



[woodardcurran.com](http://woodardcurran.com)  
COMMITMENT & INTEGRITY DRIVE RESULTS

# Monthly Operating REPORT

Monmouth, Illinois

Department of  
Public Works

June 2017



## TABLE OF CONTENTS

| SECTION  | PAGE NO.    |
|--|-------------|
| <b>Executive Summary</b> .....                 | <b>ES-1</b> |
| <b>1. WASTEWATER TREATMENT</b> .....           | <b>1-1</b>  |
| <b>2. WATER TREATMENT</b> .....                | <b>2-2</b>  |
| <b>3. BILLING AND COLLECTION</b> .....         | <b>3-1</b>  |
| <b>4. ESTIMATED ANNUAL COST</b> .....          | <b>4-1</b>  |
| <b>5. MAINTENANCE/REPAIR COST DETAIL</b> ..... | <b>1</b>    |
| 5.1 Maintenance and Repair Costs .....         | 1           |
| 5.2 Chemical Cost Detail .....                 | 3           |
| <b>6. HEALTH &amp; SAFETY</b> .....            | <b>4</b>    |
| <b>7. CAPITAL PROJECTS</b> .....               |             |

## LIST OF TABLES

| TABLE  | PAGE NO. |
|--|----------|
| Table 1-1: Water Quality vs. NPDES Permit Limits .....             | 1-1      |
| Table 2-1: Monthly Chemical Usage for Ion Exchange Softening ..... | 2-2      |
| Table 3-1: Billing/Collection .....                                | 3-1      |
| Table 4-1: Estimated Annual Budget – Year 4 .....                  | 4-1      |
| Table 5-1: Maintenance and Repair Costs .....                      | 1        |
| Table 5-2: Process Chemical Costs .....                            | 3        |

---

## EXECUTIVE SUMMARY

The June Public Works monthly report provides an overview of the month's activities and statistical data including: wastewater treatment effluent quality, water production, billing and collection statistics for municipal services, maintenance activities, maintenance and repair costs vs. monthly thresholds, water treatment chemical costs, overall project cost and performance to annual budget.

Feel free to stop by the office or give me a call, 309-734-4026.

Regards, Andy

## 1. WASTEWATER TREATMENT

The Consolidated WWTP treated and discharged 100 million gallons of wastewater in the month of June. There were 2 combined sewer overflow events in June. The weather station at the plant reported 2.4” of rainfall during the month. The Consolidated Plant continues to produce excellent effluent quality. The table below outlines the water quality vs. NPDES permit limits.

**Table 1-1: Water Quality vs. NPDES Permit Limits**

|                       | Monthly Average | Permit Limit |
|-----------------------|-----------------|--------------|
| Flow (MGD)            | 3.3             | 4.62         |
| Ammonia N mg/l        | 0.1             | 1.5          |
| CBOD5 mg/l            | 2               | 10           |
| Chlorides mg/l        | 385             | 500          |
| Suspended Solids mg/l | 6               | 12           |
| Total Phosphorus      | 0.8             | 1.0          |

## 2. WATER TREATMENT

The water treatment plants produced 79 million gallons of finished water in June. Finished water quality met all standards per the Clean Water Act for drinking water. The table below outlines the chemical usage for ion exchange softening for the month.

**Table 2-1: Monthly Chemical Usage for Ion Exchange Softening**

|                           | Daily Average | Monthly Total |
|---------------------------|---------------|---------------|
| Treated Water to System   | 2.64 MG       | 79 MG         |
| Poly Phosphate Usage-lbs. | 92            | 2,747         |
| Salt Usage — tons         | 5.0           | 150 tons      |
| Chlorine Usage - lbs.     | 103           | 3,093         |

### 3. BILLING AND COLLECTION

**Table 3-1: Billing/Collection**

The table below outlines the revenue collected for the month of June from the Municipal Services billings.

| DATE         | PAYMENTS            | PAYMENTS JUNE 2017  |                     |                    |                    |                    |                   |                    | FARM          |                   | PENALTY |
|--------------|---------------------|---------------------|---------------------|--------------------|--------------------|--------------------|-------------------|--------------------|---------------|-------------------|---------|
|              |                     | WATER               | SEWER               | LANDFILL           | RECYCLE            | GARBAGE            | YARD WASTE        | FARM BONDS         | SURCHARGE     |                   |         |
| 06/01/17     | \$12,298.98         | \$5,330.74          | \$3,498.04          | \$1,010.19         | \$686.90           | \$1,645.39         | \$123.77          | \$0.00             | \$0.00        | \$3.95            |         |
| 06/02/17     | \$17,988.18         | \$7,587.59          | \$5,170.25          | \$1,499.25         | \$1,007.56         | \$2,522.97         | \$199.26          | \$0.00             | \$0.00        | \$1.30            |         |
| 06/05/17     | \$65,956.04         | \$30,398.34         | \$20,585.57         | \$4,388.80         | \$2,981.30         | \$7,042.17         | \$549.18          | \$0.00             | \$0.00        | \$10.68           |         |
| 06/06/17     | \$131,270.74        | \$62,732.26         | \$65,963.44         | \$734.85           | \$495.13           | \$1,244.70         | \$98.01           | \$0.00             | \$0.00        | \$2.35            |         |
| 06/07/17     | \$29,691.57         | \$13,876.33         | \$11,121.28         | \$1,377.35         | \$928.51           | \$2,212.02         | \$173.02          | \$0.00             | \$0.00        | \$3.06            |         |
| 06/08/17     | \$16,487.33         | \$8,272.57          | \$4,708.41          | \$1,165.71         | \$763.25           | \$1,463.14         | \$114.21          | \$0.00             | \$0.00        | \$0.04            |         |
| 06/09/17     | \$125,502.97        | \$52,970.46         | \$40,762.84         | \$4,790.26         | \$3,225.59         | \$7,298.72         | \$568.62          | \$15,886.40        | \$0.00        | \$0.08            |         |
| 06/12/17     | \$14,552.63         | \$6,437.37          | \$5,804.50          | \$489.69           | \$326.99           | \$797.96           | \$63.18           | \$0.00             | \$0.00        | \$632.94          |         |
| 06/13/17     | \$4,246.69          | \$1,762.48          | \$1,236.55          | \$326.39           | \$218.10           | \$513.64           | \$41.31           | \$0.00             | \$0.00        | \$148.22          |         |
| 06/14/17     | \$6,785.59          | \$2,790.94          | \$2,083.38          | \$485.34           | \$324.42           | \$798.90           | \$62.37           | \$0.00             | \$0.00        | \$240.24          |         |
| 06/15/17     | \$8,765.05          | \$3,741.40          | \$2,662.85          | \$604.87           | \$404.23           | \$955.70           | \$74.52           | \$0.00             | \$0.00        | \$321.48          |         |
| 06/16/17     | \$9,049.58          | \$3,794.66          | \$2,787.57          | \$623.79           | \$416.87           | \$1,028.24         | \$81.00           | \$0.00             | \$0.00        | \$317.45          |         |
| 06/19/17     | \$9,576.52          | \$3,930.08          | \$2,957.49          | \$679.24           | \$453.90           | \$1,129.32         | \$88.13           | \$0.00             | \$0.00        | \$338.36          |         |
| 06/20/17     | \$6,915.83          | \$3,013.06          | \$2,135.44          | \$441.94           | \$295.35           | \$724.10           | \$55.89           | \$0.00             | \$0.00        | \$250.05          |         |
| 06/26/17     | \$7,659.06          | \$3,434.32          | \$2,646.60          | \$415.36           | \$277.42           | \$686.05           | \$55.08           | \$0.00             | \$0.00        | \$144.23          |         |
| 06/27/17     | \$5,408.09          | \$2,219.78          | \$1,522.67          | \$488.00           | \$334.17           | \$782.72           | \$60.75           | \$0.00             | \$0.00        | \$0.00            |         |
| 06/28/17     | \$6,973.52          | \$2,906.75          | \$2,100.62          | \$560.88           | \$374.84           | \$955.91           | \$74.52           | \$0.00             | \$0.00        | \$0.00            |         |
| 06/29/17     | \$13,409.14         | \$6,353.60          | \$4,470.58          | \$779.71           | \$521.10           | \$1,190.19         | \$93.96           | \$0.00             | \$0.00        | \$0.00            |         |
| 06/30/17     | \$13,330.30         | \$7,483.02          | \$3,095.97          | \$813.76           | \$551.89           | \$1,284.49         | \$99.63           | \$0.00             | \$0.00        | \$1.54            |         |
| <b>TOTAL</b> | <b>\$505,867.81</b> | <b>\$229,035.75</b> | <b>\$185,314.05</b> | <b>\$21,675.38</b> | <b>\$14,587.52</b> | <b>\$34,276.33</b> | <b>\$2,676.41</b> | <b>\$15,886.40</b> | <b>\$0.00</b> | <b>\$2,415.97</b> |         |

#### 4. ESTIMATED ANNUAL COST

Table 4-1: Estimated Annual Budget – Year 5

| Budget Category                            | Month Budget     | Month Actual     | YTD Budget       | YTD Actual       | Annual Budget      |
|--|------------------|------------------|------------------|------------------|--------------------|
| Labor (D.L. + FB)                          | \$125,165        | \$137,784        | \$250,329        | \$250,965        | \$1,501,976        |
| Utilities                                  | \$2,542          | \$2,168          | \$5,083          | \$4,438          | \$30,500           |
| Chemicals Costs                            | \$23,044         | \$25,743         | \$46,089         | \$39,772         | \$276,533          |
| Maintenance and Repair Costs               | \$28,297         | \$52,061         | \$56,595         | \$84,200         | \$339,567          |
| Sludge Disposal Costs                      | \$2,069          | \$0              | \$4,138          | \$0              | \$24,830           |
| Lab Supplies & Equipment                   | \$3,431          | \$1,369          | \$6,863          | \$3,108          | \$41,175           |
| Office Supplies                            | \$1,525          | \$1,759          | \$3,050          | \$2,077          | \$18,300           |
| Miscellaneous Expenses                     | \$12,201         | -\$566           | \$24,401         | \$14,895         | \$146,408          |
| Other Operating Costs                      | \$5,912          | \$33,641         | \$11,825         | \$43,702         | \$70,947           |
| Overhead (G&A of D.L.)                     | \$28,263         | \$31,113         | \$56,526         | \$56,670         | \$339,156          |
| <b>Subtotal of Costs - Contract Year 5</b> | <b>\$232,449</b> | <b>\$285,072</b> | <b>\$464,899</b> | <b>\$499,827</b> | <b>\$2,789,392</b> |
| Fixed Fee for Contract Year 5              | \$16,736         | \$20,525         | \$33,473         | \$35,988         | \$200,836          |

## 5. MAINTENANCE/REPAIR COST DETAIL

### 5.1 MAINTENANCE AND REPAIR COSTS

Maintenance and Repair costs as compared to the monthly threshold

**Table 5-1: Maintenance and Repair Costs**

|                           | Month           | YTD             |
|---------------------------|-----------------|-----------------|
| Grounds                   | 1,926           | 2,443           |
| Electrical                | 1,674           | 2,965           |
| Street                    | 16,994          | 19,643          |
| Water Distribution        | 6,998           | 18,892          |
| Sewer Collection          | 2,530           | 9,478           |
| Instrumentation           | 0               | 0               |
| Mechanical                | 12,380          | 17,944          |
| Vehicle                   | 6,484           | 8,376           |
| Tools                     | 200             | 634             |
| Janitorial/Misc.          | 812             | 1,658           |
| HVAC Maintenance          | 993             | 993             |
| Maintenance Agreements    | 95              | 95              |
| Landscaping               | 84              | 188             |
| Snow Removal              | 0               | 0               |
| Misc. Maintenance         | 891             | 891             |
| <b>Total Expenditures</b> | <b>52,061</b>   | <b>84,200</b>   |
| <b>Threshold</b>          | <b>28,297</b>   | <b>56,595</b>   |
| <b>Over (Under)</b>       | <b>\$23,764</b> | <b>\$27,605</b> |

#### A SUMMARY OF MAINTENANCE & REPAIR ACTIVITIES:

##### Water/Street Facilities

Maintenance staff completed 86 preventatives and 44 corrective work orders for the water plants, distribution system, and fleet in June. 98 requests for service were responded to by service personnel. 404 requests for City utility locates from the J.U.L.I.E. call center were completed.

Water distribution system and sewer collection system items:

- Replaced 21 water meters
- Repaired water main 1000 block South 2nd
- Repaired water main Highway 67 north of Beck gas station
- Repaired water main 700 block North 8th
- Repaired water main 1100 block East 11<sup>th</sup> Avenue
- Repaired water service 222 East 4<sup>th</sup> Avenue



- Repaired water service 117 North 2nd
- Repaired water service 316 East Franklin
- Repaired water service 428 North F
- Repaired water service 510 West 4th
- Repaired water service 318 West Broadway
- Repaired storm drain intake West 4<sup>th</sup> Avenue & South D
- Replaced sanitary sewer North 10<sup>th</sup> and East Detroit

Water Plant repairs:

- Repaired brine valve on softener at South Water Plant
- Repaired brine valves (waste and brining) on softener at North Water Plant
- Replaced transformer on Well 4 starter

### Wastewater Facilities

Maintenance staff performed 89 preventatives and 4 corrective work orders at the Consolidated Plant, and, 40 preventatives work orders and 13 corrective work order at the Pre-Treatment plant.

- Repaired exhaust fan (Pre-Treatment Plant)
- Repaired PLC from lightning strike (Pre-Treatment Plant)
- Adjusted skimmer on GEMS unit (Pre-Treatment Plant)
- Repaired HVAC on GEMS building (Pre-Treatment Plant)
- Repaired air compressor on GEMS unit (Pre-Treatment Plant)
- Repaired influent sampler refrigeration unit
- Installed new alarm sensaphone at Smithfield Lift Station
- Installed new bearings on effluent pump (Pre-treatment Plant)
- Installed new Flyght pump at East 2<sup>nd</sup> Avenue lift station
- Repaired HVAC unit on lab building
- Repaired lights and electrical switch at South lift station
- Replaced coil contactors North 6<sup>th</sup> lift station controls

### Street/Grounds/Right of Way/Fleet

- Various tree removal and trimming
- Scheduled vehicle service work (lube, oil, filters)
- Street sweeping
- Patching
- Repaired transmission T42
- Replaced tire on T11
- Replaced all 4 tires on T3

- Repaired alternator on T5
- Replaced tires on bat wing mower
- Intersection paved at North 5<sup>th</sup> and East Boston to finish out the college storm sewer project

## 5.2 CHEMICAL COST DETAIL

Process chemical costs for water treatment

**Table 5-2: Process Chemical Costs**

|                     | Month          | YTD              |
|---------------------|----------------|------------------|
| Chlorine            | 2,054          | 4,188            |
| Salt                | 23,690         | 35,584           |
| Polyphosphate       | 0              | 0                |
| <b>Total</b>        | <b>25,743</b>  | <b>39,772</b>    |
| <b>Threshold</b>    | <b>23,044</b>  | <b>46,089</b>    |
| <b>Over (Under)</b> | <b>\$2,699</b> | <b>\$(6,317)</b> |

---

## 6. HEALTH & SAFETY

Staff reviewed the annual Confined Space Entry and Practice Drill from the PureSafe program. PureSafety is an interactive tutorial based safety program used by Woodard Curran for monthly safety topics.

There were no safety incidents in June and the Department has had 1 incident year to date involving a minor hand injury.

---

## 7. CAPITAL PROJECTS

Well 10 – The Softener has been installed and piping connections completed. New well house set and in the process of being wired and piping connections to raw water main. Raw water main from well site to water plant installed and North 6<sup>th</sup> Street repaired and reopened.

CSO Phase 1 – temporary pumping set up, tested and ready for business. Screw pump building, structure and existing screw pumps have been demolished. Ameren set new pole and transformers for new electrical service (no cost to the City since it is an upgrade of existing equipment but same size service).

North WWTP Design – Clarifier design completed and ready to go to bid pending financing.







