CITY OF ST. JOSEPH WATER FILTRATION PLANT

OPERATIONAL REPORT

JUNE 2015

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-JUNE 2015

Water demand in June was down by 21,036,808 gallons or 13% from last year. This year 140,497,782 gallons were delivered which compares to 161,534,590 gallons delivered in June of 2014. The June 2015 pumpage ranked 30th in the 30 year tabulation dating back to 1986.

GENERAL ACTIVITIES

Spring Intake Inspections

Plant staff drafted and sent an RFP to qualified divers for inspections of the north and south intakes. Underwater Construction of Stevensville submitted the low bid. Inspections were performed in April. Cleaning followed in May and June.

South Intake: This intake which is rated at 16 MGD and was constructed in 1955 served as the water plant's sole water source until the completion of the North Intake in 2011. The 24" pipe extends 1500 ft. from shore. It was laid under the lake bottom and supplies a separate dedicated shorewell on the plant site. On the lake bottom the pipe terminates in an intake structure which consists of four vertical steel cylinders connected by a pipe manifold located in the center (two cylinders on a side). Divers found heavy zebra mussel growth on the cylinders and piping. Sand was found in all four of the cylinder influent pipes varying in depth from 70% to fully blocked. This intake was cleaned in 2013 and had been in service during the fall of that year. Recently in January, plant staff reported a total blockage in this line when an attempt was made to utilize it during routine cleaning and maintenance of the North intake. At the time it was thought that frazil was the cause of the problem. On an emergency basis, Underwater Construction was directed to clean the intake structures and pipe manifold. Upon completion of this work, the station was placed back into service but only yielded 25% of its design capacity. On May 12th, this intake was successfully backflushed from the plant. To date this intake has been operated at flows up to 7 MGD with very little draw down in the wet well and as such staff is confident that it has been restored to full capacity and that the obstruction which was likely sand and sea grass has been successfully cleared. The South intake functions as an emergency backup, as an NPDES compliant backflush water source for the North and as a standby while maintenance is being performed on the North.

North Intake: The North intake which is rated at 32 MGD was completed in 2011 and serves as the primary intake for the water plant. Similar to the South intake it begins onshore with a low service pump station connected to a 48" pipe 4450 ft long which extends under the lake bottom. Near the end it splits into a 'Y' configuration and terminates in two large cylindrical steel cylinders which are eight feet in diameter. The legs of the Y are 70' long and as such the structures are just under 140' from each other on the lake bottom. The inspection revealed heavy sand deposition in the structures varying from two feet at the pipe entrance to eight feet. The divers were unable to enter the south leg which was 70% blocked and were only able to travel twenty feet in the north leg before being stopped by sand which was increasing in depth. The sand source appears to have been the result of the two major storms experienced last fall. Guy Meadows of Michigan Technological University reminded us that these were 100 year storms and that sand deposition as a result of suspended material was likely a major factor. The divers did not find any evidence of shifting sand bars as was the cause of the 2005 blockage of the South intake. The sand level on the outside of all of the structures (North and South) was normal.

As of June 22nd, the divers had cleaned both structures, including the Y and approximately 180 feet of the main pipe. At that point there remains 20"-24" of sand in the 4 foot diameter pipe. On June 9th the divers opened the emergency riser which is located 1,500' shoreward of the structures to inspect the main line at that point. They found 4" of sand. No sand was found in the pipe or in the wet well at the water plant. The cleaning of the pipe went very slowly due to the content of the material. Along with the sand, driftwood and sea grass were found.

The driftwood had to be removed by hand and the grass intermixed with the sand was difficult to move with the pump. The divers were pulled out on the 23rd and this intake was placed back into service on that day.
The sand that remains in the pipe is not an operational concern. Plant staff is exploring alternative options to cost effectively remove this sand. Among the options is the use of a foam disc know as a pig that could be flushed through the pipe. This method was successfully employed on our 24" intake in St. Joseph in 2011 and in Benton Harbor in 1994.

Intake Raw Water Sample Line
The raw water sample line in the North intake functions to provide water which is free of chlorine to enable the analysis for total organic carbon and coliform (bacteriological) enumeration. It consists of a ¾" HDPE line that terminates in an inlet screen assembly located on the roof of the North structure of the North Intake. A semicircular screen 2 feet in diameter at the base was installed in 2014 to provide additional screening capability when the sample line was reconfigured and check valves were installed to permit NPDES compliant backflushing capability for the sample line. Divers found that the semicircular screen was badly damaged and that the sample line inside the structure was pulled apart and found to be lying in the sand.

In late May while cleaning the main pipe divers rodded the sample line and found an obstruction approximately 35' from the end. The working plan at this point is to cut out the blocked section and splice in a new piece as time permits. Due to the overriding need to maximize the intake pipe cleaning operation this work was deferred until the next inspection in the early Fall. The sample line will remain out of service until that time. In the interim the raw water samples will be drawn from the 36" raw influent line in the water plant.

Taste & Odor Complaints
In May we received several taste and odor complaints. The calls started coming in after we switched from the North Intake to the South Intake. We utilize the older intake to enable the divers to work longer days in the North line without having to shut the plant down. The problem arises due to the location of the South intake in Lake Michigan. It is closer to shore and in shallower water. As such the raw water quality is very different. The influence of the St. Joseph River is greater in shallower near shore water and from what we learned from Phycotech in St. Joseph the water likely contains a harmless form of filamentous algae known as diatoms. Diatoms predominate in Lake Michigan and blooms can and do occur in April and May. Through on line research we also learned that diatoms thrive at depths up to 5 meters (about 16') which is right about where the South intake structures draw their water. The taste and odor are caused by the degradation of this algae when it comes in contact with chlorine. Compounds are released as the cells are destroyed which can be detected by the human nose at very minute concentrations. These compounds are harmless and the water is safe to drink. This is not all like the algal problems experienced in Lake Erie last summer. That algae is called blue green algae or cyanobacteria and is not common in Lake Michigan due to the considerable depth and cold temperature of the lake. We have not received any taste and odor complaints since switching back to the north intake on June 23rd.

Stage 2 Disinfection Byproducts Rule (DBPR)-City of St. Joseph
The quarterly sample for the City was taken on June 11th. The next round of quarterly samples for the Authority are due in July. Disinfection byproducts are formed when free chlorine reacts with naturally occurring organic matter in the raw water. The test results are included in this report. The City as well as Authority community water supplies are in compliance with the rule and have been since its promulgation.

Fairplain Interconnects
The bids were opened at St. Joseph Charter Township Hall on April 30, 2015. Wightman & Associates recommended acceptance of the low bid submitted by John Boettcher Sewer & Excavating in the amount of $76,124.00 for items 1,4,5, and 7. These items anticipated metering all locations (Woodward/Empire; Napier/Colfax; Nickerson/Colfax) and disconnecting the Elmside/Colfax interconnection. The St. Joseph Township engineer and City staff met with representatives from Benton Charter Township and the City of Benton Harbor and memoranda of understanding will be drafted.

Tentative agreements are to meter the interconnect with the City of Benton Harbor and cut and cap the all connections with Benton Charter Township except for the one at Colfax and Nickerson.

Hazardous Response Training-Simulated Chemical Leak

Plant staff met with Perry Godush from the Berrien County Sheriff Department to review a hazardous materials response practice exercise which was held at the Water Plant on June 3rd. A simulated chlorine leak was conducted. Berrien County Haz Mat and the St. Joseph Public Safety Department participated. The WTP staff convened a meeting of the Process Hazard Analysis Team on June 24th to review what was learned from the exercise and to assess and discuss potential safety issues pertaining to the chlorine feed process.

2014 Consumer Confidence Report

The annual water quality report known as the Consumer Confidence Report was mailed out on June 26th. This year's issue included an article on the SCIP or Strategic Capital Improvement Plan.

The Consumer Confidence Rule requires public water suppliers that serve the same people year round (community water systems) to provide consumer confidence reports (CCR) to their customers. These reports are also known as annual water quality reports or drinking water quality reports. The remaining public water systems in the U.S. are not required to provide CCRs, because they do not serve the same people on a day-to-day basis throughout the year.

The CCR summarizes information regarding sources used (i.e., rivers, lakes, reservoirs, or aquifers) any detected contaminants, compliance and educational information. The reports are due to customers by July 1st of each year. We are pleased to report that water quality remains excellent and that there were no water quality violations.

Unregulated Contaminant Monitoring (UCMR) III – 2014 Testing Results

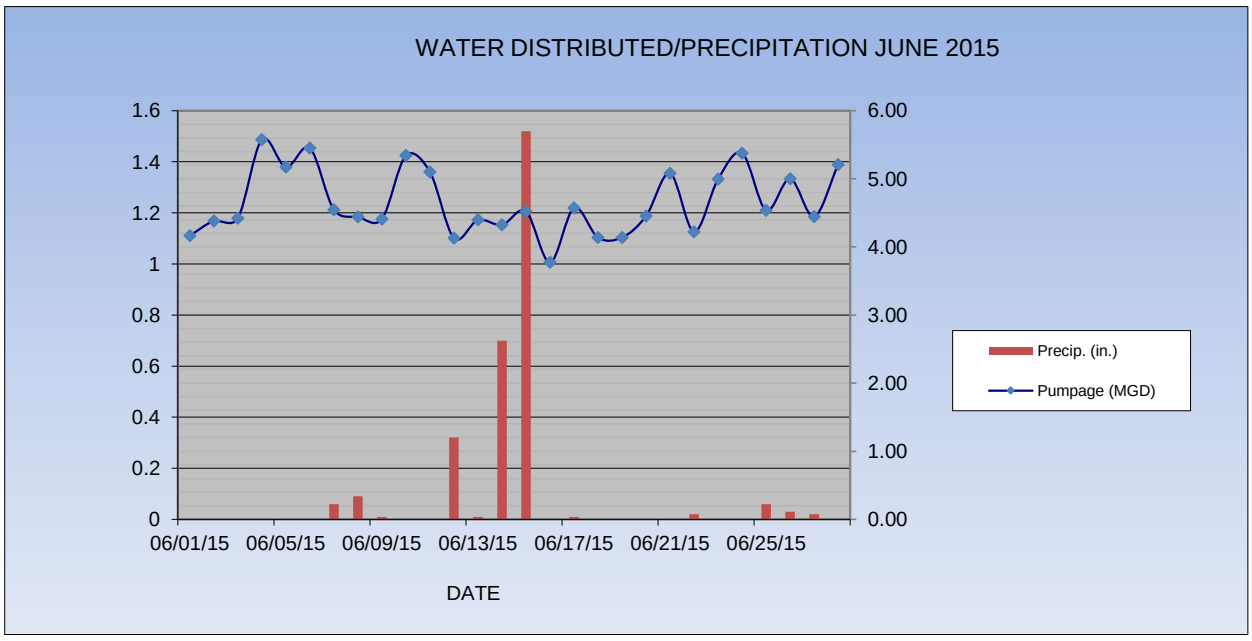
As part of the federal drinking water program, USEPA issues a list of currently unregulated contaminants to be tested by Public Water Systems throughout the nation. This process occurs every five years pursuant to the Unregulated Contaminant Monitoring Rule (UCMR). The purpose of the UCMR program is 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), UMCR 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 six had results. The detected contaminants and results appear on the Water Quality Data table under *Special Monitoring and Unregulated Contaminants* in our 2014 CCR. UCMR III was unique in that monitoring was required in the distribution system. This meant that samples were required both in the City of St. Joseph and the SWMSS & WA but taken separately on separate schedules.

ST JOSEPH WATER PLANT PUMPAGE-WATER DELIVERED/RAINFALL
JUNE 2015

				Day to Day Comparison 2015/2014	
DATE	PUMPAGE (gallons)	PUMPAGE (MGD)	RAINFALL (in)	2015	2014
06/01/15	4,166,272	*4.17*	0	4,166,272	6,917,391
06/02/15	4,381,964	*4.38*	0	4,381,964	6,221,382
06/03/15	4,421,510	*4.42*	0	4,421,510	5,602,506
06/04/15	5,577,110	*5.58*	0	5,577,110	4,989,555
06/05/15	5,172,208	*5.17*	0	5,172,208	5,042,400
06/06/15	5,451,028	*5.45*	0	5,451,028	6,040,875
06/07/15	4,546,442	*4.55*	0.06	4,546,442	6,496,560
06/08/15	4,440,073	*4.44*	0.09	4,440,073	5,094,698
06/09/15	4,410,329	*4.41*	0.01	4,410,329	5,385,372
06/10/15	5,343,974	*5.34*	0	5,343,974	5,051,207
06/11/15	5,101,471	*5.10*	0	5,101,471	4,886,727
06/12/15	4,129,597	*4.13*	0.32	4,129,597	4,516,590
06/13/15	4,396,243	*4.40*	0.01	4,396,243	4,874,465
06/14/15	4,323,388	*4.32*	0.7	4,323,388	6,178,673
06/15/15	4,521,326	*4.52*	1.52	4,521,326	5,033,294
06/16/15	3,772,989	*3.77*	0	3,772,989	6,495,215
06/17/15	4,571,612	*4.57*	0.01	4,571,612	6,193,649
06/18/15	4,137,533	*4.14*	0	4,137,533	6,423,288
06/19/15	4,138,551	*4.14*	0	4,138,551	5,071,547
06/20/15	4,453,579	*4.45*	0	4,453,579	5,217,582
06/21/15	5,081,709	*5.08*	0	5,081,709	5,341,929
06/22/15	4,223,147	*4.22*	0.02	4,223,147	5,405,247
06/23/15	4,997,065	*5.00*	0	4,997,065	5,074,495
06/24/15	5,377,053	*5.38*	0	5,377,053	4,426,550
06/25/15	4,538,043	*4.54*	0.06	4,538,043	3,804,617
06/26/15	5,001,718	*5.00*	0.03	5,001,718	4,367,149
06/27/15	4,445,415	*4.45*	0.02	4,445,415	4,801,722
06/28/15	5,209,932	*5.21*	0	5,209,932	5,182,075
06/29/15	4,704,472	*4.70*	0.07	4,704,472	5,720,253
06/30/15	5,462,027	*5.46*		5,462,027	5,677,577
TOTAL	140,497,782	140.50	2.92	140,497,782	161,534,590

Average Day	**4,683,259**
Maximum Day	**5,577,110**
Minimum Day	**3,772,989**

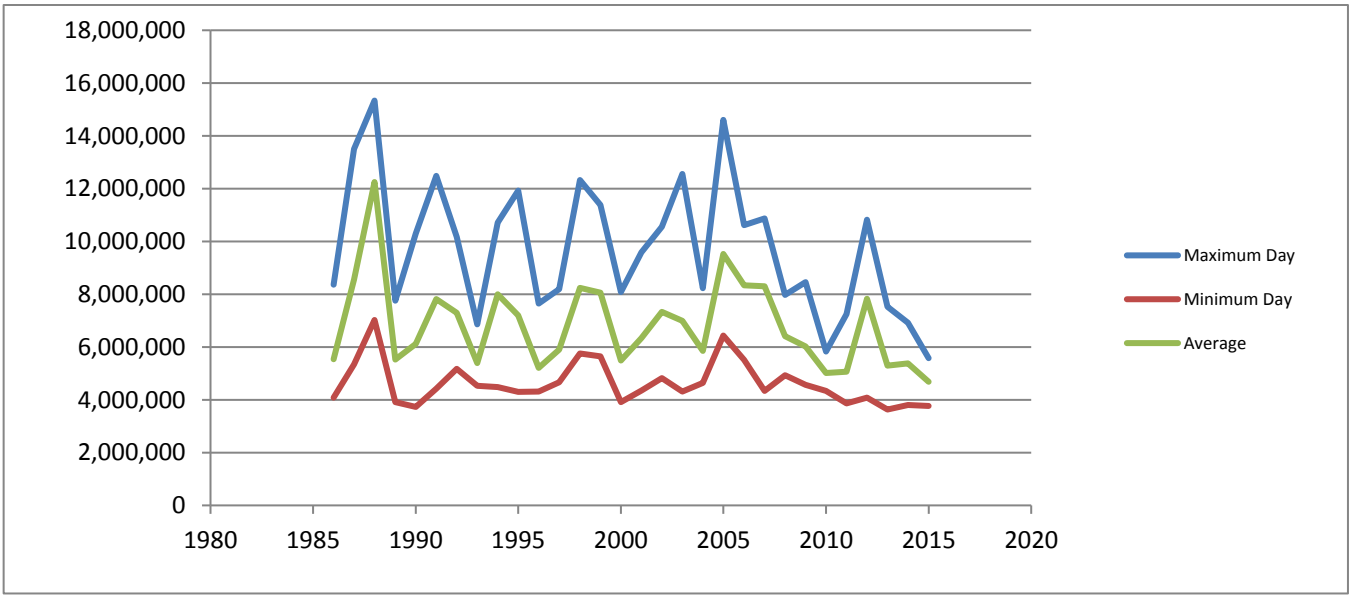


ST JOSEPH WATER PLANT PUMPAGE-WATER DELIVERED

JUNE 2015

Year	Average	Maximum Day	Minimum Day	Monthly Total
1986	5,536,993	8,361,200	4,083,100	166,109,800
1987	8,558,823	13,500,700	5,341,700	256,765,700
1988	12,250,440	15,336,400	7,024,700	367,513,200
1989	5,518,973	7,756,300	3,907,000	165,569,200
1990	6,114,560	10,296,200	3,732,200	183,436,800
1991	7,822,020	12,489,000	4,416,100	234,660,600
1992	7,294,707	10,167,700	5,176,200	218,841,200
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

Rank	Year	Monthly Total
1	1988	367,513,200
2	2005	285,827,000
3	1987	256,765,700
4	2006	250,095,310
5	2007	248,988,310
6	1998	247,354,250
7	1999	241,647,300
8	1994	239,950,300
9	2012	234,814,831
10	1991	234,660,600
11	2002	219,794,150
12	1992	218,841,200
13	1995	215,943,800
14	2003	209,847,020
15	2008	192,250,040
16	2001	189,993,420
17	1990	183,436,800
18	2009	180,660,240
19	1997	177,127,400
20	2004	175,141,780
21	1986	166,109,800
22	1989	165,569,200
23	2000	164,769,650
24	1993	161,803,800
25	2014	161,534,590
26	2013	158,731,916
27	1996	156,404,250
28	2011	151,942,626
29	2010	150,416,523
30	2015	140,497,782



June 2015

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-Jun	2.301	24	3.40	0.18	1.45	1.73	1.83		4.311	59	8.37	0.23	1.65	1.43	1.58	6.611
2-Jun	1.899	52	7.37	0.47	1.78	1.65	1.71		0.329	2	0.28	0.10	1.39	1.59	1.69	2.227
3-Jun	1.061	25	3.54	0.40	1.33	1.46	1.64		2.469	39	5.53	0.27	1.59	1.54	1.72	3.530
4-Jun	2.976	84	11.91	0.48	1.40	1.80	1.86		0.148	7	0.99	0.80	1.25	1.56	1.74	3.125
5-Jun	3.354	0	0.00	0.00	1.30	1.33	1.36		0.441	11	1.56	0.42	1.53	1.48	1.61	3.795
6-Jun	1.977	91	12.90	0.78					1.290	18	2.55	0.24				3.267
7-Jun	1.977	91	12.90	0.78					1.290	18	2.55	0.24				3.267
8-Jun	1.977	91	12.90	0.78	1.34	1.74	1.87		1.290	18	2.55	0.24	1.32	1.51	1.64	3.267
9-Jun	1.960	41	5.81	0.36	1.41	1.63	1.71		0.456	6	0.85	0.22	1.81	1.54	1.59	2.416
10-Jun	0.000	0	0.00	0.00	1.28	1.31	1.44		2.640	15	2.13	0.10	1.51	1.55	1.65	2.640
11-Jun	2.265	64	9.07	0.48	1.39	1.61	1.68		0.914	11	1.56	0.20	1.29	1.27	1.35	3.180
12-Jun	3.132	77	10.92	0.42	1.35	1.60	1.67		0.530	11	1.56	0.35	1.37	1.63	1.60	3.662
13-Jun	1.567	37	5.25	0.40					0.801	19	2.69	0.40				2.368
14-Jun	1.567	37	5.25	0.40					0.801	19	2.69	0.40				2.368
15-Jun	1.567	37	5.25	0.40	1.27	1.61	1.70		0.801	19	2.69	0.40	2.19	1.73	1.96	2.368
16-Jun	2.762	67	9.50	0.41	1.31	1.62	1.72		0.373	1	0.14	0.05	1.23	1.61	1.71	3.135
17-Jun	1.718	40	5.67	0.40	1.65	1.62	1.70		0.038	3	0.43	1.34	2.49	1.91	2.50	1.756
18-Jun	2.282	59	8.37	0.44	1.70	1.67	1.70		0.000	0	0.00	0.00	2.17	1.68	1.89	2.282
19-Jun	0.000	0	0.00	0.00	1.32	1.42	1.43		2.387	36	5.10	0.26	1.85	1.57	1.64	2.387
20-Jun	1.571	71	10.07	0.77					1.316	12	1.70	0.15				2.887
21-Jun	1.571	71	10.07	0.77					1.316	12	1.70	0.15				2.887
22-Jun	1.571	71	10.07	0.77	1.23	1.80	1.94		1.316	12	1.70	0.15	1.25	1.44	1.54	2.887
23-Jun	2.094	39	5.53	0.32	1.68	1.51	1.59		0.352	3	0.43	0.15	1.25	1.21	1.37	2.446
24-Jun	1.717	28	3.97	0.28	1.93	1.73	1.75		1.641	12	1.70	0.12	2.18	1.74	1.90	3.358
25-Jun	2.825	38	5.39	0.23	1.67	1.65	1.72		0.000	0	0.00	0.00	1.78	1.40	1.54	2.825
26-Jun	1.883	6	0.85	0.05	1.69	1.72	1.73		1.474	21	2.98	0.24	1.64	1.99	2.16	3.357
27-Jun	1.499	0	0.04	0.00					1.579	13	1.84	0.14				3.078
28-Jun	1.499	0	0.04	0.00					1.579	13	1.84	0.14				3.078
29-Jun	1.499	0	0.04	0.00	1.61	1.61	1.68		1.579	13	1.84	0.14	1.88	2.06	2.18	3.078
30-Jun	1.969	5	0.00	0.00	1.62	1.56	1.58		0.676	34	4.82	0.86	2.19	1.95	1.97	2.644
TOTAL	56.041	1,247	176.1						34.135	457	64.79					90.176
AVE DAY	1.868		5.9	0.36	1.5	1.6	1.7		1.1378		2.2	0.28	1.67	1.61	1.75	3.006
MAX	3.354		12.9	0.78	1.9	1.8	1.9		4.3105		8.4	1.34	2.49	2.06	2.5	6.611
MIN	0.000		0.0	0.00	1.2	1.3	1.4		0.0000		0.0	0.00	1.23	1.21	1.35	1.756

MONTHLY TOTALS:	Cleveland	Total MG		SJCT EAST			Hilltop	Total MG		Cleveland Pump Station:	56.041
		Treated	56.041	Average Day	0.218			Treated	34.135	Hilltop Pump Station:	34.135
Total Authority Flow:	95.9455	Untreated	0.000	Month Total	6.542			Untreated	0.000	TOTAL AUTHORITY (Trted.)	90.176

DISTRIBUTION REPORT ***For the Month of June 2015***

Activity	Number/Description			
Water Main Breaks	0			
MISS DIGS	434			
Delinquent Shut Off	11	St. Joseph Township West (11), SJCTE (12)		
Delinquent Shut Off (Broken Payment Plans)	0			
Hydrants (Repaired/Replaced)	1	St. Joseph Drive/Washington Ave. UFD found, Not closing		
Valves	0			
Taps (1")	0	5834 Dunham Ave (LCT). Bad well		
		2845 Washington Ave (SJCT) New construction		
		400 Robin Court (RCT) Well conversion to City		
		571 W. Napier (SJCTE), Bad well		
Cross Connection Control (Hydro Designs)				
Service Work (System Valves)				
Repair of Curb box/Shut-Off Valves	0			
Service Replacement	2	283 and 285 Marina Drive-Remove meter pit.		
		5 Ridgeway (CSJ), Conv meter pit repurpose to sprinkler.		
Water Quality Complaint(s)	17			
Hydrant Flushing to maintain water quality				
Hydrant Flushing (Stage 2 Rule)	1	Est 15,250 gallons-City		
Staff Education/Training	1	First Aid and CPR Training (all of PW)		
Overtime-Total	65.5	(Including Sanitary and Storm)		
Turn Off	6	(Note: For delinquent Shut off see above)		
Turn On	9			
Finals	184			
Meter Repair/Replacement		Audit Meter		
		Verify Read		3
Meter Repair		Move Mxu Box		
Per detail		New Installation		12
Meter leaking	6	New Installation-Benton Harbor		2
Stopped Meter	4	Replaced/various reasons		
Faulty Register		Rockwell Replacement		
Frozen Meter		Mxu Replaced		4
Move Meter Inside	2	Sprinkler meter removed/line capped		
Hard to read	5	Removals/demo		2
Replace/Adding Sprinkler Meter	3	Curb box location		4
Damage to Trt	4	Broken Remote		
New Plumbing		Noisy Meter		
New siding	3	Upgrade 5/8" to 3/4"		
Meter sent out for testing		Meter Change/Benton Harbor		

Monthly Maintenance Notes

June 2015

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 work at Plant, Booster Stations and Water Towers
06/02/15	Underwater Construction - Cleaning North Low Service Intakes (6/2,6/3, 6/4, 6/5) (6/9, 6/11 Emergency riser) 6/17, 6/18, 6/22
06/04/15	Repaired Filter # 10 LH Surface Wash Valve, Positron lost the lower limit closed position causing the motor to over torque the valve. Had to remove operator on the valve to free it up and re-assemble the unit. Repaired the bar on the positron that holds the limit actuators in place.
06/08/15	Installed new check ball assemblies on Chlorinator pump at Cleveland BPS
6/4 to 6/17/15	Removed glue and remaining insulation from piping at Cleveland BPS. Prepped pipes for paint
06/15/15	Boelcke Heating - Yearly PM and Service on Roof Top AC Units. Also installed new thermostat in the lab for east unit
6/15 to 6/17/15	Installed wiring and remote readouts for Chlorine Sensors in the control room
06/18/15	Installed edging, weed barrier and stone at Cleveland BPS to replace mulch and prevent erosion around the building
06/22/15	Schneider Electric - Service call for High Service Pump # 4 VFD, found that cooling fan assembly was out causing Over Temp fault. Technician will advise sales department to get a quote on part and advise.
06/22/15	Installed new security camera under veranda, waiting on Simplex to set up.
06/25/15	Installed new conduit and security camera on East side of plant, waiting on Simplex to set up.

STAGE 2 D/DBPR MONITORING-HALOACETIC ACIDS

June 2015 Report

WSSN 6310

DBP 1

Date	09/25/14
Site	Blossomland
Dibromoacetic acid	<1
Dichloroacetic acid	4
Monobromoacetic acid	<1
Monochloroacetic acid	<2
Trichloroacetic acid	9.7
Total HAA5	*13.7*

Date	12/10/14
Site	Blossomland
Dibromoacetic acid	<1
Dichloroacetic acid	20
Monobromoacetic acid	<1
Monochloroacetic acid	<2
Trichloroacetic acid	33
Total HAA5	*53*

Date	03/11/15
Site	Blossomland
Dibromoacetic acid	<1
Dichloroacetic acid	7.3
Monobromoacetic acid	<1
Monochloroacetic acid	<2
Trichloroacetic acid	7.2
Total HAA5	*14.5*

Date	06/11/15
Site	Blossomland
Dibromoacetic acid	<1
Dichloroacetic acid	13
Monobromoacetic acid	<1
Monochloroacetic acid	<2
Trichloroacetic acid	11
Total HAA5	*24*

RAA **26** **µg/l**

STAGE 2 D/DBPR MONITORING-TTHM

June 2015

WSSN 6310

DBP 1

Date	09/25/14
Site	Blossomland
Bromodichloromethane	15
Bromoform	<0.5
Chloroform	49
Dibromochloromethane	4.3
Total Trihalomethanes	68.3

Date	12/10/14
Site	Blossomland
Bromodichloromethane	11
Bromoform	<0.5
Chloroform	33
Dibromochloromethane	2
Total Trihalomethanes	46

Date	03/11/15
Site	Blossomland
Bromodichloromethane	7.3
Bromoform	<0.5
Chloroform	9.5
Dibromochloromethane	3.8
Total Trihalomethanes	20.6

Date	06/11/15
Site	Blossomland
Bromodichloromethane	8.1
Bromoform	<0.5
Chloroform	16
Dibromochloromethane	3.1
Total Trihalomethanes	27.2

RAA **41** **µg/l**