

A photograph of a large, ornate, multi-tiered fountain in a park setting. The fountain is the central focus, with water cascading down its tiers. It is surrounded by lush green trees and a clear blue sky. In the background, a street with parked cars and buildings is visible. The entire image is overlaid with a semi-transparent orange gradient at the bottom.

CONTRACT YEAR 6 MONMOUTH, ILLINOIS

Annual Report

DEPARTMENT OF PUBLIC WORKS
YEAR ENDING APRIL 30, 2019

WOODARDCURRAN.COM



Contents

- SECTION 1 Executive Summary**
- SECTION 2 Health & Safety**
- SECTION 3 Wastewater Treatment**
- SECTION 4 Water Treatment**
- SECTION 5 Customer Service and Collection**
- SECTION 6 Year End Annual Cost**
- SECTION 7 Staffing**
- SECTION 8 Capital Improvements**
- SECTION 9 Woodard & Curran Support Staff**



Section 1

EXECUTIVE SUMMARY

Woodard & Curran have concluded the sixth year with the City of Monmouth, IL and is honored to be the City's partner in the operation and maintenance of the City's Public Works Department. The year had many challenges and successful moments captured in this report. A summary of all the activity and statistical data for the past twelve months related to effluent quality, potable water information, chemical usage/cost, maintenance and repair, performance to budget, billing/collection data, Public Works staff, and capital planning is provided later in the report.

Safety is always a number one priority for Woodard & Curran. For the year 2018-19, all safety training and plan initiatives were completed. We are happy to report there were zero safety incidents within the department which is a testament by all staff and field employees to continue to work safely. Heightened awareness of any potential hazard goes a long way towards incident prevention.

Woodard & Curran's Environmental Compliance and Operations monitored and processed over 1.6 billion gallons of wastewater, meeting discharge limitations and remaining 100% compliant at the Wastewater Treatment Facility for 2018-2019. The Water Treatment system produced over 1 billion gallons of high quality water, meeting the IEPA's water quality requirements without losses of service or water quality complaints with the exception of a city wide boil order last November as a result of a large water main break on the main 12" transmission line near the North Water Treatment Plant. Four new 12" valves were installed in strategic areas to eliminate that from occurring in the future. The annual consumer confidence report was submitted on May 5, 2019 and all annual IEPA reports did not identify any deficiencies.

The Public Works operating budget for the year was \$2,999,003. By closely managing the budget line items, implementing and continuing best operational practices, obtaining competitive quotes for purchasing, and in spite of Mother Nature, the annual Public Works operation budget came in at \$3,001,766 budget for the year, \$2,763 over budget. A more thorough breakdown of the expenses is provided later in section 5 of the report.

The Public Works organization structure continues to be revisited to ensure it is operating effectively and efficiently. Andy Jackson, Roger Blackman, and Bill Hart attended various professional conferences and EPA training sessions to keep abreast of regulations, technologies, and to maintain their certifications and licenses.

Woodard & Curran continued to assist the City in Capital Planning. Section 8 of this report details the projects that are in various stages of design and completion. The capital plan is reviewed and edited each year; a copy is available to you if you would like to see it.

Woodard & Curran continued to provide technical assistance and support for governmental relations outreach and economic development. Specifically, a Woodard & Curran consultant provided regular advisory services to the mayor and administrator regarding governmental relations strategies, funding opportunities and outreach.

As the City and Woodard & Curran move forward and focus on the safe and compliant optimization of the Public Works operation there will be more challenges. Through effective planning, training, and execution we will continue to provide a safe, compliant, and cost-effective service to the residents of Monmouth. Thank you for the opportunity to serve the City of Monmouth.



Section 2

HEALTH & SAFETY

Woodard & Curran takes pride in making safety the number one priority for all of our contract operations. Ensuring each employee goes home healthy each day increases productivity, saves money, and promotes a safe work environment for all.

This past year was incident free for the entire Department which is an outstanding accomplishment given the wide ranges of tasks performed under all conditions.

Staff is required to hold monthly safety meetings of which 6 are documented training sessions and 6 that are more a “tailgate” session to review procedures, upcoming projects hazards identification, experiences, near misses, etc. These tailgate sessions are important as they engage each employee and give ample opportunity to get their perspective on all the mentioned topics.

The following safety topics were covered by all Woodard & Curran employees

- Preventing Back Injury
- Blood-borne pathogens
- Hearing Conservation
- Small chemical spill cleanup/response
- Preventing heat stress and heat related illness
- Industrial Ergonomics
- Confined Space Entry Training
- Fire Extinguisher Safety
- Guarding Floor and Wall Openings and Holes
- Personal Protective Equipment (PPE)
- Lockout/Tagout
- Traffic Control Through Work Zones
- Driver Fatigue
- Respiratory Protection



In addition to the safety topics, Corporate Safety Director Steve Lindeman made a site visit to assist with Fall Protection training and to certify our fall protection equipment.



Section 3

WASTEWATER TREATMENT

The Consolidated WWTP treated and discharged 1.65 billion gallons of wastewater during the past contract year. Of that total, 1.241 billion gallons of wastewater came from the City users and 404 million gallons from the Smithfield pre-treatment plant. There were 20 recorded combined sewer overflow events covering that same period. An additional 56 million gallons of excess flow was treated and discharge through the excess flow system. There was approximately an 18% increase in flows from the previous year as rainfall was up about 11 inches, (27%), from last year.

Quarterly meetings with Smithfield helped determine current and expected future flow and loadings to enable them to continue their successful business model in Monmouth.

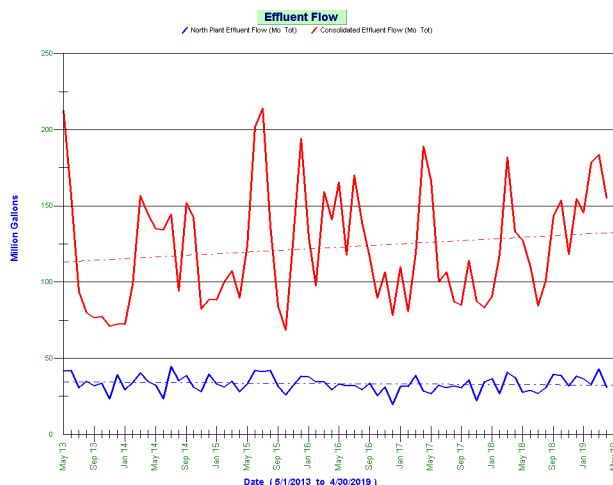
All regulatory reporting and effluent quality permit limits were met for the year.

The weather station at the plant reported 40.8” of rain and 31” of snow from May 1, 2018 through April 30, 2019. The Consolidated Plant continues to produce excellent effluent quality. The table below outlines the water quality vs. NPDES permit limits.

The trend graphs show the past 12 months’ flows and loadings to the treatment plant.

Table 3-1: Water Quality vs. NPDES Permit Limits		
	Annual Average	Permit Limit
Daily Flow (MGD)	4.53	4.62
Ammonia N mg/l	0.1	1.5
CBOD5 mg/l	2	10
Chlorides mg/l	325	500
Suspended Solids mg/l	7	12
Total Phosphorus	0.9	1.0

The graph below outlines the past 6 years of gallons of wastewater treated and discharged.





Section 4

WATER TREATMENT

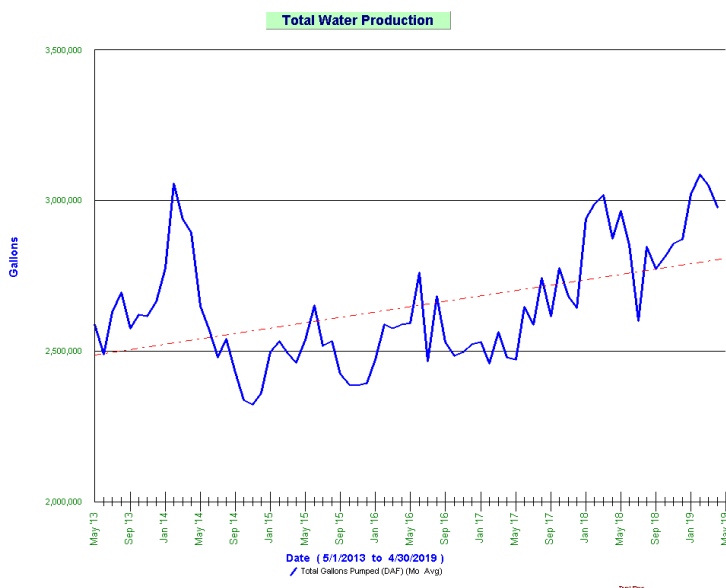
The water treatment plants produced 1.055 billion gallons of finished water during the contract year, an increase of 5% compared to the previous 12 months.

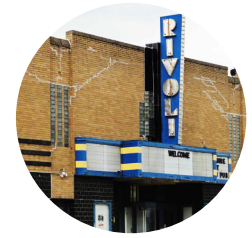
Chemical usage and associated costs were consistent with water production as both are linear with production. The finished water quality met all standards per the Clean Water Act for drinking water. The Consumer Confidence Report was published on May 8th, 2019

The table below outlines the chemical usage for ion exchange softening for the year.

Table 4-1: Monthly Chemical Use for Ion Exchange Softening		
	Daily Average	Annual Total
Treated Water to System	2.89 MGD	1.055 BG
Poly Phosphate Usage lbs	94	34,131 lbs
Salt Usage Tons	5.5	2.010Tons
Chlorine Usage lbs	114	41,557 lbs

The graph below outlines water production over the past 6 years.





Section 5

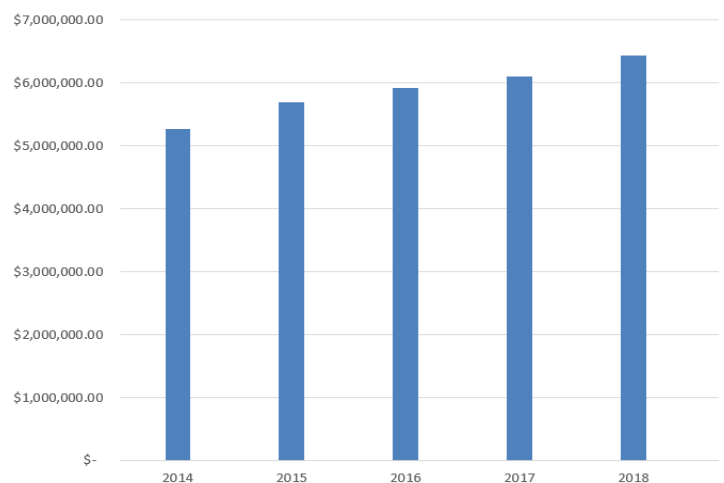
CUSTOMER SERVICE/COLLECTION

The Customer Service Office collected \$6,437,287 of revenue for water, sewer, landfill, recycling, garbage, and Smithfield services for the fiscal year compared to \$6,103,417 for FY 2018, an increase of 5.1%. The table below outlines the breakdown for each category per month. The increase includes an additional \$216,000 from Smithfield for debt service on the North Pre-Treatment Plant to cover the initial improvements made including the new force main and rehabilitation of one clarifier.

Table 5-1: Payment Totals 2018 - 2019 Fiscal Year

Month	Water	Sewer	Landfill	Recycle	Garbage	Yard Waste	Smithfield Bonds	Smithfield Surcharge	Other	Penalty
May 2018	\$223,175.52	\$182,177.89	\$21,254.12	\$14,775.79	\$34,593.81	\$2,802.00	\$34,065.81	\$329.60	\$154.22	\$2,969.59
June 2018	\$243,900.96	\$191,773.28	\$20,996.37	\$14,578.83	\$35,059.08	\$2,801.42	\$34,065.81	\$425.02	\$50.00	\$2,782.76
July 2018	\$252,903.95	\$191,101.15	\$21,601.59	\$15,033.34	\$35,932.18	\$2,808.27	\$34,065.81	\$274.83	\$50.00	\$3,021.89
August 2018	\$254,552.50	\$202,407.33	\$22,132.81	\$15,357.54	\$36,523.99	\$2,900.33	\$49,952.21	\$79.52	\$0.00	\$2,668.54
September 2018	\$230,824.54	\$171,906.02	\$18,460.93	\$12,837.41	\$30,827.09	\$2,434.80	\$34,065.81	\$0.00	\$50.00	\$2,519.13
October 2018	\$250,867.01	\$199,042.50	\$22,360.06	\$15,547.83	\$36,760.41	\$2,940.34	\$34,065.81	\$0.00	\$0.00	\$2,767.07
November 2018	\$249,445.61	\$195,181.61	\$20,512.02	\$14,263.06	\$34,668.49	\$2,694.17	\$18,179.41	\$390.41	\$0.00	\$2,277.87
December 2018	\$219,148.66	\$169,847.93	\$20,346.69	\$14,195.64	\$33,428.02	\$2,636.47	\$34,065.81	\$1,886.16	\$0.00	\$2,697.79
January 2019	\$241,187.60	\$189,383.81	\$21,077.78	\$15,099.82	\$34,674.66	\$2,729.07	\$49,952.21	\$565.64	\$175.00	\$2,890.77
February 2019	\$226,216.85	\$177,706.86	\$20,606.17	\$14,809.42	\$34,531.81	\$2,718.90	\$18,179.41	\$4,675.81	\$0.00	\$2,626.07
March 2019	\$223,956.41	\$185,193.53	\$22,665.26	\$16,254.47	\$36,490.54	\$2,759.16	\$34,065.81	\$439.08	\$100.00	\$3,294.17
April 2019	\$232,243.98	\$184,239.99	\$20,856.66	\$14,958.35	\$34,551.89	\$2,592.22	\$49,952.21	\$549.29	\$0.00	\$2,073.38
Year to Date	\$2,848,423.79	\$2,239,961.90	\$252,870.76	\$177,711.50	\$418,041.77	\$32,817.15	\$424,676.12	\$9,615.36	\$579.22	\$32,589.03
Total Revenue	\$6,437,286.60									

The graph below outlines revenue growth equating to approximately 3.5% per year, collected through the billing office for municipal services over the latest 5-year period.





Section 6

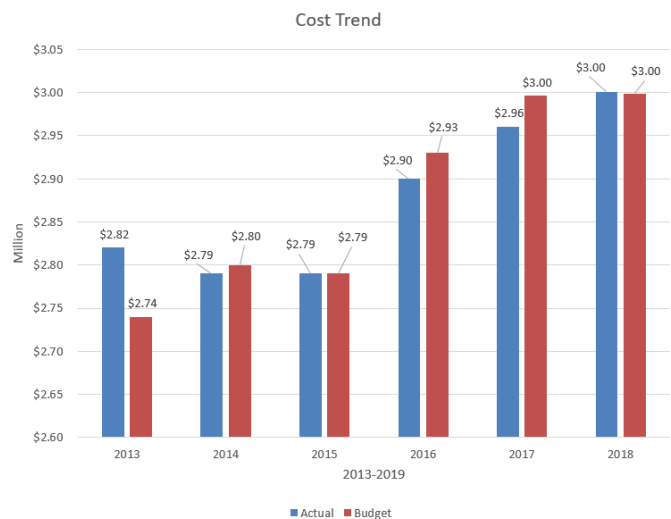
PERFORMANCE TO BUDGET

Budget Category	YTD Actual	Annual Budget	Over (Under)
Labor (D.L. + FB)	\$1,466,539	\$1,517,309	(\$50,770)
Utilities	\$45,413	\$38,100	\$7,313
Chemical Costs	\$313,623	\$303,000	\$10,623
Maintenance and Repair Costs	\$375,832	\$331,700	\$44,132
Sludge Disposal Costs	\$1,671	\$6,000	(\$4,329)
Lab Supplies and Equipment	\$46,760	\$41,750	\$5,010
Office Supplies	\$20,831	\$18,050	\$2,781
Miscellaneous Expenses	\$49,448	\$48,700	\$748
Other Operating Costs	\$148,884	\$150,350	(\$1,466)
Overhead (G&A of D.L.)	\$331,154	\$342,618	(\$11,464)
Sub Total	\$2,800,155	\$2,797,577	\$2,578
Fixed Fee	\$201,611	\$201,426	\$186
Carryover from Year 5	0	0	0
Total Contract Year 6	\$3,001,766	\$2,999,003	\$2,763

As we concluded our sixth year of contract operations and review the budget, the department finished the year \$2,763 over budget.

The maintenance and repair budget helped fund a capital improvement project consisting of installation of 4 new water main valves that were installed in strategic locations to control a large transmission main in the event of a break on this transmission line. The line broke in November of 2018 which resulted in loss of system pressure below 20 psi which required a city-wide boil order. The existing valves were not operable so personnel could not isolate the area around the break which essentially drained both water towers on the north side of town. By installing the new valves, this issue will be avoided in the future. The project cost was \$37,000 of which the City funded \$15,000 and the maintenance budget funded the remain \$22,000.

The graph below outlines department performance to budget since 2013. During that time period, actual costs have held steady at about a 1% increase per year.





Section 7

STAFFING

The Public Works Department Staff and their respective departments are listed below:

Public Works Director

Andy Jackson

Street Department

Roger Blackman, Superintendent
Mike Ross, Equipment Operator
Gary Ward, Equipment Operator
Greg Sage, Equipment Operator
Dalton Simpson, Maintenance
Joe McVey, Equipment Operator
Ken Hall, Maintenance
Jeff Carlson, Maintenance
Mark Blackman, Maintenance

Water Department

Roger Blackman, Superintendent
Bob Gray, Maintenance
Bryan Epley, Service
Brian Glasgow, Meter Reader
Dave Marston, Operations/
Maintenance

Billing | Collection | Administration

Laura Armstrong, Billing Clerk
Peg Ballard, Administration
Alicia Ward, Service Clerk

Wastewater Treatment | Lift Station

Bill Hart, Superintendent
Doug Schaeffer, Maintenance
Roger Mettler, Operations
Ray Brodrick, Operations/Lab

As a staff, the department is responsible for operations and maintenance of 2 water treatment plants, 2 wastewater treatment plants, 120 lane miles of streets and right of way, 75 miles of water mains/distribution, 50 miles of sanitary and combined sewer, 10 miles of storm sewer, 8 lift stations, grounds keeping of the cemetery/airport/Citizens Lake complex/city owned properties, 3,500 customers for water/sewer/landfill/recycling/garbage collection fees, and the approximately 9,950 residents that are served by the department.



Section 8

CAPITAL IMPROVEMENTS

In working through the variety of challenges within the Public Works Department with regards to capital improvements, the following items were completed during this contract year:

1. Design of Phase 2 of the Long-Term Control Plan began in late 2018. This phase entails replacement of the existing pump station with a larger station capable of draining the excess flow lagoons in 36-48 hours vs the current 7-8 days it takes to pump the lagoons down. The reasoning being to empty the storage lagoons as quickly as practical to be able to capture the next storm and prevent a combined sewer overflow. Construction is slated to start in the late summer of 2019.
2. North Wastewater Pre-Treatment Plant improvements began with the replacement of 6,500 feet of force main pipe from the Smithfield pump station on North 6th Street out to the pre-treatment plant. The project was completed in May of 2018. The rehabilitation of the east clarifier at the North Pre-Treatment Plant was completed and put into service in September 2018. The project involved replacement of the center column and sludge removal mechanism, modifying the clarifier from a peripheral feed to a center feed system, new discharge piping and new electrical components to operate the mechanism.
3. Full design for the remaining plant upgrade to the North Wastewater Pre-Treatment plant to accommodate the current and projected future needs of Smithfield Foods began in September 2018. As of May 2019, the design is 90% complete. After internal review and comment, the project design will be submitted to IEPA for review and permitting. A bio-gas use analysis was included in the design to determine the use/market value, if any, of the gas that is produced through anaerobic treatment. The bio-gas use analysis will be revisited as market value conditions stabilize.
4. Construction of the Southeast Quadrant Water Main project on East 9th Avenue and South 5th Street will commence in June of 2019.
5. Working closely with Administrator Steinbrecher, the City entered into a lease program with Enterprise Leasing to allow updating of the fleet including 10 new vehicles in Public Works. The program resulted in affordability, reliability, less vehicle maintenance cost, and improved public appearance in replacement of an aging fleet.

To continue to plan for the needs of the City and economic development, Woodard & Curran's engineering team is engaged in designing the utility extensions for the new Love's Travel Stop proposed to be located along West 11th Avenue near the 34/67 Bypass. The downtown sewer interceptor replacement project will hopefully begin with a preliminary engineering report to submit an application for a USDA Loan as a funding mechanism for the project. The existing sewer interceptor is over 100 years old and traverses under several downtown buildings. The conceptual project is a combination of replacement and rehabilitation of the existing sewer along with investigation into mitigating the effects of storm water runoff into the combined sewer in that area. The USDA offers a 40-year low interest loan for qualified projects with a 45% forgiveness if the MHI is below poverty. The consensus was to pursue this funding avenue and gather the needed information to determine the viability of this funding source.



Section 9

WOODARD & CURRAN SUPPORT STAFF

All the Woodard & Curran staff listed below has been directly involved in the support and ongoing management of the operations of the Public Works facilities.

Name	Title	Function
Marc Thomas	Operations Leader	Management Support
Jennifer Anders	Client Manager	Local Engineering support
Celina Bland	Ops Specialist	O&M support
Ray Giguere	SCADA Specialist	SCADA Support
Kim Brierley	Project Administrator	Accounting
Joe Hurley	Vice President	SCADA Audit & Training
Alan Fabiano	IT Specialist	IT Support
Jackie Smith	Marketing Assistant	Project Support Specialist
Jeannie Dubois	IT Specialist	IT Support
Steve Lindemann	Health & Safety Manager	Health & Safety Support
Wendy Foreman	Health & Safety	Health & Safety Support
Brian Ravens	O&M Controller	Finance
Steve Niro	Business Center Leader	Management Support
Doug McKeown	Chief Executive Officer	Management Support