

**CITY OF ST. JOSEPH WATER FILTRATION PLANT
OPERATIONAL REPORT
JUNE 2022**



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.

Attachment: MONTHLY ACTIVITY REPORT JUNE 2022 (8085 : Superintendent Report for June 2022)

WATER PLANT/DISTRIBUTION REPORT- JUNE 2022

Water demand in June was down by 20,833,298 gallons representing a 10% decrease from 2021. This year 187,863,490 gallons were delivered which compares to 207,863,490 gallons in 2021. The June 2022 pumpage ranks 17th in the thirty-year tabulation dating back to 1993.

GENERAL ACTIVITIES

North Boiler Replacement

Upon approval by both boards in June new boilers were ordered by the contractor. Due to availability issues, the model specified in the bidding documents; a 750,000 BTU unit will not be available until November of this year. The manufacturer offered a 1,000,000 BTU unit for the same price that would be shipped in September. The larger unit will have a lower turn down which will be more economical. Two units were specified in the project.

Corrosion Control Treatment

The professional services agreement is in progress. A project kick-off meeting will be held in July. Cast iron and lead pipe sections will be prepared and shipped for scale analysis beginning in July.

2021 Consumer Confidence Report

The 2021 Consumer Confidence Report was issued in June. It was posted on the city website. Copies were mailed to all customers residing in the city and authority service areas. In addition, staff delivered multiple copies community organizations, local city and township offices and multifamily housing units. This is a water quality report that is a compilation of all water testing done during the year. In addition, public education articles are included again this year on lead in drinking water and residential cross connection control.

SCIP Phase II Design and Construction Engineering

The RFP was advertised in June on the City web site, in the Herald Palladium and on MITA. Bids are due July 27th. Three firms have shown interest and have requested bidding documents and plant plans. SCIP II includes design engineering budgeted in 2022/2023 and construction engineering for the construction phase of engineering in 2023/2024 and 2024/2025.

Staff

Maintenance Foreman Mark Thornton accepted a job offer in private industry locally. One of our operators has begun retirement paperwork and has set a tentative retirement date.

Lead Service Line Replacement-Ongoing

Staff continues to meet weekly with the lead service line replacement team to discuss lead service line identification, replacement, water sampling and planning.

Travel & Training

Greg attended a meeting of the Michigan Section AWWA Historical Preservation Committee in Lake Odessa.

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Monthly Maintenance Notes

June 2022

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
6/1 to 6/6/22	Remove concrete pads in old chlorine feed room
06/08/22	Removed mudballs in Filter # 8.
06/10/22	Total Fire - service call for security cameras, update system and repair one camera
06/10/22	UCC - Inspection of both the 24" intake crib and the 48" intake cribs
06/14/22	Filled Plant and Cleveland BPS Generators up with Fuel.
06/15/22	Added (2) Full bags of Anthracite to Filter # 8, Backwashed and chlorinated filter
6/16 & 6/17/22	Bacti Testing on Filter # 8
06/22/22	Repaired leak on Fluoride Day Tank, installed new gasket for drain valve
06/23/22	Peerless Midwest - Installed rebuild lift pump #1 in pit by Alum Storage Tanks
6/27 to 6/29/22	Andy Egan - Installed new Chlorinator at the Hilltop BPS and all new associated piping.

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

June 2022

DISTRIBUTION:	
Total Gallons	187,030,192
Average Day	6,234,340
Maximum Day	8,861,797
Minimum Day	3,865,424

TREATMENT:	
Total Low Service	193,297,275
Wash Water Gals.	1,413,779
Wash Water %	0.71%
Plant Use Gals.	25,150
Plant Use %	0.01%

FILTRATION:		
Ave. Filter Run	171.2	hours
Ave. Filter Rate	2.31	g/sqft/min
Filter Eff. Index	229.8	
Ave. Loss of Head	4.5	feet
Plant Sewer Usage		

LABORATORY REPORT		
Average of	Raw	Tap
Chlorides mg/L	18.1	19.4
Fluoride mg/L	0.14	0.72
Alkalinity mg/L	111	99
Hardness mg/L	139	135
pH	8.2	7.4
Calcium mg/L	37	36
Magnesium mg/L	11	11
Turbidity NTU	4.95	0.04
Temperature °F	60	
Total Coliform		0.0
Chlorine Residual		
Mixing Basin		0.82
Applied		0.80
Tap		1.44
Distribution		1.17

TREATMENT CHEMICAL SUMMARY:					
	Applied mg/L	Total Lbs.	Cost	Inventory lbs.	Days Supply
Alum (Al ⁺³)	22.53	36,175	\$11,798.75	48,853	20
Chlorine (Cl ₂)	2.52	4,111	\$6,984.78	6,395	47
Fluoride (F ₂)	0.56	889	\$1,556.97	6,875	44

		REMARKS:	
Total Cost all Chemicals	\$20,340.50		
Chemical Cost per Mil. Gallon Treated	\$105.23		
Chemical Cost per Mil. Gallon Delivered	\$106.04		
PLANT UTILITIES SUMMARY			
Electric:			
Total KWH	271,947	***includes measure of melted snow	
Total Power Cost	\$ 19,036.29	visit the City of Saint Joseph's Home page at www.sjcity.com	
Power Cost per Million Gallon Treated	\$ 98.48	e-mail comments to either: operator@sjcity.com or galimenti@sjcity.com	
Power Cost per Million Gallon Delivered		WEATHER CONDITIONS AT THE PLANT	
Gallons Pumped per KWH	463	SJWW Weather Computer	Air Temp. °F
		Rain Guage, Inches	Avg. 70.2
		days it rained***	Max. 96.1
Natural Gas:		Wind Speed, Avg	Min. 51.8
Metered Cubic Feet		Wind Speed, Max	Avg. 60.3
Natural Gas Cost		Prevailing Wind Dir.	Max 72.8
Emergency Power Diesel Fuel Inv., Gals.	North 2100	Lake Level (USACE)	580.12
	South 700		Min 47.5

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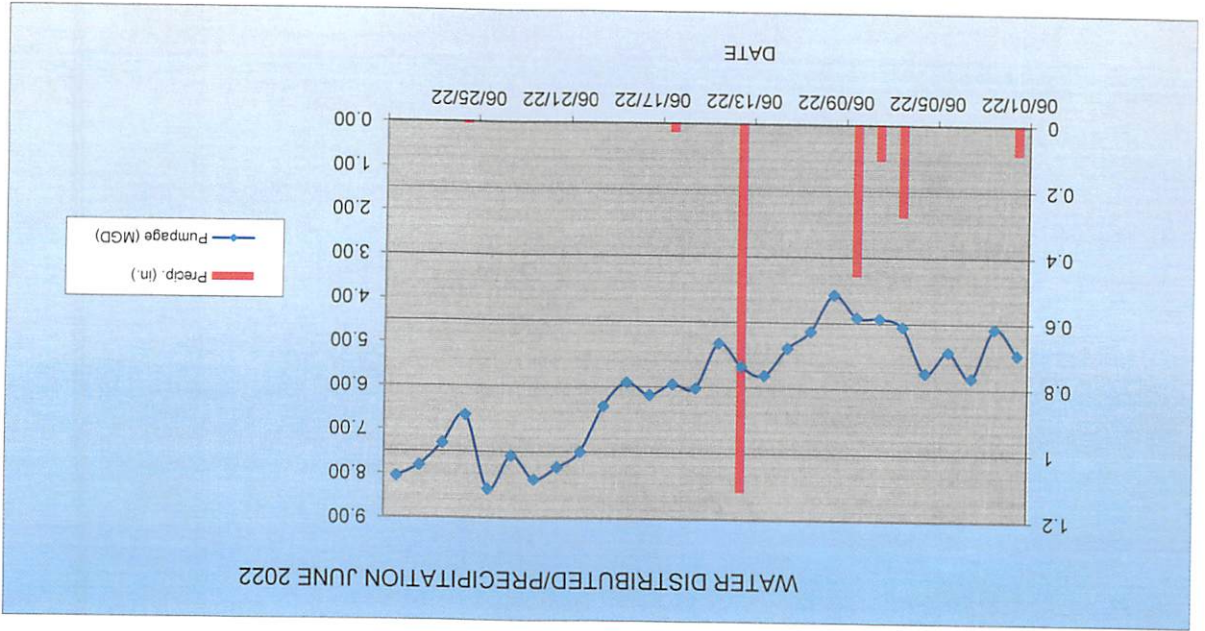
SOUTHWEST MICHIGAN REGIONAL SANITARY SEWER & WATER AUTHORITY
CLEVELAND BOOSTER STATION

WSSN 3726

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-Jun	2.397	316	44.80	2.24	1.61	1.29	1.22	1.432	77	10.92	0.91	1.45	1.35	1.34	3.82
2-Jun	2.751	347	49.20	2.14	1.40	1.52	1.43	0.026	0	0.00	0.00	1.34	1.94	1.58	2.77
3-Jun	3.739	435	61.67	1.98	1.38	1.40	1.32	1.401	79	11.20	0.96	1.35	1.31	1.30	5.14
4-Jun	2.237	229	32.47	1.74				1.272	70	9.92	0.94				3.51
5-Jun	2.237	229	32.47	1.74				1.272	70	9.92	0.94				3.51
6-Jun	2.237	229	32.47	1.74	1.45	1.94	1.87	1.272	70	9.92	0.94	1.24	1.81	2.04	3.51
7-Jun	2.542	260	36.86	1.74	1.36	1.88	1.78	0.919	53	7.51	0.98	1.37	2.07	2.13	3.46
8-Jun	2.177	210	29.77	1.64	1.59	1.35	1.27	0.102	8	1.13	1.34	1.41	1.63	1.61	2.27
9-Jun	2.580	270	38.28	1.78	1.82	1.42	1.34	0.010	0	0.00	0.00	1.12	1.64	1.57	2.59
10-Jun	3.667	379	53.73	1.76	1.45	1.97	1.91	0.567	17	2.41	0.51	1.49	1.97	1.95	4.23
11-Jun	2.015	188	26.65	1.59				1.269	59	8.37	0.79				3.28
12-Jun	2.015	188	26.65	1.59				1.269	59	8.37	0.79				3.28
13-Jun	2.015	188	26.65	1.59	1.38	2.07	2.13	1.269	59	8.37	0.79	1.46	2.16	2.29	3.28
14-Jun	2.649	249	35.30	1.60	1.38	1.35	1.29	1.618	79	11.20	0.83	1.48	1.94	1.90	4.26
15-Jun	2.143	194	27.51	1.54	1.40	1.36	1.27	1.228	48	6.81	0.66	1.49	1.84	1.79	3.37
16-Jun	3.307	283	40.12	1.46	1.49	1.85	1.78	1.800	50	7.09	0.47	1.57	1.99	1.96	5.10
17-Jun	2.099	190	26.94	1.54	1.42	1.84	1.71	1.333	36	5.10	0.46	1.42	1.90	1.84	3.43
18-Jun	2.787	238	33.74	1.45				1.807	24	3.40	0.23				4.59
19-Jun	2.787	238	33.74	1.45				1.807	24	3.40	0.23				4.59
20-Jun	2.787	238	33.74	1.45	1.46	2.09	2.06	1.807	24	3.40	0.23	1.46	1.88	1.69	4.59
21-Jun	2.695	217	30.77	1.37	1.42	1.72	1.68	2.655	95	13.47	0.61	1.50	1.81	1.83	5.35
22-Jun	4.019	359	50.90	1.52	1.38	2.19	2.23	2.196	73	10.35	0.57	1.42	1.70	1.59	6.21
23-Jun	3.654	318	45.09	1.48	1.65	2.11	1.90	2.255	78	11.06	0.59	1.44	1.89	1.79	5.90
24-Jun	2.966	245	34.74	1.40	1.31	1.26	1.26	2.545	82	11.63	0.55	1.35	1.50	1.48	5.51
25-Jun	3.753	313	44.38	1.42				1.917	66	9.36	0.59				5.67
26-Jun	3.753	313	44.38	1.42				1.917	66	9.36	0.59				5.67
27-Jun	3.753	313	44.38	1.42	1.54	1.96	1.88	1.917	66	9.36	0.59	1.42	1.58	1.52	5.67
28-Jun	3.956	409	57.99	1.76	1.43	1.72	1.63	2.405	0	0.00	0.00	1.43	1.41	1.35	6.36
29-Jun	3.298	316	44.80	1.63	1.38	1.67	1.62	1.990	0	0.00	0.00	1.38	1.41	1.28	5.28
30-Jun	4.534	463	65.64	1.74	1.47	1.73	1.66	2.003	0	0.00	0.00	1.22	1.35	1.20	6.53
TOTAL	87.547	8,364	1,185.8					45.280	1,432	203.03					132.82
AVE DAY	2.918		39.5	1.63	1.5	1.7	1.6	1.5093		6.8	0.57	1.40	1.73	1.68	4.42
MAX	4.534		65.6	2.24	1.8	2.2	2.2	2.6546		13.5	1.34	1.57	2.16	2.29	6.53
MIN	2.015		26.7	1.37	1.3	1.3	1.2	0.0099		0.0	0.00	1.12	1.31	1.2	2.27
MONTHLY TOTALS:	Cleveland Total MG			SJCT EAST				Hilltop Total MG			Cleveland Pump Station:			87.54	
Average Day	4.286	Chl Add	87.547	Average Day		0.222		Chl Add		38.846	Hilltop Pump Station:			45.28	
Max Day (Est)	6.865	No Chl Add	0.000	Max Day (Est)		0.328		No Chl Add		6.434	TOTAL AUTHORITY (Trted.)			132.82	
Total Authority Flow:	132.871			Month Total		6.670									

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Average Day	6,234,340
Maximum Day	8,861,797
Minimum Day	3,865,424

DATE	PUMPAGE (gallons)	PUMPAGE (MGD)	RAINFALL (in)	Day to Day Comparison 2022/2021
06/01/22	5,214,063	5.21	0.09	2021
06/02/22	4,623,520	4.62	0	7,568,349
06/03/22	5,754,965	5.75	0	8,133,592
06/04/22	5,157,296	5.16	0	8,411,955
06/05/22	5,645,099	5.65	0	9,084,889
06/06/22	4,590,807	4.59	0.28	9,328,125
06/07/22	4,401,085	4.40	0.11	7,286,988
06/08/22	4,380,211	4.38	0.46	6,046,070
06/09/22	3,865,424	3.87	0	7,597,660
06/10/22	4,708,352	4.71	0	6,613,391
06/11/22	5,098,241	5.10	0	8,336,512
06/12/22	5,728,452	5.73	0	7,936,898
06/13/22	5,525,543	5.53	1.12	8,339,980
06/14/22	4,997,903	5.00	0	8,483,075
06/15/22	6,033,818	6.03	0	7,972,977
06/16/22	5,941,967	5.94	0.03	8,508,468
06/17/22	6,192,652	6.19	0	8,393,047
06/18/22	5,915,069	5.92	0	6,707,163
06/19/22	6,458,387	6.46	0	6,999,766
06/20/22	7,505,481	7.51	0	6,182,306
06/21/22	7,856,740	7.86	0	5,744,103
06/22/22	8,128,414	8.13	0	5,789,533
06/23/22	7,600,809	7.60	0	6,629,565
06/24/22	8,362,098	8.36	0	5,754,657
06/25/22	6,679,975	6.68	0.01	5,061,784
06/26/22	7,325,963	7.33	0	4,747,011
06/27/22	7,832,705	7.83	0	4,445,395
06/28/22	8,076,360	8.08	0	4,777,766
06/29/22	8,566,996	8.57	0	4,656,400
06/30/22	8,861,797	8.86	0	5,091,514
TOTAL	187,030,192	187.03	2.10	207,863,490

ST JOSEPH WATER PLANT PUMPAGE-WATER DELIVERED/RAINFALL

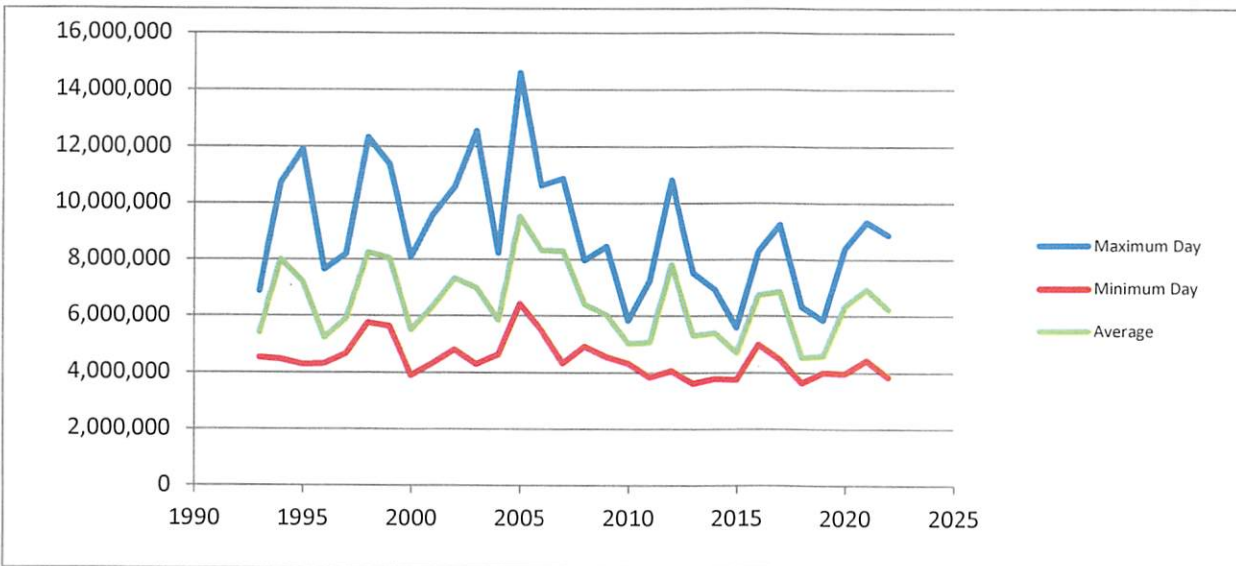
JUNE 2022

ST JOSEPH WATER PLANT PUMPAGE-WATER DELIVERED

JUNE 2022

Year	Average	Maximum Day	Minimum Day	Monthly Total
1993	5,393,460	6,855,200	4,530,100	161,803,800
1994	7,998,343	10,718,900	4,478,600	239,950,300
1995	7,198,127	11,928,500	4,300,200	215,943,800
1996	5,213,475	7,647,600	4,314,450	156,404,250
1997	5,904,247	8,197,900	4,666,500	177,127,400
1998	8,245,142	12,326,050	5,760,800	247,354,250
1999	8,054,910	11,383,350	5,645,950	241,647,300
2000	5,492,322	8,084,500	3,917,500	164,769,650
2001	6,333,114	9,586,150	4,343,000	189,993,420
2002	7,326,472	10,561,700	4,826,500	219,794,150
2003	6,994,901	12,554,770	4,311,750	209,847,020
2004	5,847,159	8,226,140	4,644,750	175,141,780
2005	9,527,567	14,599,440	6,436,750	285,827,000
2006	8,336,510	10,615,250	5,508,500	250,095,310
2007	8,299,610	10,869,000	4,339,000	248,988,310
2008	6,408,335	7,971,500	4,935,500	192,250,040
2009	6,022,007	8,461,750	4,564,750	180,660,240
2010	5,013,884	5,824,610	4,342,220	150,416,523
2011	5,064,754	7,249,460	3,858,296	151,942,626
2012	7,827,161	10,828,342	4,079,686	234,814,831
2013	5,291,064	7,524,443	3,631,587	158,731,916
2014	5,384,486	6,917,391	3,804,617	161,534,590
2015	4,683,259	5,577,110	3,772,989	140,497,782
2016	6,734,530	8,276,178	4,995,643	202,035,888
2017	6,854,131	9,247,518	4,488,072	205,623,938
2018	4,517,746	6,317,607	3,660,076	135,532,382
2019	4,592,117	5,846,428	4,030,711	137,763,518
2020	6,351,734	8,398,996	3,994,222	190,552,034
2021	6,928,783	9,328,125	4,445,395	207,863,490
2022	6,234,340	8,861,797	3,865,424	187,030,192

Rank	Year	Monthly Total
1	2005	285,827,000
2	2006	250,095,310
3	2007	248,988,310
4	1998	247,354,250
5	1999	241,647,300
6	1994	239,950,300
7	2012	234,814,831
8	2002	219,794,150
9	1995	215,943,800
10	2003	209,847,020
11	2021	207,863,490
12	2017	205,623,938
13	2016	202,035,888
14	2008	192,250,040
15	2020	190,552,034
16	2001	189,993,420
17	2022	187,030,192
18	2009	180,660,240
19	1997	177,127,400
20	2004	175,141,780
21	2000	164,769,650
22	1993	161,803,800
23	2014	161,534,590
24	2013	158,731,916
25	1996	156,404,250
26	2011	151,942,626
27	2010	150,416,523
28	2015	140,497,782
29	2019	137,763,518
30	2018	135,532,382



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JUNE 2022

CITY OF ST. JOSEPH

WSSN 6310

	TOC Compliance							
	Treated	Source	Formula		Req. TOC	Actual	Alternative	Compl. Perf.
	Tap	Tap	Ratio	Alka- linity	Removal	Ratio/ Remov	Criteria Complied Y/N	
July	1.61	1.98	18.7	111	25	0.75	Yes	1.00
August	1.47	1.92	23.4	112	25	0.94	Yes	1.00
September	1.60	1.90	15.8	112	25	0.63	Yes	1.00
						0.77		
October	1.75	2.61	33.0	122	15	2.20	N(Removal)	2.20
November	1.49	1.85	19.5	121	15	1.30	N(Removal)	1.30
December	2.72	2.98	8.7	130	15	0.58	Yes	1.00
						1.36		
January	1.60	1.95	17.9	118	25	0.72	Yes	1.00
February	1.49	1.89	21.2	133	15	1.41	N(Removal)	1.41
March	1.75	1.93	9.3	119	25	0.37	Yes	1.00
						0.83		
April	1.77	2.04	13.2	102	25	0.53	Yes	1.00
May	1.71	2.01	14.9	109	25	0.60	Yes	1.00
June	1.67	1.96	14.8	107	25	0.59	Yes	1.00
Qtr Average						0.57		
Annual Avg.	1.72	2.10				0.88		1.17

7/12/202
8/18/202
9/9/202
10/24/202
11/9/202
12/15/202
1/12/202
2/17/202
3/8/202
4/13/202
5/18/202
6/14/202

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STAGE 2 D/DBPR MONITORING-HALOACETIC ACIDS

JUNE 2022

WSSN 6310

SITE: DBP1

Date	09/17/21
Location	Blossomland
Dibromoacetic acid	<1
Dichloroacetic acid	3.9
Monobromoacetic acid	<1
Monochloroacetic acid	<2
Trichloroacetic acid	6
Total HAA5	9.9

Date	12/15/21
Location	Blossomland
Dibromoacetic acid	<1
Dichloroacetic acid	3.5
Monobromoacetic acid	<1
Monochloroacetic acid	<2
Trichloroacetic acid	8.8
Total HAA5	12.3

Date	03/17/22
Location	Blossomland
Dibromoacetic acid	<1
Dichloroacetic acid	14
Monobromoacetic acid	<1
Monochloroacetic acid	<2
Trichloroacetic acid	15
Total HAA5	29

Date	06/14/22
Location	Blossomland
Dibromoacetic acid	<1
Dichloroacetic acid	11
Monobromoacetic acid	<1
Monochloroacetic acid	<2
Trichloroacetic acid	9.1
Total HAA5	20.1

RAA 18 µg/l

STAGE 2 D/DBPR MONITORING-TTHM

JUNE 2022

WSSN 6310

SITE: DBP1

Date	09/17/21
Location	Blossomland
Bromodichloromethane	15
Bromoform	0.62
Chloroform	29
Dibromochloromethane	6.9
Total Trihalomethanes	51.52

Date	12/15/21
Location	Blossomland
Bromodichloromethane	13
Bromoform	0.62
Chloroform	32
Dibromochloromethane	4.5
Total Trihalomethanes	49.5

Date	03/17/22
Location	Blossomland
Bromodichloromethane	10
Bromoform	<0.5
Chloroform	22
Dibromochloromethane	3.3
Total Trihalomethanes	35.3

Date	06/14/22
Location	Blossomland
Bromodichloromethane	12
Bromoform	<0.5
Chloroform	23
Dibromochloromethane	4.5
Total Trihalomethanes	39.5

RAA 44 µg/l

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MONTHLY CLIMATOLOGICAL SUMMARY

May 2022

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	50.9	54	57.7	1:00a	65	86	1951	46.1	8:30p	42	27	1979	14.1	0	0.24	10.4	22	6:00p	N
2	48	54	53.1	4:00p	65	87	1959	44.7	8:30a	42	25	1990	17	0	0	6.4	19	12:30a	N
3	48.6	54	53.2	4:00p	65	87	1955	43.6	12:00m	43	29	1971	16.4	0	0.7	8.9	33	7:00p	N
4	44.4	55	48.4	3:30p	66	87	1949	42.2	7:30a	43	30	1961	20.6	0	0	10.2	23	1:00a	N
5	51.2	55	60.9	2:00p	66	88	1949	42.3	3:30a	43	30	1971	13.8	0	0.1	1.7	14	11:00p	NE
6	52.2	55	56.4	9:00p	66	89	1959	48.6	6:30p	44	25	1989	12.8	0	0.36	5.3	21	2:00p	NNE
7	52	56	65.7	1:00p	67	85	1965	45.3	7:00a	44	26	1992	13	0	0	6.9	21	3:00p	NNE
8	58.5	56	69.1	2:00p	67	85	1965	46	7:30a	44	25	1989	7.1	0.6	0	3.1	19	1:00p	SE
9	67.6	56	81.5	6:00p	68	89	1993	52.1	5:00a	44	25	1955	3.8	6.4	0	6.9	29	5:00p	SSE
10	77.6	57	89.5	5:30p	68	89	2022	66.5	7:00a	45	29	1966	0	12.6	0	5.5	24	9:30a	SSE
11	79.1	57	92	3:30p	68	92	2022	68.9	6:00p	45	28	1949	0	14.1	0	3.3	20	5:30p	SSE
12	80.2	58	91.4	5:30p	69	91	2022	69.8	7:30a	45	30	1951	0	15.2	0	4	22	5:30p	SSE
13	77.5	58	91.5	5:00p	69	91	2022	64.4	7:00a	46	26	1996	0	12.5	0	3.2	18	5:30p	SSE
14	67.5	58	76.4	12:30a	69	92	1982	60.6	12:00m	46	32	1996	0.7	3.2	0	2.7	13	3:00p	SSE
15	61.2	59	67	3:30a	70	90	1982	54.8	12:00m	46	33	1992	4	0.2	0.08	5	14	5:30a	N
16	60.8	59	71	5:00p	70	89	1977	54.6	1:00a	47	28	1984	4.7	0.5	0	5.6	18	5:30a	SW
17	56.1	59	60.8	10:00a	70	93	1962	50.3	7:00a	47	30	1973	8.9	0	0	6.6	20	4:00p	N
18	56.6	60	60.6	7:00p	71	92	1962	51.2	12:00m	47	32	1952	8.4	0	0.19	3.3	18	9:30p	E
19	64.9	60	85.1	7:00p	71	93	1975	48.1	3:30a	48	35	1948	5.3	5.2	0	5.1	22	11:30p	SSW
20	70.5	60	84.3	12:30p	72	91	1975	56.9	12:00m	48	33	1997	1	6.5	0	8.8	37	1:30p	S
21	55.9	61	59.5	11:00a	72	90	1977	53.4	4:30p	48	31	1954	9.1	0	1.05	6.6	27	1:30p	N
22	52.5	61	57.2	5:00p	72	90	1977	48.4	12:00m	49	32	1997	12.5	0	0	6.5	20	10:30a	N
23	52.3	61	60.9	12:00p	73	90	1964	45.8	3:30a	49	32	1990	12.7	0	0	8.8	27	7:30p	N
24	57.2	62	71.7	3:30p	73	88	1981	50.2	7:00a	50	34	1948	8.2	0.4	0	4.3	22	6:30p	NNE
25	66	62	78.4	4:30p	73	91	2018	57.8	2:00a	50	27	1992	2.6	3.7	0.83	3.8	20	9:00p	SSE
26	70.2	62	75.9	2:30p	74	92	2020	65.4	12:00m	50	26	1988	0	5.2	0	5	22	1:00a	S
27	55.2	63	65.5	4:00a	74	93	2018	49.3	4:30p	51	24	1992	9.8	0	0.13	7.8	25	3:00p	N
28	59.6	63	71.8	8:30p	74	96	2018	48.4	6:00a	51	26	1992	6.5	1.1	0	2.7	12	12:30a	N
29	73.6	63	85.5	4:30p	75	91	1991	61.2	6:30a	51	32	1992	0.7	9.3	0	6.1	23	3:30p	S
30	78	64	91.1	5:30p	75	91	1987	69.3	7:00a	52	32	1990	0	13	0	7.8	27	6:30p	S
31	77.9	64	84	7:30p	75	89	1988	71.2	12:00m	52	31	1990	0	12.9	0	9.4	29	9:00a	S
AVE	62.1	58.9											6.9	4.0	0.1	5.9	22.0		N
MAX	80.2	64	92			96		71.2		52	35		20.6	15.2	1.05	10.4	37.0		
MIN	44.4	54	48.4					42.2		42	24		0	0	0	1.7	12		
TOTAL															3.68				

Attachment: MONTHLY ACTIVITY REPORT JUNE 2022 (8085 : Superintendent Report for June 2022)

Max Rain: 1.05 ON 05/21/22
 Days of Rain: 9 (>.01 in) 7 (>.1 in) 1 (>1 in)

MONTHLY CLIMATOLOGICAL SUMMARY

June

2022

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	62.9	71	74.6	2:30a	82	95	1963	56.1	12:00m	59	39	1982	3.3	1.1	0.09	6.4	21	12:00p	N
2	64.1	71	75.1	2:00p	82	96	1974	54.9	1:30a	60	40	1988	3.7	2.8	0	3.4	13	7:30a	N
3	66.1	71	78.1	7:00p	82	95	1974	60.6	3:00a	60	39	1988	1.4	2.5	0	6	21	6:30a	SSW
4	61.4	71	69.9	10:30a	82	96	1990	51.8	5:30a	60	43	1996	4	0.3	0	3.1	16	1:30p	N
5	66.9	71	77.8	7:30p	82	95	1990	59.9	3:00a	60	43	1996	1.6	3.5	0	2.9	15	3:30p	E
6	68	72	76.6	8:00p	82	97	1991	59.5	11:30p	60	43	1972	0.6	3.6	0.28	4.4	23	10:30a	SSE
7	55.5	72	60.5	12:30a	82	95	1980	52.5	8:30a	60	43	1983	9.5	0	0.11	9.3	22	11:00a	N
8	59.6	72	71.3	11:30a	82	95	1980	53	5:00a	60	39	1984	6.3	1	0.46	4.3	21	4:30p	N
9	60.9	72	72.7	7:30p	82	95	1988	53.4	6:30a	60	49	1963	5.3	1.1	0	5.9	25	12:30a	SSW
10	65.2	72	73.8	2:30p	82	95	1976	60.1	12:30a	60	45	1962	1.6	1.8	0	5	15	4:30p	SSW
11	66.6	72	75.6	5:30p	82	93	1984	59	7:30a	60	41	1996	1.7	3.3	0	4.3	14	5:00a	SSW
12	63	72	68.4	12:30a	82	95	1987	60.2	10:00a	60	48	1975	2.1	0.1	0	7	20	5:30p	N
13	76	72	91.7	5:00p	82	99	1995	61.6	4:30a	60	48	1990	0.6	11.5	1.12	3	50	7:30p	S
14	82.8	72	96.1	7:30p	82	100	1995	71.6	1:00a	61	46	1950	0	17.8	0	6.2	30	1:00a	SSW
15	86.1	72	95.2	7:00p	82	99	1995	79.7	7:30a	61	47	1960	0	21.1	0	9	30	12:00m	S
16	77.4	72	87.4	12:30a	82	99	1988	70.2	5:00a	61	46	1987	0	12.4	0.03	8.5	40	3:00a	SSW
17	73	72	86.4	4:30p	82	95	1986	67.1	11:30p	61	45	1985	0	8	0	8.1	20	9:30p	WNW
18	63	72	68.9	10:30a	82	93	1986	58.2	12:00m	61	48	1979	2.4	0.4	0	9.9	25	4:00p	N
19	69.9	72	85.4	2:00p	82	95	1991	54.4	6:00a	61	47	1979	2.8	7.7	0	3	13	11:00p	ESE
20	77.8	72	90.2	8:00p	82	96	1980	68	8:00a	61	46	1951	0	12.8	0	7.8	27	4:00a	SSW
21	80.4	72	88.3	5:00p	82	95	1983	74.5	4:30a	61	44	1970	0	15.4	0	11.2	24	8:30a	SSW
22	76	72	87	5:00p	82	96	1983	69.7	12:00m	61	47	1970	0	11	0	5.9	22	12:30a	WNW
23	71.8	72	81.8	8:00p	82	96	1983	63.8	7:00a	60	44	1985	0.1	6.8	0	4.5	13	12:30p	N
24	74.3	72	88.5	1:30p	82	94	1965	60.6	5:00a	60	42	1957	0.8	10.1	0	2.5	10	8:30a	E
25	73.3	72	77.9	12:00p	82	92	1964	67.7	7:00a	60	50	1990	0	8.3	0.01	3.6	22	1:30p	S
26	73.1	72	83.6	5:00p	82	92	1966	69	12:00p	60	49	1961	0	8.1	0	8.4	25	10:00a	WNW
27	67	72	70.5	7:30p	82	91	1949	59.1	12:00m	60	45	1991	0.5	2.4	0	8.8	25	8:30a	WNW
28	70.1	72	81.8	7:00p	82	99	1983	57	2:00a	60	51	1992	2.2	7.3	0	5.2	18	12:00m	SSE
29	74.7	72	86	3:00p	82	100	1983	68.2	6:00a	60	46	1968	0	9.7	0	6.8	20	1:30a	SW
30	79.6	72	87.9	8:30p	82	104	1999	72	1:00a	60	47	1984	0	14.6	0	7.4	22	3:30a	S
31																			
AVE	70.2	71.8											1.7	6.9	0.1	6.1	22.1		SSW
MAX	86.1	72	96.1			104		79.7		61	51		9.5	21.1	1.12	11.2	50.0		
MIN	55.5	71	60.5					51.8		59	39		0	0	0	2.5	10		
TOTAL															2.1				

Attachment: MONTHLY ACTIVITY REPORT JUNE 2022 (8085 : Superintendent Report for June 2022)

Max Rain: 1.12 ON 06/13/22
 Days of Rain: 6 (>.01 in) 4 (>.1 in) 1 (>1 in)