

CITY OF ST. JOSEPH WATER FILTRATION PLANT

OPERATIONAL REPORT

JULY 2014



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 REPORT-JULY 2014

Water demand in July was down up by 43,080,000 gallons from last year which represents a 21% decrease. This year only 162,504,136 gallons were delivered which compares to 205,584,737 gallons delivered in July of 2013. The 2014 July pumpage ranked 30th in the 30 year tabulation dating back to 1985.

GENERAL ACTIVITIES

Water Plant Security

Simplex Grinnell was approved to install security cameras and card access at the water plant. The equipment is on order and is expected by sometime in August. The plan is for Mead & White and water plant staff to route and run conduit and for Simplex Grinnell to furnish and install the equipment. Installation is currently underway at City Hall.

Strategic Capital Improvement Plan

Plant staff met with the full team from CH2M Hill at the water plant in July. Hill brought in experts in mechanical, architectural and electrical systems to complete the condition assessment phase of the plan. To date the Asset Hierarchy and Process Assessment have been completed. The anticipated completion date is in October.

Benton Harbor Emergency Interconnect

Work is currently underway on the rehabilitation of the M63 Interconnect. Staff has ordered replacement bolts for all of the pipe flanges and valve housings located inside of the vault. Air Therm is replacing the bolts by cutting out the old ones with a welder and installing new. Staff is looking into the replacement of the roof slab and reinforcement of the walls. The City of Benton Harbor has expressed interest in contributing to this effort.

In addition, the Cities of St. Joseph and Benton Harbor are working together to draft an emergency interconnect agreement. The City Managers and Mr. Alimenti met on May 6th to review the draft document. The City Attorney reviewed the draft and made recommendations. Abonmarche is preparing a site plan and layout of the valve vault which will be included as an exhibit in the agreement which should be ready by the week of August 18th.

Unregulated Contaminant Monitoring (UCMR) III – 2013 Testing Results

As part of the federal drinking water program, USEPA issues a list of currently unregulated contaminants to be tested by Public Water Systems throughout the nation. This process occurs every five years pursuant to the Unregulated Contaminant Monitoring Rule (UCMR). The purpose of the UCMR program is to determine the prevalence of unregulated contaminants in drinking water. Results of this testing help USEPA determine whether or not to regulate new contaminants for protection of public health.

There have been three cycles of monitoring: UCMR 1 (2001-2003), UCMR 2 (2008-2010), and UCMR 3 (2013-2015). The City of St. Joseph was not required to participate in UCMR 1 and of the 37 contaminants tested in UCMR 2 none were detected. The City also participated in the current UCMR 3 in 2013. The City tested 21 contaminants on USEPA's List 2 (Screening Survey). Of the 21 contaminants tested, 17 were non-detected and five had results. The detected contaminants and results appear on the Water Quality Data table under *Special Monitoring and Unregulated Contaminants* in our 2013 CCR issued on June 27th.

Stage 2 D/DBP Monitoring Results-Authority

The Stage 2 DBP rule is one part of the Microbial and Disinfection Byproducts Rules (MDBPs), which are a set of interrelated regulations that address risks from microbial pathogens and disinfectants/disinfection byproducts. The stage 2 DBP rule focuses on public health protection by limiting exposure to DBP's, specifically total trihalomethanes (TTHM) and five haloacetic acids (HAA5) which can form in water through disinfectants used to control microbial pathogens. The St. Joseph Water Plant utilizes chlorine as a disinfectant.

In April the HAA5 level recorded was elevated at 72 ppb at site #2 (Lincoln Township Hall). This was likely due to high organics from Spring runoff and the lack of mixing in the lake given the unusually long ice cover. Community water supplies cannot exceed 60 ppb as a running annual average. Given the seasonal nature of HAA5, production, we expected the running annual average to remain well below the limit and they did. In July an HAA5 result of 25.8 ppb which yielded an annual running average of 39.7 ppb.

Intake Inspections

Both the north and south St. Joseph Water Plant intakes were inspected in May. Seebrex Diving recorded 1.5 ft of accumulated sand in the bottom of intake structures and in the pipe extending past the Y. A full report and video was presented to plant staff. Upon completion of the raw water sample line modifications it was discovered that the sand had accumulated to 2.5 ft. This material was removed while as part of the modification project. Cleaning of the pipe will done in July/August as weather permits and competitive bids will be sought for that work.

Intake Raw Water Sample Line

The raw water sample line is a ¾" HDPE pipe that extends from the low service pumping station to the north intake structure. The line provides plant staff with the capability of obtaining real time raw water data which is unaffected by the chlorine feed in the intake. The line must be periodically backflushed with tap water which contains chlorine. The current setup as designed is set to backflush to an end point wherein no chlorinated water reaches the lake. Plant staff is concerned however that the chlorine residual is weakened to such an extent by the time the stream reaches the intake that no protection against mussel growth in the line is achieved. Staff has been in discussion with DEQ Lansing regarding acceptable NPDES chlorine discharge limits and sampling protocols.

Given the stringent limits an alternate design has been developed wherein the installation of a check valve and bypass inside of the intake structure has been devised and will be installed by Seebrex Divers. This bypass and check will redirect the backflush water into the intake which will then be drawn into the intake pipe and not discharged to the lake. A screen dome will be fabricated and placed on the existing sample line strainer located outside of the intake (on the 'roof') which will be cleaned by divers semi-annually.

The bypass, check valve and screen were installed by Seebrex in July. Plant staff tested the installation and report that it is working well.

Algae

On August 1st, algal blooms in Lake Erie gained national attention when the City of Toledo issued a drinking water ban due to high levels of the blue green algal toxin Microcystin in its finished water. Microcystin is produced by Blue Green algae Microcystis (Genus name). Upon learning of this we looked into whether this could occur in Lake Michigan and if so whether the water plant could remove it as well as how the toxin could be detected. Early on it became apparent that the conditions in Lake Erie differed markedly from those of Lake Michigan and the likelihood of high levels of Microcystis would be remote. This algae requires warm temperatures (generally above 77 degrees F), and high phosphorus levels. Given the depth of Lake Michigan and the low relative phosphorus concentrations, the conditions are simply not favorable for any significant algal growth. The Lake Erie watershed which is fed predominantly by the Maumee River in terms of phosphorus is heavily influenced by agricultural runoff containing phosphorus rich fertilizers and pesticides.

In spite of the low risk of Microcystis we did analysis both our raw and tap water for this toxin and found none present. On an operational basis we are now monitoring daily satellite imagery from NASA of chlorophyll content in Lake Michigan. If chlorophyll levels on the East Shore increase to unacceptable levels we will test for algal toxins again and initiate operational changes to maximize removal.

Travel & Training

Grand Valley State University Annis Water Institute

The West Michigan Superintendents Group attended an on the water educational tour presented by Grand Valley State's Annis Water Research Institute. Basic concepts in lake ecology were accompanied by hands on training. Through GVSU we have also learned of the International Association for Great Lake Research and its monthly journal which has been of great benefit in understanding the blue green algae problem in Lake Erie.

AWWA National Conference

I attended one day of the National AWWA Conference & Exposition while on vacation in Boston. I focused my attention on AMI (Advanced Metering Infrastructure) and Waterborne Disease. I attempted to take in as much as I could of the exposition during my lunch hour and caught part of the national tapping competition.

Cross Connection Control Inspections

Hydro Designs completed 32 inspections in the City during the weeks of August 4th and 11th. I accompanied the inspector on several inspections in the field including the new Harbor Village, Azul Restaurant, City Hall and the Joint Wastewater Plant.

High Service VFD #5

As I mentioned in the July meeting, VFD #5 failed in late June. Staff had obtained competitive bids for its replacement and a quote for the replacement of the drive only and we were planning to bring them before the board in August and to the City Commission subsequent to WSJOB approval. However, on August 3rd, the failure of high service #3 forced us to obtain emergency authorization from the City Manager and Commission to replace the drive. Schnieder Electric furnished a quote in the amount of \$16,995 for the replacement of the drive only (switchgear and cabinet to stay).

High Service #3

On August 1st, High Service #3 failed. Specifically the babbit bearing in the motor seized. The motor had last been rebuilt in 2002. Peerless Midwest was called in to pull the motor. At this time competitive bids are being sought for the replacement of the motor and base.

Reclaim Pump #2

On August 3rd, Reclaim Pump #2 failed due to a reclaim sensor failure. Peerless pulled this pump while here to pull High Service #3. Emergency authorization to hire Peerless to rebuild the pump was sought and granted by the City Manager on August 15th. This is urgent since the plant is now dependent on the other reclaim pump until #2 is rebuilt. The reclaim pump functions to pump reclaim water back into the process. Without them, reclaim water which originates as filter backwash water would overflow to Lake Michigan. The plant holds an NPDES permit for backwash water discharge to the lake which is limited to 240,000 gallons per day. Average day backwash water in July was 72,000 gallons per day.

**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**

JULY 2014

DISTRIBUTION:	
Total Gallons	162,504,136
Average Day	5,242,069
Maximum Day	6,837,467
Minimum Day	3,820,178

TREATMENT:	
Total Low Service	166,166,253
Wash Water Gals.	2,254,332
Wash Water %	1.37%
Plant Use Gals.	1,602,547
Plant Use %	0.98%

FILTRATION:		
Ave. Filter Run	115.5	hours
Ave. Filter Rate	1.98	g/sqft/min
Filter Eff. Index	208.2	
Ave. Loss of Head	4.3	feet
Plant Sewer Usage		

LABORATORY REPORT		
Average of	Raw	Tap
Chlorides mg/L	18.4	18.0
Fluoride mg/L	0.14	0.95
Alkalinity mg/L	106	95
Hardness mg/L	133	130
pH	7.9	7.4
Calcium mg/L	37	36
Magnesium mg/L	10	10
Turbidity NTU	2.68	0.03
Temperature °F	65	
Total Coliform		0.0
Chlorine Residual		
		mg/L Free
Mixing Basin		1.53
Applied		1.68
Tap		1.46
Distribution		0.97

TREATMENT CHEMICAL SUMMARY:					
	Applied mg/L	Total Lbs.	Cost	Inventory lbs.	Days Supply
		CHEMICAL			
Alum (Al ⁺³)	1.53	2,100	\$6,110.04	5,814	86
Chlorine (Cl ₂)	3.17	4,388	\$1,140.88	11,102	78
Fluoride (F ₂)	0.68	947	\$2,841.45	279	9

		REMARKS:			
Total Cost all Chemicals	\$10,092.37				
Chemical Cost per Mil. Gallon Treated	\$60.74				
Chemical Cost per Mil. Gallon Delivered	\$62.11				
PLANT UTILITIES SUMMARY					
Electric:					
Total KWH	5,440	***includes measure of melted snow			
Total Power Cost	\$21,501.80	visit the City of Saint Joseph's Home page at www.sjcity.com			
Power Cost per Million Gallon Treated	\$115.36	e-mail comments to either: operator@sjcity.com or alimenti@sjcity.com			
Power Cost per Million Gallon Delivered	\$129.40	WEATHER CONDITIONS AT THE PLANT		Air Temp. °F	
Gallons Pumped per KWH	29872	SJWW Weather Computer		Avg.	77.6
		Rain Guage, Inches	1.94	Max.	85.3
		days it rained***	14	Min.	57.7
Natural Gas:		Wind Speed, Avg	6.9	Lake Temp. °F	
Metered Cubic Feet	0	Wind Speed, Max	51	Avg.	64.6
Natural Gas Cost	-	Prevailing Wind Dir.	North	Max	75.9
Emergency Power Diesel Fuel Inv., Gals.	3100	Lake Level (USACE)	579	Min	47.9

CLEVELAND BOOSTER STATION

HILLTOP BOOSTER STATION

BOTH

DATE	MGD TREATED	FEED METER GAL	CHL LBS/DAY	CHLORINE APPLIED mg/l	Cl ₂ RES PRE mg/l	Cl ₂ RES POST mg/l	Cl ₂ RES MON mg/l	MGD TREATED	FEED METER GAL	CHL LBS/DAY	CHLORINE APPLIED mg/l	Cl ₂ RES PRE mg/l	Cl ₂ RES POST mg/l	Cl ₂ RES MON mg/l	MGD TREATED BOTH
1-Jul	1.647	46	6.52	0.47	1.53	1.41	1.48	1.396	23	3.26	0.28	1.18	1.43	1.49	3.043
2-Jul	1.929	85	12.05	0.75	1.32	1.62	1.65	0.325	5	0.71	0.26	1.17	1.16	1.22	2.254
3-Jul	2.779	113	16.02	0.69	1.21	1.53	1.64	0.000	0	0.00	0.00	2.01	1.04	1.06	2.779
4-Jul	2.562	100	14.18	0.66				0.798	13	1.84	0.28				3.360
5-Jul	2.562	100	14.18	0.66				0.798	13	1.84	0.28				3.360
6-Jul	2.562	100	14.18	0.66				0.798	13	1.84	0.28				3.360
7-Jul	2.562	100	14.18	0.66	1.38	1.89	1.97	0.798	13	1.84	0.28	2.20	1.85	1.98	3.360
8-Jul	2.904	98	13.89	0.57	1.73	1.58	1.55	0.620	10	1.42	0.27	1.93	1.26	1.34	3.524
9-Jul	1.610	56	7.94	0.59	1.26	1.52	1.68	0.908	16	2.27	0.30	1.33	1.51	1.63	2.518
10-Jul	1.726	58	8.22	0.57	1.45	1.73	1.80	1.336	28	3.97	0.36	1.50	1.77	1.86	3.063
11-Jul	2.845	108	15.31	0.65	1.37	1.66	1.72	1.076	20	2.84	0.32	2.71	1.86	2.03	3.921
12-Jul	2.058	81	11.48	0.67				1.225	11	1.56	0.15				3.283
13-Jul	2.058	81	11.48	0.67				1.225	11	1.56	0.15				3.283
14-Jul	2.058	81	11.48	0.67	1.42	1.64	1.71	1.225	11	1.56	0.15	1.29	1.64	1.75	3.283
15-Jul	2.348	100	14.18	0.72	1.38	1.63	1.72	0.615	10	1.42	0.28	2.11	1.72	1.84	2.963
16-Jul	1.287	49	6.95	0.65	1.30	1.63	1.65	0.610	10	1.42	0.28	1.27	1.61	1.67	1.897
17-Jul	2.370	91	12.90	0.65	1.66	1.53	1.52	0.947	16	2.27	0.29	1.92	1.40	1.52	3.317
18-Jul	1.961	74	10.49	0.64	1.28	1.52	1.55	1.056	14	1.98	0.23	1.23	1.49	1.32	3.017
19-Jul	2.563	98	13.89	0.65				1.603	12	1.70	0.13				4.165
20-Jul	2.563	98	13.89	0.65				1.603	12	1.70	0.13				4.165
21-Jul	2.563	98	13.89	0.65	1.53	1.74	1.77	1.603	12	1.70	0.13	1.49	1.51	1.60	4.165
22-Jul	3.449	144	20.42	0.71	1.47	1.69	1.65	1.446	21	2.98	0.25	1.50	1.63	1.69	4.895
23-Jul	2.581	108	15.31	0.71	1.43	1.67	1.73	1.375	20	2.84	0.25	1.41	1.65	1.68	3.956
24-Jul	1.614	52	7.37	0.55	1.51	1.51	1.58	1.982	27	3.83	0.23	1.53	1.74	1.77	3.595
25-Jul	2.745	114	16.16	0.71	1.71	1.93	1.88	1.013	4	0.57	0.07	1.53	1.75	1.78	3.758
26-Jul	2.927	122	17.30	0.71				0.924	12	1.70	0.22				3.850
27-Jul	2.927	122	17.30	0.71				0.952	12	1.70	0.21				3.879
28-Jul	2.927	122	17.30	0.71	1.35	1.39	1.41	0.924	12	1.70	0.22	2.03	1.61	1.64	3.850
29-Jul	2.934	128	18.15	0.74	1.64	1.71	1.67	0.364	6	0.85	0.28	1.51	1.37	1.38	3.298
30-Jul	2.308	99	14.04	0.73	1.31	1.33	1.37	1.206	19	2.69	0.27	1.37	1.56	1.60	3.514
31-Jul	2.999	42	5.95	0.24	1.51	1.22	1.22	0.664	12	1.70	0.31	2.37	1.33	1.43	3.664
TOTAL	74.925	2,868	406.63					31.412	418	59.26					106.337
AVE DAY	2.417		13.12	0.65	1.4432	1.5945	1.6327	1.0133		1.91	0.23	1.66	1.54	1.60	3.430
MAX	3.449		20.42	0.75	1.73	1.93	1.97	1.9817		3.97	0.36	2.71	1.86	2.03	4.895
MIN	1.287		5.95	0.24	1.21	1.22	1.22	0.0000		0.00	0.00	1.17	1.04	1.06	1.897
MONTHLY TOTALS:	Cleveland	Total MG Treated		74.925	SJCT East			Hilltop	Total MG Treated		31.412	Cleveland Pump Station:			74.925
				74.925	Total Month		7.4298				31.415	Hilltop Pump Station:			31.415
Total Authority Flow:	112.105	Untreated		0.000	Average Day		0.2397		Untreated		0.000	TOTAL AUTHORITY (Trted.)			106.34

Monthly Maintenance Notes

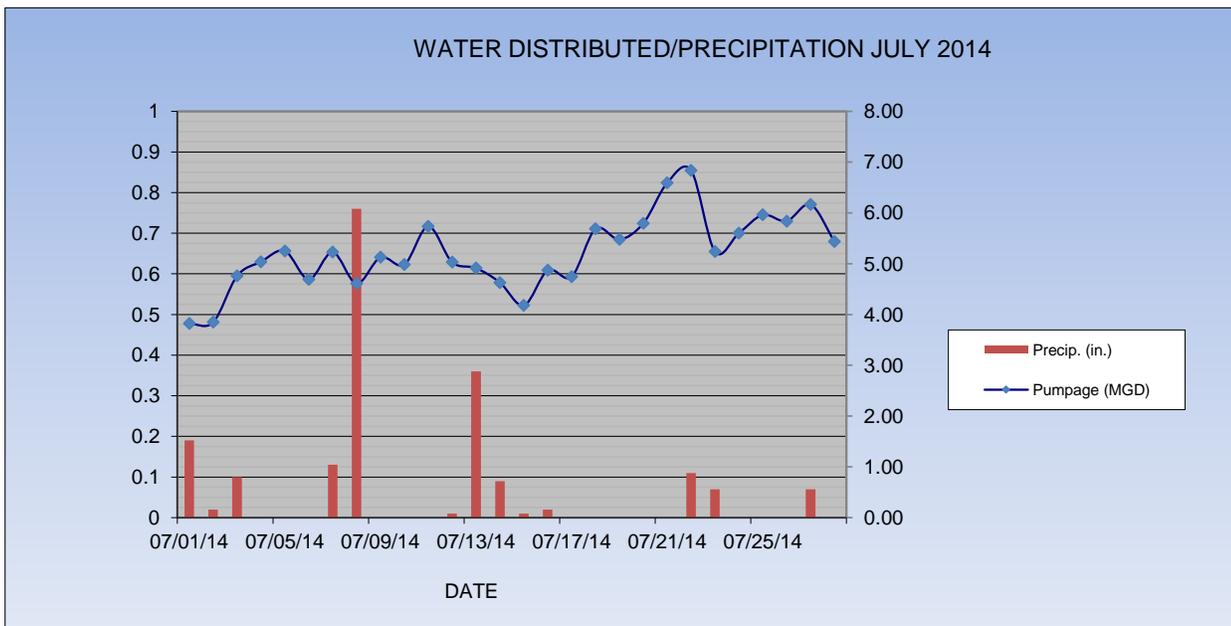
JULY 2014

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. Mow and Grounds Maintenance at Plant, Booster Stations and Towers
07/02/14	Installed New Solenoid and piping for sample line on filters 9 & 11
07/09/14	Kone Elevator - PM inspection of Maintenance Elevator
07/14/14	Installed new ventilation fan and motor in high service pump room
07/18/14	Installed new motor on roof top vent fan for # 4 VFD
07/21/14	Cleaned Turbidimeter supply lines for filters 1-4
07/21/14	Repaired leak on Fluoride supply line, installed new nipple and coupling for delivery connection
7/21 to 7/22/14	Hach - Calibration and service on TOC Machine and all Filter Turbidimeters per service contract
7/21 to 7/22/14	Cox Painting - Painted
07/25/14	Hach - Calibration and service on Particle counters, Also Installed new head on filter # 1 Turbidimeter
07/29/14	Guse Hahn - Installed New over head door in Chlorine Storage Room
07/29/14	Installed New Battery in Hilltop BPS Generator
07/31/14	Rebuilt center blow off valve for clarifier # 2

**ST JOSEPH WATER PLANT PUMPAGE-WATER DELIVERED/RAINFALL
JULY 2014**

DATE	PUMPAGE (gallons)	PUMPAGE (MGD)	RAINFALL (in)	Day to Day Comparison 2014/2013	
				2014	2013
07/01/14	3,820,178	3.82	0.19	3,820,178	5,520,227
07/02/14	3,847,329	3.85	0.02	3,847,329	4,749,545
07/03/14	4,758,185	4.76	0.1	4,758,185	5,766,328
07/04/14	5,038,312	5.04	0	5,038,312	4,675,903
07/05/14	5,251,297	5.25	0	5,251,297	5,373,352
07/06/14	4,691,920	4.69	0	4,691,920	5,335,614
07/07/14	5,227,491	5.23	0.13	5,227,491	4,593,491
07/08/14	4,609,143	4.61	0.76	4,609,143	5,222,467
07/09/14	5,125,120	5.13	0	5,125,120	4,229,465
07/10/14	4,982,404	4.98	0	4,982,404	5,126,280
07/11/14	5,733,453	5.73	0	5,733,453	5,538,925
07/12/14	5,029,614	5.03	0.01	5,029,614	5,524,140
07/13/14	4,913,113	4.91	0.36	4,913,113	6,270,419
07/14/14	4,629,323	4.63	0.09	4,629,323	7,009,003
07/15/14	4,177,707	4.18	0.01	4,177,707	7,194,946
07/16/14	4,869,456	4.87	0.02	4,869,456	6,200,203
07/17/14	4,744,237	4.74	0	4,744,237	8,296,153
07/18/14	5,685,106	5.69	0	5,685,106	8,415,067
07/19/14	5,476,347	5.48	0	5,476,347	8,153,263
07/20/14	5,794,067	5.79	0	5,794,067	9,103,735
07/21/14	6,590,781	6.59	0	6,590,781	8,492,875
07/22/14	6,837,467	6.84	0.11	6,837,467	8,832,138
07/23/14	5,238,021	5.24	0.07	5,238,021	8,548,404
07/24/14	5,600,312	5.60	0	5,600,312	8,156,737
07/25/14	5,961,421	5.96	0	5,961,421	7,890,317
07/26/14	5,838,362	5.84	0	5,838,362	8,098,232
07/27/14	6,165,420	6.17	0.07	6,165,420	6,569,358
07/28/14	5,438,934	5.44	0	5,438,934	6,407,043
07/29/14	5,285,083	5.29	0	5,285,083	6,847,070
07/30/14	6,087,856	6.09	0	6,087,856	7,435,918
07/31/14	5,056,675	5.06	0	5,056,675	6,008,118
TOTAL	162,504,136	162.50	1.94	162,504,136	205,584,737

Average Day	5,242,069
Maximum Day	6,837,467
Minimum Day	3,820,178



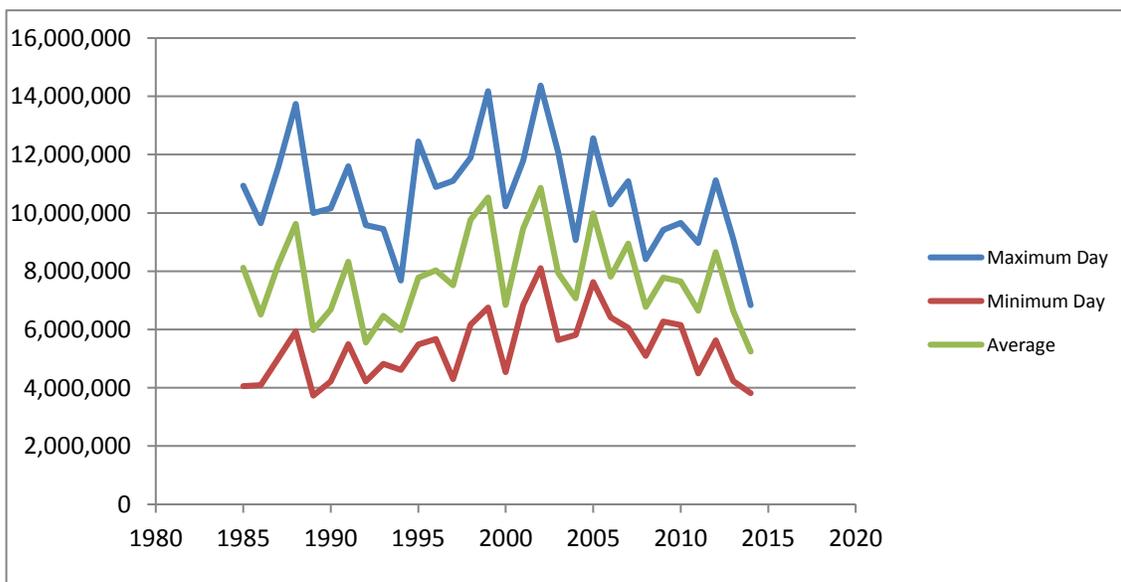
City of St. Joseph

Water Delivered July 2014

Year	Average	Maximum Day	Minimum Day	Monthly Total
1985	8,118,358	10,939,300	4,061,300	251,669,100
1986	6,511,548	9,647,200	4,093,700	201,858,000
1987	8,224,284	11,572,500	5,010,300	254,952,800
1988	9,620,248	13,737,100	5,929,400	298,227,700
1989	5,980,219	9,999,600	3,730,800	185,386,800
1990	6,689,352	10,154,500	4,221,100	207,369,900
1991	8,321,697	11,597,100	5,494,600	257,972,600
1992	5,557,800	9,576,200	4,215,800	172,291,800
1993	6,470,832	9,449,600	4,821,100	200,595,800
1994	5,978,371	7,683,600	4,608,400	185,329,500
1995	7,776,994	12,455,700	5,483,800	241,086,800
1996	8,032,152	10,895,700	5,675,000	248,996,700
1997	7,521,474	11,098,600	4,295,500	233,165,700
1998	9,769,487	11,894,800	6,166,850	302,854,100
1999	10,527,027	14,182,550	6,753,150	326,337,850
2000	6,836,392	10,222,400	4,538,500	211,928,150
2001	9,464,765	11,781,300	6,835,250	293,407,700
2002	10,861,105	14,369,900	8,104,000	336,694,250
2003	7,944,660	12,081,270	5,645,120	246,284,450
2004	7,070,745	9,064,000	5,811,500	219,193,080
2005	9,984,444	12,561,030	7,625,810	309,517,750
2006	7,817,399	10,287,500	6,416,500	242,339,370
2007	8,949,160	11,088,240	6,060,000	277,423,970
2008	6,773,159	8,410,730	5,088,510	209,967,920
2009	7,775,545	9,418,490	6,271,750	251,041,900
2010	7,648,984	9,661,039	6,148,012	237,118,518
2011	6,648,500	8,965,640	4,490,325	206,103,485
2012	8,654,039	11,115,883	5,632,433	268,275,220
2013	6,631,766	9,103,735	4,229,465	205,584,737
2014	5,242,069	6,837,467	3,820,178	162,504,136

Monthly Total Ranking-July 1985-2014

Rank	Year	Monthly Total
1	2002	336,694,250
2	1999	326,337,850
3	2005	309,517,750
4	1998	302,854,100
5	1988	298,227,700
6	2001	293,407,700
7	2007	277,423,970
8	2012	268,275,220
9	1991	257,972,600
10	1987	254,952,800
11	1985	251,669,100
12	2009	251,041,900
13	1996	248,996,700
14	2003	246,284,450
15	2006	242,339,370
16	1995	241,086,800
17	2010	237,118,518
18	1997	233,165,700
19	2004	219,193,080
20	2000	211,928,150
21	2008	209,967,920
22	1990	207,369,900
23	2011	206,103,485
24	2013	205,584,737
25	1986	201,858,000
26	1993	200,595,800
27	1989	185,386,800
28	1994	185,329,500
29	1992	172,291,800
30	2014	162,504,136



DISTRIBUTION REPORT

For the Month of July 2014

Activity	Number	Description
Water Main Breaks	1	
MISS DIGS	475	
Delinquent Shut Off	21	
Delinquent Shut Off (Broken Payment Plans)	6	(Fairplain SJCTE)
Hydrants (Repaired/Replaced)	0	
Valves	1	Crestview & Anthony-Repaired operating nut
Taps (1")	5	1210 Forrest Brook Dr (LCT) New house, New Development 500 Golden Bear Court (SJ) New house, New Development 590 E. Glenlord Rd. (RCT) Bad well 361 Ridgway (SJ) New house 1504 Greg Drive (LCT) Bad well
Service Work	1	2612 Thayer Dr (SJ) Leaking lead service
Water Service Repairs		
Repair of Curb box/Shut-Off Valves	4	(Fairplain SJCTE) Wrong style box
Water Quality Complaint(s)	0	
Hydrant Flushing to maintain water quality	0	
Staff Education/Training	0	
Overtime-Total	79	(inc. San and Storm)
Turn Off	4	(Note: This number does not include delinquent Shut off)
Turn On	12	
Finals	213	
Meter Repair		
Meter Repair/Replacement	47	Verify Read
Per detail		New Installation 18
Meter leaking		New Installation-Benton Harbor
Stopped Meter		Replaced/various reasons
Faulty Register		Rockwell Replacement
Frozen Meter		Mxu Replaced
Move Meter Inside		Sprinkler meter removed/line capped
Hard to read		Removals 4
Replace/Adding Sprinkler Meter		Curb box location
Damage to Trt		Broken Remote
New Plumbing		Noisy Meter
New siding		Upgrade 5/8" to 3/4"
Meter sent out for testing		Meter Change/Benton Harbor

CITY OF ST. JOSEPH WATER MAIN BREAK REPORT									
For the Month/Year of: July 2014									
#	Date	Location	Main Size	Gallons Lost	Break Type	Valves Turned	City Twp	Labor	Remarks
1	7/9/2014	3646 Crestview	8"	6,000	crack corp	3	SJCT		Water tap cracked at corporation stop
2									Valve repair necessary (see page 1)
3									
4									
5									
6									
		Total Gallons Lost		6,000					

STAGE 2 D/DBPR MONITORING-HALOACETIC ACIDS

JULY 2014

WSSN 3726

Date	10/10/13	10/10/13
Site	Lincoln Twp Hall	Dane
Dibromoacetic acid	1.1	<1
Dichloroacetic acid	20	6.8
Monobromoacetic acid	<1	<1
Monochloroacetic acid	<2	<2
Trichloroacetic acid	17	19
<i>Total HAA5</i>	38.1	25.8

Date	01/15/14	01/15/14
Site	Lincoln Twp Hall	Dane
Dibromoacetic acid	1.1	1
Dichloroacetic acid	9.6	12
Monobromoacetic acid	<1	<1
Monochloroacetic acid	<2	<2
Trichloroacetic acid	12	17
<i>Total HAA5</i>	22.7	30.0

Date	04/10/14	04/10/14
Site	Lincoln Twp Hall	Dane
Dibromoacetic acid	<1	<1
Dichloroacetic acid	25	22
Monobromoacetic acid	<1	<1
Monochloroacetic acid	5	5.1
Trichloroacetic acid	42	31
<i>Total HAA5</i>	72	58.1

Date	07/09/14	07/09/14
Site	Lincoln Twp Hall	Dane
Dibromoacetic acid	1.2	<1
Dichloroacetic acid	15	10
Monobromoacetic acid	<1	<1
Monochloroacetic acid	<2	<2
Trichloroacetic acid	9.6	12
<i>Total HAA5</i>	25.8	22.0

RAA	39.7	34.0 ppb
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MONTHLY CLIMATOLOGICAL SUMMARY

JULY

2014

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	72.1	71	76.1	2:00p	82	95	1963	68.7	3:00a	59	39	1982	0	7.4	0.19	14.1	33	7:00a	WSW
2	66.3	71	73.1	2:00a	82	96	1974	61	12:00m	60	40	1988	0	2	0.02	12.8	32	2:00a	W
3	63.4	71	67.4	7:00p	82	95	1974	59.1	4:00a	60	39	1988	1.8	0	0.1	10	31	6:00a	NW
4	68	71	71	4:00p	82	96	1990	64	4:00a	60	43	1996	0	2.5	0	4.5	15	4:00p	N
5	69.5	71	74	6:00p	82	95	1990	63	7:00a	60	43	1996	0	3.5	0	3.8	13	7:00a	SW
6	73.4	72	80.9	6:00p	82	97	1991	67.6	8:00a	60	43	1972	0	9.3	0	8.1	26	11:00p	SSW
7	73.1	72	76.6	1:00a	82	95	1980	69.8	3:00a	60	43	1983	0	8.2	0.13	8.8	51	3:00a	SW
8	72.5	72	75.6	5:00a	82	95	1980	69.4	8:00a	60	39	1984	0	7.5	0.76	8.8	25	10:00a	W
9	68.4	72	71.1	1:00a	82	95	1988	65.4	10:00a	60	49	1963	0	3.3	0	6	17	4:00a	N
10	67.8	72	71	7:00p	82	95	1976	63.4	7:00a	60	45	1962	0	2.2	0	4.6	13	10:00a	N
11	69.9	72	73.4	2:00p	82	93	1984	64.5	5:00a	60	41	1996	0	4	0	2.8	12	2:00p	ESE
12	73.8	72	77.1	12:00m	82	95	1987	70.8	6:00a	60	48	1975	0	9	0.01	4.3	26	12:00m	S
13	72.6	72	77.8	8:00p	82	99	1995	69.1	8:00a	60	48	1990	0	8.5	0.36	7.6	46	1:00a	WSW
14	70.8	72	73.8	5:00p	82	100	1995	67	12:00m	61	46	1950	0	5.4	0.09	4.8	27	12:00m	N
15	64.2	72	67.1	1:00a	82	99	1995	61.3	10:00a	61	47	1960	0.8	0	0.01	15.8	32	11:00a	NW
16	63.2	72	65.2	6:00p	82	99	1988	61.1	8:00a	61	46	1987	1.9	0	0.02	8.9	26	7:00a	N
17	66.1	72	70.8	6:00p	82	95	1986	59.7	6:00a	61	45	1985	0	0.3	0	3.5	14	10:00a	N
18	69.2	72	74	8:00p	82	93	1986	62.7	6:00a	61	48	1979	0	3.4	0	2.7	11	6:00p	N
19	69.8	72	72.9	6:00p	82	95	1991	65.4	6:00a	61	47	1979	0	4.2	0	3.3	12	2:00p	N
20	71.7	72	75.6	7:00p	82	96	1980	67.8	6:00a	61	46	1951	0	6.7	0	2.3	9	6:00p	ESE
21	74.4	72	78.3	7:00p	82	95	1983	69.4	6:00a	61	44	1970	0	8.9	0	2.5	9	12:00p	SE
22	77.6	72	85.3	5:00p	82	96	1983	71.9	7:00a	61	47	1970	0	13.6	0.11	6.9	32	12:00m	SSW
23	66.6	72	76.4	1:00a	82	96	1983	62.6	9:00p	60	44	1985	0	4.5	0.07	14.1	34	6:00a	NNE
24	63.1	72	65.9	5:00p	82	94	1965	59.5	11:00a	60	42	1957	2.3	0	0	3.5	12	1:00p	NNE
25	65.4	72	70.1	3:00p	82	92	1964	59.4	5:00a	60	50	1990	0.3	0	0	3.5	13	5:00p	SW
26	69.3	72	73.2	8:00p	82	92	1966	65.3	6:00a	60	49	1961	0	4.3	0	2.9	11	12:00p	SE
27	70.8	72	75.2	2:00p	82	91	1949	64.7	12:00m	60	45	1991	0	4.9	0.07	11	39	5:00p	SW
28	60.3	72	65.1	1:00a	82	99	1983	57.7	1:00p	60	51	1992	3.6	0	0	15.9	37	1:00a	N
29	63.8	72	67.6	11:00p	82	100	1983	58.2	3:00a	60	46	1968	2.1	0	0	5	26	12:00m	WSW
30	65.8	72	67.5	2:00p	82	104	1999	64.8	6:00a	60	47	1984	0	1.2	0	4.7	16	1:00a	NW
31	69.5	72	75.9	7:00p	82	100	1999	63.6	3:00a	60	46	1993	0	4.8	0	5.3	18	9:00a	S
AVE													0.4	4.2	0.1	6.9	23.2		N
MAX	77.6	72	85.3			104		71.9		61	51		3.6	13.6	0.76	15.9	51.0		
MIN	60.3	71	65.1					57.7		59	39		0	0	0	2.3	9		
TOTAL															1.94				

Max Rain: 0.76 ON 07/08/14
 Days of Rain: 11 (>.01 in) 5 (>.1 in) 0 (>1 in)