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COMMITMENT & INTEGRITY DRIVE RESULTS

# Monthly Operating REPORT

Monmouth, Illinois

Department of  
Public Works

May 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> .....	<b>.....</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

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## EXECUTIVE SUMMARY

The May 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.

We are beginning the process of integrating a GIS system called Utility Cloud as our sewer collection system and water distribution system maintenance software program, and moving away from our existing JobCal maintenance system. Much of the GIS locating has been already done via Utility Cloud Street View program.

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 166 million gallons of wastewater in the month of May. An additional 4 million gallons of wastewater was treated and discharged through the excess flow plant. There were 2 combined sewer overflow events in May. The weather station at the plant reported 3.6” 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)	5.4	4.62
Ammonia N mg/l	0.1	1.5
CBOD5 mg/l	1	10
Chlorides mg/l	241	500
Suspended Solids mg/l	4	12
Total Phosphorus	0.8	1.0

## 2. WATER TREATMENT

The water treatment plants produced 77 million gallons of finished water in May. 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	2.47 MG	77 MG
Poly Phosphate Usage-lbs.	84	2,592lbs
Salt Usage — tons	4.6	143 tons
Chlorine Usage - lbs.	96	2,991 lbs

### 3. BILLING AND COLLECTION

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

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

DATE	PAYMENTS	PAYMENTS MAY 2017						FARM BONDS	FARM SURCHARGE	PENALTY
		WATER	SEWER	LANDFILL	RECYCLE	GARBAGE	YARD WASTE			
05/01/17	\$20,019.22	\$8,454.92	\$5,867.17	\$1,663.27	\$1,127.61	\$2,693.21	\$213.04	\$0.00	\$0.00	\$0.00
05/02/17	\$12,713.07	\$5,408.02	\$3,769.81	\$1,026.24	\$693.89	\$1,683.58	\$131.53	\$0.00	\$0.00	\$0.00
05/03/17	\$25,177.16	\$11,367.40	\$9,222.03	\$1,288.78	\$865.34	\$2,246.02	\$175.77	\$0.00	\$0.00	\$11.82
05/04/17	\$15,717.16	\$6,913.70	\$4,757.83	\$1,211.46	\$829.69	\$1,858.68	\$145.80	\$0.00	\$0.00	\$0.00
05/05/17	\$49,432.90	\$21,785.71	\$16,240.93	\$3,306.65	\$2,245.97	\$5,413.71	\$425.42	\$0.00	\$0.00	\$14.51
05/08/17	\$73,993.43	\$35,718.09	\$28,219.91	\$2,932.94	\$1,972.22	\$4,777.56	\$372.41	\$0.00	\$0.00	\$0.30
05/09/17	\$143,621.41	\$58,935.19	\$65,237.05	\$1,042.70	\$700.09	\$1,688.74	\$131.22	\$15,886.40	\$0.00	\$0.02
05/10/17	\$65,180.44	\$30,804.81	\$22,666.60	\$3,508.57	\$2,376.99	\$5,400.19	\$420.12	\$0.00	\$0.00	\$3.16
05/11/17	\$5,317.20	\$2,129.79	\$1,557.04	\$415.29	\$277.51	\$698.33	\$54.27	\$0.00	\$0.00	\$184.97
05/12/17	\$9,339.55	\$3,953.66	\$2,722.74	\$665.05	\$448.50	\$1,117.43	\$86.67	\$0.00	\$0.00	\$345.50
05/15/17	\$15,732.28	\$6,566.54	\$4,858.86	\$1,201.14	\$802.45	\$1,601.63	\$127.98	\$0.00	\$0.00	\$573.68
05/16/17	\$7,376.59	\$3,061.73	\$2,286.60	\$517.43	\$345.83	\$844.10	\$65.61	\$0.00	\$0.00	\$255.29
05/17/17	\$4,499.96	\$1,820.18	\$1,408.39	\$329.23	\$220.06	\$522.09	\$41.31	\$0.00	\$0.00	\$158.70
05/18/17	\$2,595.31	\$1,079.34	\$820.83	\$180.00	\$120.30	\$290.92	\$22.68	\$0.00	\$0.00	\$81.24
05/19/17	\$5,511.25	\$2,361.49	\$1,702.97	\$352.37	\$235.51	\$604.55	\$48.60	\$0.00	\$0.00	\$205.76
05/22/17	\$6,205.92	\$2,772.58	\$1,955.42	\$370.83	\$247.86	\$600.50	\$44.84	\$0.00	\$0.00	\$213.89
05/26/17	\$6,987.51	\$3,046.81	\$2,056.51	\$539.81	\$364.77	\$853.99	\$68.04	\$0.00	\$0.00	\$57.58
05/30/17	\$13,118.42	\$5,412.10	\$3,535.60	\$1,210.69	\$821.17	\$1,982.22	\$154.71	\$0.00	\$0.00	\$1.93
05/31/17	\$9,120.00	\$4,079.83	\$2,526.33	\$768.62	\$521.72	\$1,132.53	\$87.48	\$0.00	\$0.00	\$3.49
<b>TOTAL</b>	<b>\$491,658.78</b>	<b>\$215,671.89</b>	<b>\$181,412.62</b>	<b>\$22,531.07</b>	<b>\$15,217.48</b>	<b>\$36,009.98</b>	<b>\$2,817.50</b>	<b>\$15,886.40</b>	<b>\$0.00</b>	<b>\$2,111.84</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	\$113,181	\$125,165	\$113,181	\$1,501,976
Utilities	\$2,542	\$2,270	\$2,542	\$2,270	\$30,500
Chemicals Costs	\$23,044	\$14,029	\$23,044	\$14,029	\$276,533
Maintenance and Repair Costs	\$28,297	\$32,139	\$28,297	\$32,139	\$339,567
Sludge Disposal Costs	\$2,069	\$0	\$2,069	\$0	\$24,830
Lab Supplies & Equipment	\$3,431	\$1,739	\$3,431	\$1,739	\$41,175
Office Supplies	\$1,525	\$318	\$1,525	\$318	\$18,300
Miscellaneous Expenses	\$12,201	\$15,461	\$12,201	\$15,461	\$146,408
Other Operating Costs	\$5,912	\$10,061	\$5,912	\$10,061	\$70,947
Overhead (G&A of D.L.)	\$28,263	\$25,557	\$28,263	\$25,557	\$339,156
<b>Subtotal of Costs - Contract Year 5</b>	<b>\$232,449</b>	<b>\$214,755</b>	<b>\$232,449</b>	<b>\$214,755</b>	<b>\$2,789,392</b>
Fixed Fee for Contract Year 5	\$16,736	\$15,462	\$16,736	\$15,462	\$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	517	517
Electrical	1,291	1,291
Street	2,649	2,649
Water Distribution	11,894	11,894
Sewer Collection	6,948	6,948
Instrumentation	0	0
Mechanical	5,564	5,564
Vehicle	1,892	1,892
Tools	434	434
Janitorial/Misc.	846	846
HVAC Maintenance	0	0
Maintenance Agreements	0	0
Landscaping	104	104
Snow Removal	0	0
Misc. Maintenance	0	0
<b>Total Expenditures</b>	<b>32,139</b>	<b>32,139</b>
<b>Threshold</b>	<b>28,297</b>	<b>28,297</b>
<b>Over (Under)</b>	<b>\$3,842</b>	<b>\$3,842</b>

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

##### Water/Street Facilities

Maintenance staff completed 84 preventatives and 20 corrective work orders for the water plants, distribution system, and fleet in May. 89 requests for service were responded to by service personnel. 186 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 17 water meters
- Repaired water service 907 West Archer
- Repaired water service 611 South 6th
- Repaired water service 826 East 2<sup>nd</sup>
- Repaired water service 424 North B
- Repaired water service 509 East Clinton



- Repaired water service 213 South 6<sup>th</sup>
- Repaired water service 507 North 5<sup>th</sup>
- Repaired water service 923 West 4<sup>th</sup>
- Repaired water service 213 South 6<sup>th</sup>
- Cleaned sewer 1100 block South A
- Re – cut west ditch line along 1300 North 6<sup>th</sup> to improve drainage
- Replaced fire hydrant and valve box South A and West 10<sup>th</sup>
- Repaired street intakes 900 block West Girard and 100 Block East Detroit
- Replaced fire hydrant and 6” hydrant valve 200 block West Broadway

### Wastewater Facilities

Maintenance staff performed 97 preventatives and 11 corrective work orders at the Consolidated Plant, and, 40 preventatives work orders and 7 corrective work order at the Pre-Treatment plant.

- Repaired oil drain line on chemical feed pump #1 (Pre-Treatment Plant)
- Replaced motor bearings on sludge pump 2 (Pre-Treatment Plant)
- Adjusted skimmer on GEMS unit (Pre-Treatment Plant)
- Replaced contactor for gas blower and GFCI breaker on flare system (Pre-Treatment Plant)
- Install fall protection handrail around wetwell at GEMS lift station (Pre-Treatment Plant)
- Replaced Ethernet and comms radio at phos plant, damage from lightning strike (Pre-Treatment Plant)
- Replaced batteries in alarm dialer (Pre-Treatment Plant)
- Repaired add-a-phase transformer at Parkway lift station
- Replaced phase monitor and repaired broken wire at Industrial Park lift station
- Replaced oil pressure switch and serviced generator at North lift station
- Installed safety ladders on clarifiers
- Replaced shear pin on grit collector
- Installed fall protection handrail around all lift stations (7) wet well hatches
- Replaced refrigeration units on influent and effluent samplers
- 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
- New front tires on T41
- Replaced battery cable T16
- Replaced U joint T5
- Repaired exhaust manifold leak T19
- Replaced serpentine belt C2

## 5.2 CHEMICAL COST DETAIL

Process chemical costs for water treatment

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

	Month	YTD
Chlorine	2,134	2,134
Salt	11,895	11,895
Polyphosphate	0	0
<b>Total</b>	<b>14,029</b>	<b>14,029</b>
<b>Threshold</b>	<b>23,044</b>	<b>23,044</b>
<b>Over (Under)</b>	<b>\$(9,015)</b>	<b>\$(9,015)</b>

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## 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 May and the Department has had 1 incident year to date involving a minor hand injury.

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## 7. CAPITAL PROJECTS

Well 10 – Received C2 permit and raw water main modified permit so Leander can start installing the well house, pump, motor and appurtenances on the Well. Raw water main installation is expected to begin after the July 4 holiday. The Softener is set to arrive on site July 28, the softener resin has been delivered to the plant.

CSO Phase 1 – nothing new, construction meeting on July 10 for a progress update

North WWTP Design – engineering group made a site visit June 7-8, City Staff (Mayor, Lew, myself, Bill Hart) met with Smithfield on June 7 as part of the quarterly update meetings along with Jennifer Anders and Kevin White from Woodard and Curran Engineering. The clarifier 60% design review is completed and would expect to go to bid in August or September. The bio gas feasibility study is near completion and will be presented to the City in the next 30 days

