South Sangamon

YEAR 2 2016-2017 ANNUAL REPORT

Prepared for:
South Sangamon Water Commission

WOODARD &CURRAN

July 2017

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Contents

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Executive Summary

This Annual Report summarizes the Operation and Maintenance activities at the South Sangamon Water Commission (SSWC) for the period of May 1, 2016 – April 30, 2017. This was the second contract year for Woodard and Curran. This past year was once again a very busy and challenging year with the implementation of a Composite Correction Program (CCP), a revised Special Exemption Permit by the Illinois Environmental Protection Agency (IEPA) for the plant, addressing water quality concerns, development of a new format for the Capital Improvement Projects list while maintaining a safe work environment and producing water that met or exceeded IEPA regulatory standards.

The SSWC provides water to the Village of Chatham, Village of New Berlin, 44 retail customers and 1 wholesale customer. Water pumped from the well field passes through aeration, is dosed with Sodium Permanganate prior to detention is filtered by membranes for removal of bacteria, Iron, and Manganese, then ion exchange units for softening, and then dosed with chlorine prior to entering the clear well. When the water leaves the plant, an Ortho-Phosphate is added for corrosion control and Fluoride as required by the State of Illinois.

A summary of this year's highlights are:

1. There were no safety incidents or lost time accidents for the year. All training has been completed. The 127 items identified as a safety issue needing to be addressed have been completed. Only seven items remain and two of those items require Capital funding to be completed.
2. Implementation of the Sodium Bisulfate feed system to the lagoon station. The SSWC plant now consistently meets Lagoon Chlorine Discharge limits for the first time since the plant opened in 2012.
3. The Composite Correction Program ordered by the IEPA has essentially been completed.
4. The plant has a new Special Exemption Permit (SEP) and new National Pollution Discharge Elimination System (NPDES) permit. Woodard & Curran worked closely with IEPA to minimize the financial impacts of these permits and once completed saved SSWC significant sums of money.
5. $282,490 in Capital Projects were completed during the 2016-2017 timeframe.
6. The Hydro-Pneumatic Storage Tank Project was completed and is online at the plant. This project allows SSWC to be removed from the restricted list and gives the commission the ability to extend water mains.

7. Over 246 total work orders were completed for the year. This included continuation of the Well Rehabilitation Program and the Emergency Generator Maintenance Program. Over $22,000 in Distribution System work was completed as well as nearly $28,000 in repairs to the WesTech Filter System.

8. The project was $52,149 over budget for the year. This was due primarily to over 700 hours of overtime worked by plant operations staff as well as maintenance and repair activities to address CCP requirements, responding to Freedom of Information Act (FOIA) requests, staff taking on additional duties associated with the distribution system and pump station, and overtime due to SCADA automation issues.

9. The total spent on chemicals for 2016-2017 was $174,778.85 for the year. This was approximately $3,000 under budget for the year.

10. Implementation of:
    - Permanent Sodium Permanganate Feed System
    - Chlorine Alarm System on the plant's effluent line
    - New Fluoride Pumps per IEPA mandate.
    - Installation of a second redundant Chlorine feed pump

Woodard & Curran appreciates the opportunity to serve the SSWC and its customers and we look forward to another successful year of operations.

SECTION 1

Health & Safety

SUMMARY OF LOST TIME / SAFETY INCIDENTS

There were no safety incidents at the South Sangamon Water Commission treatment plant during Year 2. Since the plant opened in 2012, there has not been a safety incident or lost time accident. The number of days worked at the facility without a loss time accident by Woodard & Curran now stands at 730.

As part of the transition, Woodard & Curran's safety program was implemented with a hard copy and electronic available for plant personnel to access. Vendor and contractor safety programs and credentials were reviewed and "approved" before work was performed at SSWC.

Woodard & Curran employees were required to complete the Woodard & Curran site specific training as well as other elements such as Qualified Electrical Training, Forklift/ Powered Industrial Truck Training and Confined Space Training.

Since Woodard & Curran assumed operational responsibility for the SSWC plant, there have been two (2) safety audits completed. There were 134 items needing to be addressed. As of the end of Year 2, 127 of these items have been addressed. Of the remaining seven items, two require Capital Funding to be completed.

SUMMARY OF TRAINING

Woodard & Curran provides continuous safety training for personnel at the plant. This is accomplished by requiring daily safety meetings, weekly safety updates that are available through the company's web page and safety videos that are assigned to all employees and are required to be completed.

Throughout the year, all plant personnel participated in Puresafety topics provided by Woodard & Curran. Topics for Year 2 are presented in the following table.

Month	Topic
2016	
May	Methods of Electrical Contact Release
June	Guarding Floor & Wall Openings & Holes
July	Respiratory Protection
August	Ladder Safety
September	Hearing Conservation

Month	Topic
October	Hazard Communication
November	“What If” Mentality
December	Focus on Annual Tasks
2017	
January	Blood Bourne Pathogens
February	Electrical Hazard Recognition
March	Preventing Back Injuries
April	Industrial Ergonomics

MISCELLANEOUS SAFETY ITEMS

Chemicals that are old and no longer usable can pose a hazard to employees and others. Chlorine that was old and was on-site when Woodard & Curran assumed operational responsibilities for the plant in May 2015 was removed on September 26, 2016. Pictured below are the three containers that had Chlorine in them that were removed and disposed of properly.

SECTION 2

Compliance

The finished water quality was within regulatory limits and all reporting and sampling requirements were met for Year 2 except for the annual Nitrate sample. Year 2 was exceptionally challenging with the installation of a new system to dechlorinate water being discharged from the lagoons, submission of an application for a new NPDES Permit, implementation of the Composite Correction Program, implementation of Capital Projects in response to the 2015 Engineering Evaluation, and completion of two Capital projects. These activities required over 700 hours of overtime by just two plant employees. Included within this section is an outline of the numerous projects both completed and currently under way during Year 2.

Lagoon Chlorine Exceedance. Since Woodard & Curran assumed operational responsibilities for the plant, the discharge from the lagoons has consistently exceeded the maximum allowable Chlorine residual of 0.05 mg/L. On July 27, 2016, the IEPA issued a non-compliance advisory letter for the lagoon effluent exceeding the total Chlorine residual limit. Woodard & Curran's engineering staff developed a project to address this regulatory issue by designing a system to de-chlorinate the water prior to discharge. Woodard & Curran's engineering staff completed engineering and obtained a Construction Permit for the project on April 26, 2016. Once construction was completed, Woodard & Curran's SCADA group tied the de-chlorination system in the plant's SCADA computers to allow plant operational staff to control and monitor the pumps by computer. Since the system went online in October 2016, the plant has yet to exceed the total Chlorine residual limit of 0.05 mg/L required by the plant's National Pollutant Discharge Elimination System (NPDES) Permit.

New NPDES Permit. Shortly after Woodard & Curran assumed operational responsibilities for the SSWC plant, the NPDES Permit for the lagoon discharge expired on December 31, 2015. Woodard & Curran's plant manager prepared an application for a new NPDES permit on behalf of SSWC. After a lengthy review and a chance for public comment, a new permit was issued on August 12, 2016 with an expiration date of July 31, 2021. In addition to renewing the permit, Woodard & Curran was also able to get the IEPA to relax the frequency of samples required from weekly to monthly and a portion of the samples can be done by Woodard & Curran operational personnel. With the reduction in required samples, a significant cost saving of $2,784 a year has been realized by SSWC. The Lagoon Discharge Water Quality table below illustrates the quality of the water being discharged to the Sangamon River daily as well the permit limits.

LAGOON DISCHARGE WATER QUALITY

Month	Iron (mg/L)	Mn (mg/L)	Chloride (mg/L)	CL2 (mg/L)	pH (S.U.)	TSS (mg/L)	Chloride Discharge to SCWRD (mg/L)
2016							
May	0.490	0.350	261	0.450	7.86	0.90	14,500
June	0.285	0.826	311	0.730	7.94	1.13	13,800
July	0.230	0.930	269	1.180	7.78	3.13	12,400
August	2.860	1.471	258	0.849	7.59	3.00	7,330
September	0.110	0.199	285	0.227	7.84	0.00	11,100
October	0.240	0.313	271	0.020	7.87	0.00	6,330
November	0.420	0.596	325	0.020	7.60	0.00	18,500
December	1.180	1.07	265	0.000	7.73	0.00	24,200
2017							
January	0.968	0.760	355	0.030	7.68	0.00	16,100
February	0.650	0.648	248	0.040	7.51	0.00	14,700
March	0.230	0.114	242	0.030	8.09	0.00	14,800
April	0.660	0.601	312	0.040	8.08	13.50	18,800
Average	**0.694**	**0.657**	**284**	**0.301**	**7.80**	**1.80**	**14,380**
Monthly Limit	**2.000**	**1.000**	**–**	**–**	**–**	**15.00**	**30,000**
Daily Limit	**4.000**	**2.000**	**500**	**0.050**	**6.0 - 9.0**	**30.00**	**–**

Composite Correction Program (CPE and CTA). Due to ongoing consumer concerns expressed by residents within the Chatham community water supply distribution system, on February 22, 2016, the IEPA sent a letter to the SSWC directing them to conduct a Composite Correction Program (CCP). The CCP consisted of two elements, a Comprehensive Performance Evaluation (CPE) and a Comprehensive Technical Assistance (CTA):

- The CPE is a thorough review and analysis of the Commission's plant, specifically as to the plant's performance-based capabilities and associated administrative, operation and maintenance practices.
- The CTA is the performance improvement phase that will be implemented if the CPE results indicate improved performance potential.

Mike and Andy Curry from Curry and Associates along with John Bartolomucci from the IEPA and Shane Hill from the village of Chatham made-up the committee performing the CPE. The CPE Committee made preliminary results of their findings for the water plant available on March 30, 2016 (copy of the CPE recommendations is included in Attachment A).

On May 27, 2016, a letter was received from the IEPA requesting an implementation schedule (CTA) for the recommendations in the CPE as well as an update in early 2017. Woodard & Curran's Project Manager prepared the response for the CTA on behalf of SSWC. A July 25, 2016 response from Commissioner Joel Sander with scheduling information was mailed to IEPA on July 27, 2016. (copy of the July 25, 2016 letter is included

in Attachment B). After six months, a second letter was once again prepared on behalf of SSWC by Woodard & Curran that indicated 11 of the 13 recommendations in the CPE had been completed (copy of the January 9, 2017 letter updating IEPA on the status of the CTA is included as Attachment C).

While Woodard & Curran staff continued to work closely with the IEPA on the CCP, much discussion took place on the stability of the water in the Chatham community water supply distribution system. Woodard & Curran utilizes three different test methods to monitor the stability of the water throughout the SSWC distribution system. The CPE required the SSWC to use the Rothberg, Tamburini and Winsor (RTW) model to monitor the stability of the water. Several parameters are utilized to arrive at a Langelier Index Value. The target range for the Langelier Index is a reading between 1.0 and -1.0. Six samples were drawn over a three month period in both Chatham and New Berlin. The average Langelier Index Value for both Chatham and New Berlin were -0.2 for the three-month period (copy of the RTW Model results is included in Attachment D).

In addition to the RTW Model, Woodard & Curran has worked closely with Water Solutions Unlimited (WSU) to monitor water stability through coupon testing. WSU has been helping Municipal water treatment systems throughout the Midwest provide safe drinking water for more than 25 years. The Corrosion Coupon Records indicate a very good rate for Steel and a low rate for Copper corrosion. Woodard & Curran will continue to monitor corrosion rates from the plant and work with WSU in the future. A table with all the coupon results is included in this report as Attachment E.

The third method for monitoring water stability is through state mandated Lead and Copper testing. SSWC is required to draw five samples from the distribution system on a yearly basis. SSWC has no samples above the Maximum Contaminant Level (MCL) for either Copper or Lead. The table below provides Lead and Copper results from samples pulled in 2016 and the Maximum Contaminant Level for each parameter.

Location	Lead Result (ug/L)	Copper Result (mg/L)
LP3R001	0.00	0.497
LP3R003	0.00	0.340
LP3R005	8.99	0.412
LP3R006	0.00	0.776
LP3R008	0.00	0.925
MCL	15 ug/L	1.3 mg/L

New Special Exemption Permit. As results of the CTA became available, the IEPA issued a new Special Exemption Permit (SEP) on June 7, 2016. A copy of the June 7, 2016 SEP is included in this report as Attachment F. Woodard & Curran met with Mr. David Cook from the IEPA on October 21, 2016 regarding the new Special Exemption Permit. Woodard & Curran presented findings from additional testing and observations from the initial SEP. The result of the meeting produced a less expense testing regimen for SSWC. A revised SEP was issued by the IEPA on November 30, 2016 (copy of the revised SEP is included in Attachment G).

2016 Capital Project List. The IEPA performed an Engineering Evaluation on the plant in August 20, 2015. This evaluation produced several projects that were approved by the SSWC for implementation during the 2016-2017 budget. A copy of the original list of projects included in South Sangamon Water Commission – Capital Improvements Cost

Matrix 2016 is included in Attachment H.

To date, the Hydro-Pneumatic Storage Tank project, incorporation of the WesTech and Tonka HMI (Human Machine Interface) onto the SCADA computer, the new Chemical Feed Pumps projects, the Lagoon De-chlorination project and the CL 17 project to monitor Chlorine Levels leaving that plant have been completed at a cost of $282,490. The remaining project for the Altitude Valve at the Village of Chatham Reservoir is estimated to cost $79,200 and requires coordination with the Village of Chatham with other planned improvements.

WATER QUALITY

For Year 2 the well field pumped 491,417,000 gallons of water. The Average Raw Water Quality parameters for Year 2 are included in the table below.

RAW WATER

	Free CL2	Total CL2	pH	Temp	Iron	Mang	Fluoride	Hardness	Alkalinity	Phosphate
2016										
May	–	–	7.45	13.6	0.78	0.216	0.22	364	285	–
June	–	–	7.37	14.1	0.90	0.224	0.21	362	283	–
July	–	–	7.38	14.5	0.93	0.222	0.24	363	283	–
August	–	–	7.34	14.6	0.85	0.226	0.21	367	284	–
September	–	–	7.36	14.9	0.89	0.229	0.20	368	284	–
October	–	–	7.32	14.7	0.84	0.233	0.20	370	285	–
November	–	–	7.34	14.4	0.89	0.235	0.18	372	287	–
December	–	–	7.35	13.7	0.88	0.226	–	369	287	–
2017										
January	–	–	7.32	13.4	1.03	0.213	–	373	289	–
February	–	–	7.34	13.6	0.94	0.202	–	377	292	–
March	–	–	7.41	13.6	0.99	0.190	–	373	291	–
April	–	–	7.41	14.1	0.94	0.202	–	375	292	–
Average	**–**	**–**	**7.37**	**14.1**	**0.91**	**0.218**	**0.21**	**369**	**287**	**–**

For Year 2 the treatment plant filtered 439,292,000 gallons of water. Approximately 396,789,815 was available to the distribution system. The Average Finished Water Quality parameters for Year 2 are included in the table below.

FINISHED WATER

	Free CL2	Total CL2	pH	Temp	Iron	Mang	Fluoride	Hardness	Alkalinity	Phosphate
2016										
May	1.4	1.5	7.83	13.8	0.01	0.014	0.83	120	269	0.75
June	1.4	1.5	7.75	14.3	0.01	0.013	0.92	120	268	0.75
July	1.4	1.5	7.66	14.6	0.01	0.011	0.88	120	272	0.79
August	1.6	1.8	7.69	15.0	0.01	0.012	0.67	121	277	0.77

	Free CL2	Total CL2	pH	Temp	Iron	Mang	Fluoride	Hardness	Alkalinity	Phosphate
September	1.4	1.6	7.71	15.1	0.01	0.012	0.76	120	271	0.78
October	1.3	1.5	7.63	14.8	0.01	0.010	1.00	120	269	0.86
November	1.4	1.6	7.67	14.6	0.01	0.014	0.88	121	268	0.77
December	1.3	1.4	7.66	13.6	0.01	0.013	0.83	120	273	0.87
2017										
January	1.2	1.4	7.63	13.4	0.01	0.012	0.81	119	273	0.92
February	1.2	1.4	7.73	13.7	0.01	0.010	0.80	121	276	0.86
March	1.2	1.4	7.87	13.6	0.01	0.012	0.80	124	276	1.21
April	1.2	1.4	7.84	14.1	0.01	0.011	0.79	116	279	1.37
Average	**1.3**	**1.5**	**7.72**	**14.2**	**0.01**	**0.012**	**0.83**	**120**	**273**	0.89

Consumer Confidence Report. Woodard & Curran's operational staff prepared The 2016 Consumer Confidence Report (CCR) on behalf of the SSWC. The report was presented at the April 18, 2017 SSWC monthly meeting and a copy was distributed to all customers of the commission.

Nitrate Testing. There was one compliance issue regarding Nitrate testing. Woodard & Curran received a Notification Letter from the IEPA regarding the 2016 Nitrate test. The sample was pulled and delivered to the laboratory as required by operational personnel. The laboratory performed the Nitrate test and sent the results to the SSWC plant, but failed to report the Nitrate test results to the IEPA. As a result, the plant was considered out of compliance. Once results were forwarded to the IEPA, the plant was back in compliance and the Public Notification requirement was rescinded. However, the violation was still required to appear in the 2016 CCR.

Third Place in the Water Tasting Contest. Each year the Illinois Rural Water Association has an annual technical conference in Effingham, Illinois. This year's conference was held February 21-23, 2017 and a sample of the plant water was submitted in the Best Tasting Water Contest. We tied for third place with Mt. Pulaski who won the event in 2012. Lake Egypt in southern Illinois was the overall winner. This makes the second top 5 finish for the SSWC in consecutive years.

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SECTION 3

Operations Summary

OVERVIEW

Woodard & Curran continues to develop the Hach Wims OPS Database and SEMS Database for water testing and reporting as well as maintenance and repair activities. Utility Cloud, a database specifically used for maintenance of the distribution system, is being utilized for maintenance of the SSWC distribution system. Flushing of approximately 30 percent of the distribution system took place in late May 2016.

EVENTS IMPACTING OPERATIONS

WesTech System Repairs. WesTech Engineering was on site May 31, June 1 and June 2, 2016. The main purpose of the site visit was to install pipe spools for the air scour line, pipe spools for the PDT line and install new air filter systems. Other work accomplished during their visit was programming modifications to implement use of the new Neptune Citric Acid pump for Clean In Place and Maintenance cleaning, programming modifications for the VAF strainers to flush the higher pressures for Filter Banks 1 and 2, and review alarm set points. Below are pictures taken while the work was in progress.

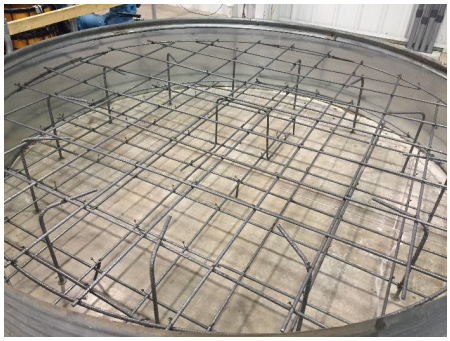
New Chemical Pumps for Sodium Permanganate, Sodium Hypochlorite and Fluoride Systems. Following an engineering evaluation by the IEPA in 2015 and while working closely with the IEPA during the CCP, it was determined the pumps originally supplied to the plant would require replacement. To meet the IEPA's mandates, it was also determined that properly typed and sized pumps would be required. Woodard & Curran worked closely with Meco Engineering and local contractors to develop a project that would provide two new Sodium Permanganate Pumps, two new Sodium Hypochlorite pumps and the purchase of one new Fluoride pump while utilizing an existing pump for Fluoride. This work was estimated to cost $37,015 and was completed at a cost of $35,521. In addition, chemicals budget for the plant were under budgeted by nearly $4,000.

On November 9, 2016, 8" upper manifold on Train 3 was replaced. The existing piece had developed a hairline crack due to stress on the end of the pipe under the groove lock clamp.

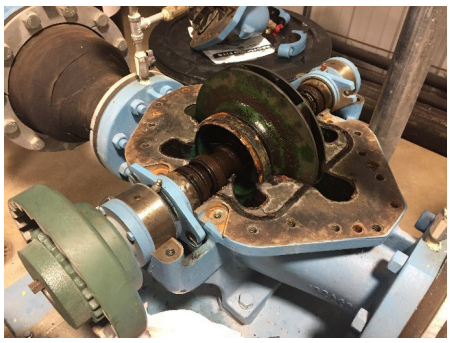
Chlorine Alarm System on Plant Effluent. A CL-17 was moved to the end of the plant to monitor the Chlorine level in the water leaving the plant continuously. Plant operation staff installed the CL-17 and installed the plumbing and electric needed. Woodard & Curran's SCADA group tied the reading from the CL-17 into the plant's SCADA system. The project was estimated to cost $16,000 but was completed at a total cost of $1,525 not including plant operation staff labor.

SCADA Computers. A project was completed by Woodard & Curran's SCADA group to upgrade the SSWC SCADA system. Major improvements included the installation of two new SCADA computers to control the plant, installation of Team Viewer for secure remote access, purchase and configure new Netgear Wireless Router, provide iFix (HMI software) and support as well as other needed upgrades. The project was estimated to cost $78,745 and was completed at that cost.

Hydro-Pneumatic Storage Tank. Foundations for the tank and compressor were poured on November 12, 2016. The New Hydro-Pneumatic Storage Tank arrived at the plant on January 5, 2017. Painting began on the permanent Hydro-Pneumatic Storage Tank on February 1, 2017. Painting was completed February 6, 2107. The new tank was placed into operation on February 14, 2017. The Operating Permit was signed on February 9, 2017 (see Attachment C of this report). The IEPA approved the permit on February 17, 2017. The temporary Hydro-Pneumatic Storage Tank was taken off line and removed.



High Service Pump Five Rehabilitation. Illinois Electric Works was on-site on November 8, 2016 to disassemble High Service Pump #5. As you may recall, we had this same work done in 2015 for High Service Pump #3. New wear rings were installed in the pump. Once installation was complete, a Bac-T was pulled off the pump and it passed. The pump is now back on-line and is running. Below are the pictures while the pump was disassembled.



Transmission Main Break. On November 13, 2016, the transmission main had a break just north of the bridge between New City Road and Rochester. The break occurred around mid-day. Repairs were completed around 9:30 pm. The line was flushed for approximately 6 six hours after the break. Samples were obtained on Monday morning and the plant went back on line Tuesday morning. Below are some of the pictures we took the day of the break.

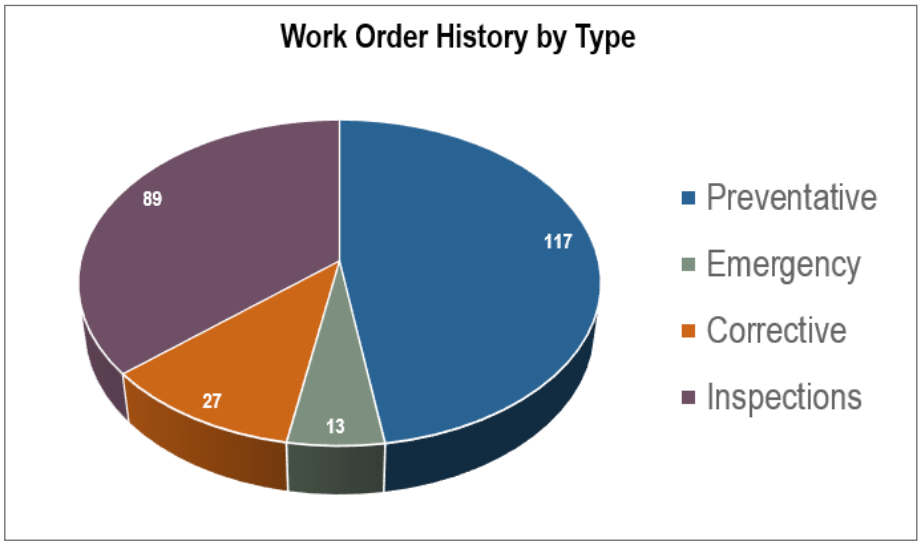
CUSTOMER INQUIRIES

During Year 2 there were 34 inquiries received. The inquiries can be summarized as follows.

Month	Amount	Category
2016		
May	1	Water Quality Question
June	3	Meter Issue, FOIA Request, Water Leak
July	5	2 (ea) NPDES, FOIA, Bulk Water, Easement Payment
August	5	Multiple FOIA, Chlorine Level, Lead & Copper, EJ Water, Matt Mau Tour
September	2	Flushing Info, AAC Invoice
October	2	New Water Service, 2011 Feasibility Study
November	2	FOIA
December	2	Chlorine Residual, FOIA
2017		
January	2	FOIA, Meter Reading
February	4	2 (ea) Water Pressure, Flushing, Water Leak
March	3	New Customer, Water Analysis, Water Usage
April	3	Dead Meter, Restore Water Service, Manganese Levels

SECTION 4
Maintenance

In Year 2, there were 246 total work orders completed. This consisted of 27 Corrective, 13 Emergency, and 117 Preventive activities. In addition, there were 89 Inspections completed. The table, chart, and graph below are an illustration of these activities during Year 2.



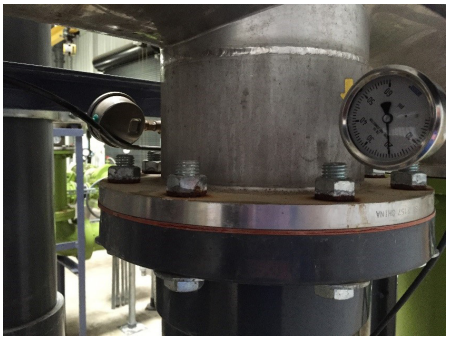
MAINTENANCE HIGHLIGHTS

Prior to Woodard & Curran's arrival, the SSWC instituted a Well Rehabilitation Program. Woodard & Curran saw the value in this program and continued the program through Year 2. Based on the information in the table, the results confirm Woodard & Curran is operating the wells in such a manner that the wells are operating and sustained at a higher level than when they were new. Wells 6, 7 and 8 will be treated early in Year 3. The table below indicates the current data on each well.

Well No.	Present	New	% Loss	Last Test	% Loss
1	17.8	18.0	1	20.2	12
2	36.4	25.0	–	28.4	–
3	18.3	16.0	–	22.7	19
4	10.0	9.0	–	10.2	2
5	20.6	11.0	–	14.3	–
6	11.5	9.0	–	12.0	4
7	24.0	18.0	–	32.0	25

Well No.	Present	New	% Loss	Last Test	% Loss
8	26.4	23.0	–	36.9	18
9	20.8	18.3	–	23.1	10
10	35.0	11.2	–	33.6	–

Pressure sensors on the VAF Pressure Filters on the WesTech system, Bank 3, were showing pressure irregularities. Plant operational staff cleaned the sensors and reinstalled them. Bank 3 was off-line for a short time and there was no interruption in service. Pictured to the right is Bank 3 where the sensors are located.



Bank 3 - Pressure Sensor

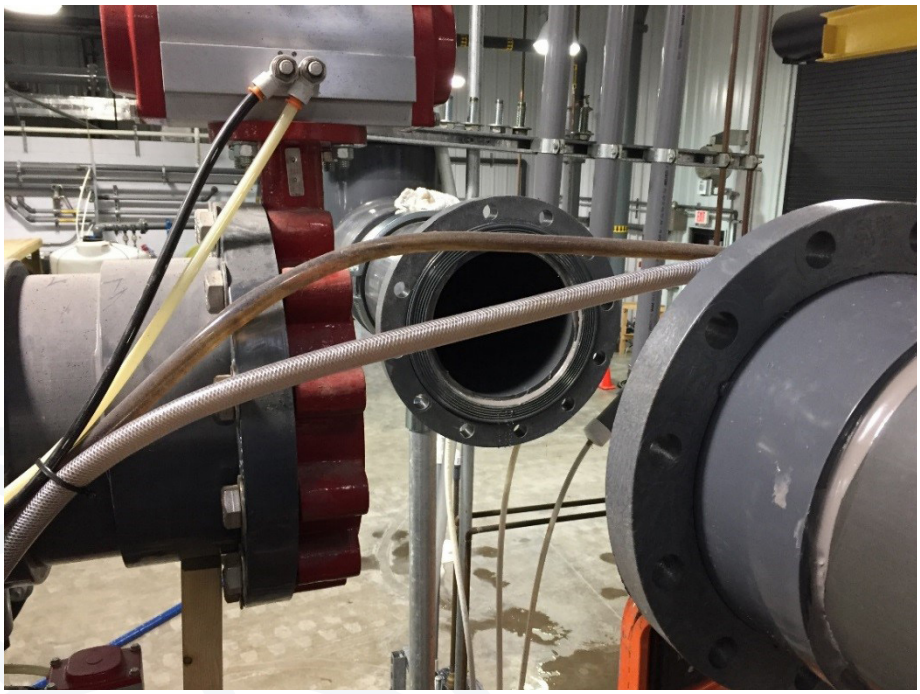
Work was completed on the high Chloride tank load out September 9, 2016. Below are pictures of the load out prior to repair (left) and the completed repair (right).

During Year 2, over $22,000 in new service installation, hydrant repair, service line repairs and transmission main repairs were completed. Pictured below to the right is the service line repair at 5210 New City Road. The meter pit was relocated from the ditch to the beginning of the homeowners yard.

Pictured above on the left is the hydrant that was repaired at Old Route 54 and Loami Bates Road. Something struck the hydrant and it was laying on the ground when plant operation staff picked it up. The hydrant was repaired on July 20, 2016 and placed back in service.

A leak at a sample station on Cardinal Hill Road approximately 300-feet south of St. Hiliare Road required repairs in the spring of 2017.

Henson Robinson was on site December 1, 2016 to repair the leak on Bank 1 of the WesTech Filters. The plant was off-line for approximately 3 hours while the repairs were made.



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SECTION 5

Project Management AND SUPPORT

PROJECT MANAGEMENT AND SUPPORT

Jennifer Anders
Roger Blackman
Laura Bonk
Mike Cherniak
Stephanie Crowell
Jason Dennis
Jeannie Dubois
Shannon Eyler
Alan Fabiano
Abby Feather
Wendy Foreman
Joyce Garnett
Ray Giguere
Cara Hanson
Joe Hurley
Troy Kepley
David Kraus
Doug McKeown
Bobby Nichols
Steve Niro
Brian Ravens
Paul Roux
Jackie Smith
Marc Thomas
Joanne Wallace
Helen Whitcomb

ANNUAL BUDGET

Woodard & Curran completed Year 2 with a negative balance of $52,149. The table below illustrates the category and estimated cost agreed upon by the SSWC and Woodard & Curran prior to May 1, 2016. The far-right column indicates actual expenditures through April 30, 2017.

Category	Estimate	Actual
Direct Salary, Benefits & Overhead	$275,115	$293,691
Chemical Costs	$178,500	$174,778
Maintenance & Repair Costs	$95,100	$109,594
Laboratory Costs	$23,355	$18,648
Brine Removal Costs	$140,260	$160,814
Miscellaneous Office Supplies	$3,200	$3,120
Miscellaneous Operating Expenses	$14,914	$17,320
Utility Costs	$97,350	$97,680
Other Operating Costs	$4,072	$3,629
Subtotal Costs	**$831,866**	**$879,274**
Fixed Fee	$83,187	$87,927
Transition Costs ($49, 167 – 3 yr amortization	$16,389	$16,389
Total for Contract Year 2	**$931,442**	**$983,591**

The increased costs for Year 2 were due to the following reasons:

- **Direct Salary, Benefits & Overhead.** The Modified Comprehensive Plant Evaluation (CPE) Final Report was submitted to the IEPA on April 21, 2016. On May 27, 2016, the IEPA requested a schedule be developed for implementation of the CPE. 13 recommendations that in some cases required additional research and testing required additional hours for the plant's operational staff to complete. A new SEP was issued to the SSWC which would likely have required the plant be staffed 24/7. Woodard & Curran met with the IEPA and a revised SEP was issued but significant overtime was necessary to gather the information and test results.
- **Maintenance and Repair.** Repairs and maintenance costing nearly $28,000 to keep the WesTech Membrane system operational. Repair and maintenance of the distribution system, new services, and hydrant repairs totaled nearly $22,000 were paid by Woodard & Curran without additional revenues.
- **Brine Removal Costs.** Additional costs for disposal of waste when cleaning the tanks and changes suggested by the IEPA on the Ion Exchange/Softening system as part of the CPE contributed to additional trucking expenses.
- **Miscellaneous Operating Expenses.** Safety equipment necessary for employee safety and to comply with both Woodard & Curran as well as OSHA was purchased.
- **Utility Costs.** The cost for utilities was very close to the estimated cost. Utilities were over by a slight amount.

The table below is a breakout of the chemicals used and the cost during Year 2.

Annual Budget	Actual Expense
Sodium Permaganate	$10,478.08
Sodium Hypochlorite	$9,561.79
Phosphate	$11,896.25
Fluoride	$4,609.13
Sodium Bisulfite	$1,833.67
Citric Acid	$40,047.21
Sodium Hydroxide	$317.20
Algae Killer (Lagoon)	$50.00
Sodium Chloride	$95,985.52
Totals	**$174,778.85**

STAFF TRAINING

- Management Training in Florida and St. Charles. Dan Held attended Management training in Orlando, Florida on March 14-17, 2017 and in St. Charles, Missouri in September 2016.
- Dan Held and Keith Sommers attended Forklift training in St. Louis during February and March of 2017.
- Conferences. Dan Held attended several conferences to obtain continuous education credits required to maintain a Class A license.

APPENDIX A

COMPOSITE CORRECTION PROGRAM RECOMMENDATIONS

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APPENDIX B

JULY 25, 2016 LETTER TO THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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APPENDIX C

JANUARY 9, 2017 LETTER TO THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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APPENDIX D

RTW MODEL SAMPLE RESULTS

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APPENDIX E

CORROSION COUPON TEST RESULTS

APPENDIX F

NEW SPECIAL EXEMPTION PERMIT

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APPENDIX G

REVISED SPECIAL EXEMPTION PERMIT

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APPENDIX H

CAPITAL IMPROVEMENTS COST MATRIX 2016

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APPENDIX I

CAPITAL PROGRAM PROJECT LISTING