48.2**	8:00p	53	79	1963	**24.5**	7:30a	33	20	1992	28	0	**0**	**4.4**	**20**	12:30a	ESE
3	49.2	44	**62.2**	6:30p	54	80	1956	**38.3**	3:00a	33	18	1954	15.8	0	**0**	**7**	**31**	11:00a	SSW
4	56.9	45	**71.6**	7:30p	54	75	1956	**44.9**	8:00a	34	15	1993	8.5	0.4	**0**	**2.9**	**16**	8:00a	SSE
5	63.6	45	**71.2**	12:30p	55	82	1988	**56.2**	4:30p	34	18	1982	2.2	0.8	**0.08**	**6.3**	**23**	6:30a	SSE
6	66.5	45	**77.6**	7:00p	55	82	1988	**58.2**	8:00a	34	14	1982	1.6	3.1	**0**	**5.6**	**20**	3:00a	SSE
7	70.3	46	**79.6**	5:30p	55	79	2021	**60.2**	7:30a	35	9	1982	0.6	5.9	**0**	**5.9**	**22**	3:30p	SSE
8	63.5	46	**72.5**	4:00p	56	77	1991	**51.2**	10:00p	35	15	1972	2.9	1.4	**0.18**	**5.5**	**34**	6:30p	SSE
9	55	46	**64.6**	2:00p	56	76	2017	**49.8**	7:30a	35	15	1985	10	0	**0.05**	**6.1**	**29**	9:30a	SSE
10	55.6	47	**68.3**	1:30p	57	80	1977	**47.9**	7:00a	36	15	1997	9.5	0.1	**0.23**	**3.1**	**32**	9:30p	SSE
11	48.3	47	**53.6**	12:30a	57	79	1977	**43.4**	10:00p	36	18	1952	16.7	0	**0**	**4.3**	**15**	12:30a	SSE
12	48.8	47	**57.7**	5:00p	57	82	1971	**43.3**	12:30a	36	21	1982	16.2	0	**0**	**5.8**	**16**	9:30a	SW
13	48.1	48	**53.7**	6:00p	58	77	1960	**43.5**	12:00m	36	18	1950	16.9	0	**0**	**9.1**	**21**	3:00p	SW
14	43.6	48	**51.1**	3:30p	58	79	1976	**39.8**	10:30p	37	21	1982	21.4	0	**0**	**10.7**	**28**	9:30a	W
15	41.8	48	**45**	6:30p	59	83	1976	**40.1**	12:30a	37	16	1957	23.2	0	**0**	**15.1**	**32**	11:30a	WNW
16	40.8	49	**43**	4:00a	59	86	1976	**39.1**	9:00p	37	24	1990	24.2	0	**0**	**12**	**23**	7:00a	N
17	42.5	49	**47.2**	7:30p	59	84	1976	**40.2**	3:00a	38	25	1949	22.5	0	**0**	**9.8**	**19**	6:00p	N
18	49.5	49	**59**	7:30p	60	86	2002	**42**	2:00a	38	19	1990	15.5	0	**0**	**5.2**	**14**	12:30a	SSW
19	46.6	50	**54.6**	1:00a	60	84	1985	**41.6**	4:30p	38	18	1988	18.5	0	**0.21**	**9.6**	**25**	7:00a	WNW
20	38.8	50	**42.5**	12:30a	60	84	1985	**35.8**	1:30p	39	22	1951	26.2	0	**0.01**	**12.5**	**27**	5:30a	N
21	38.1	50	**46.9**	4:00p	61	86	1985	**33**	12:00m	39	23	1953	26.9	0	**0**	**8.7**	**23**	12:30a	N
22	43.7	51	**52.3**	8:00p	61	86	1985	**32.2**	1:30a	39	21	1993	21.3	0	**0**	**8.4**	**23**	9:30a	N
23	52.2	51	**62.4**	3:30p	62	85	1980	**46.8**	6:30a	39	18	1986	12.8	0	**0**	**8.8**	**25**	5:30a	SW
24	51.4	51	**57.4**	4:30p	62	85	1990	**48**	3:30a	40	28	1999	13.6	0	**0**	**3**	**17**	3:00p	SSE
25	39.4	52	**50.3**	12:30a	62	86	1990	**37.4**	10:30p	40	25	1949	25.6	0	**0.03**	**17.1**	**37**	1:30a	N
26	56.5	52	**74.7**	6:30p	63	88	1986	**38.4**	12:30a	40	24	1997	10.7	2.2	**0**	**5.5**	**28**	5:00p	SSE
27	68.5	52	**83**	7:00p	63	87	1994	**61**	11:30p	41	27	1988	0.4	3.9	**0**	**8.4**	**29**	9:00a	SSW
28	45.5	53	**63.3**	12:30a	64	85	1990	**43.1**	4:00p	41	24	1992	19.5	0	**0.04**	**7.6**	**19**	10:00a	N
29	47	53	**55.3**	6:30p	64	82	1970	**43.9**	1:30a	41	27	1979	18	0	**0.06**	**6.5**	**21**	10:30a	N
30	45.5	53	**49.5**	9:00a	64	87	1962	**40.1**	11:00p	42	30	1971	19.5	0	**0.01**	**14**	**38**	9:30a	N
31																			
AVE	**49.5**	**48.5**											**16.1**	**0.6**	**0.0**	**8.4**	**24.9**		N
MAX	**70.3**	**53**	**83**			**88**		**61**		**42**	**30**		**33.1**	**5.9**	**0.23**	**23.7**	**39.0**		
MIN	**31.9**	**43**	**35.6**					**24.5**		**33**	**9**		**0.4**	**0**	**0**	**2.9**	**14**		
TOTAL															**0.9**				

Max Rain: 0.23 ON 04/10/21
Days of Rain: 8 (>.01 in) 3 (>.1 in) 0 (>1 in)