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COMMITMENT & INTEGRITY DRIVE RESULTS

# Monthly Operating REPORT

Monmouth, Illinois

Department of  
Public Works

October 2016



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## EXECUTIVE SUMMARY

The October 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 90 million gallons of wastewater in the month of October. There were 0 combined sewer overflow events in October. The weather station at the plant reported 1.4” 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)	2.89	4.62
Ammonia N mg/l	0.2	1.5
CBOD5 mg/l	1	10
Chlorides mg/l	383	500
Suspended Solids mg/l	4	12
Total Phosphorus	0.7	1.0

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## 2. WATER TREATMENT

The water treatment plants produced 77 million gallons of finished water in October. 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	2.48 MG	77 MG
Poly Phosphate Usage-lbs.	74	2,308 lbs
Salt Usage — tons	4.8	148 tons
Chlorine Usage - lbs.	100	3,090 lbs

### 3. BILLING AND COLLECTION

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

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

Through the first 6 months of the fiscal year, water and sewer revenue is running 2% ahead of budget.

DATE	PAYMENTS	PAYMENTS OCTOBER 2016						FARM BONDS	FARM SURCHARGE	PENALTY
		WATER	SEWER	LANDFILL	RECYCLE	GARBAGE	YARD WASTE			
10/03/16	\$41,185.35	\$20,990.82	\$11,219.51	\$2,793.04	\$1,839.70	\$4,063.77	\$254.15	\$0.00	\$0.00	\$24.36
10/04/16	\$14,423.96	\$6,128.65	\$4,298.68	\$1,144.24	\$761.29	\$1,964.93	\$122.85	\$0.00	\$0.00	\$3.32
10/05/16	\$80,842.91	\$38,328.87	\$30,907.99	\$3,460.98	\$2,277.30	\$5,515.15	\$345.18	\$0.00	\$0.00	\$7.44
10/06/16	\$17,562.91	\$8,804.56	\$4,739.69	\$1,195.75	\$782.98	\$1,913.28	\$118.95	\$0.00	\$0.00	\$7.70
10/07/16	\$41,433.73	\$11,465.74	\$8,051.58	\$1,815.86	\$1,177.28	\$2,857.73	\$178.19	\$15,886.40	\$0.00	\$0.95
10/10/16	\$85,160.96	\$40,102.01	\$28,805.48	\$4,746.42	\$3,101.27	\$7,909.79	\$495.95	\$0.00	\$0.00	\$0.04
10/11/16	\$132,422.53	\$60,058.25	\$63,089.70	\$413.87	\$272.46	\$727.48	\$44.85	\$0.00	\$7,624.62	\$191.30
10/12/16	\$22,211.78	\$10,184.22	\$9,487.75	\$483.19	\$313.01	\$670.59	\$42.28	\$0.00	\$0.00	\$1,030.74
10/13/16	\$20,590.42	\$9,796.27	\$8,998.92	\$380.05	\$246.39	\$576.01	\$35.75	\$0.00	\$0.00	\$557.03
10/14/16	\$11,182.35	\$4,644.78	\$3,463.66	\$765.25	\$499.83	\$1,280.11	\$80.60	\$0.00	\$0.00	\$448.12
10/17/16	\$13,746.28	\$5,919.51	\$4,130.18	\$959.25	\$621.96	\$1,536.97	\$94.90	\$0.00	\$0.00	\$483.51
10/18/16	\$4,767.96	\$2,083.63	\$1,427.96	\$322.85	\$209.30	\$517.52	\$32.45	\$0.00	\$0.00	\$174.25
10/19/16	\$3,491.78	\$1,465.32	\$993.58	\$278.62	\$180.65	\$420.55	\$26.03	\$0.00	\$0.00	\$127.03
10/20/16	\$5,228.90	\$2,377.97	\$1,506.91	\$329.79	\$213.83	\$581.82	\$35.89	\$0.00	\$0.00	\$182.69
10/27/16	\$7,047.02	\$2,995.70	\$2,084.50	\$572.59	\$371.23	\$920.58	\$55.34	\$0.00	\$0.00	\$47.08
10/28/16	\$7,656.09	\$3,202.87	\$2,129.21	\$678.44	\$451.52	\$1,122.90	\$70.55	\$0.00	\$0.00	\$0.60
10/31/16	\$19,859.10	\$8,687.47	\$5,978.54	\$1,584.17	\$1,034.84	\$2,421.17	\$151.45	\$0.00	\$0.00	\$1.46
	\$0.00									
	\$0.00									
<b>TOTAL</b>	<b>\$528,814.03</b>	<b>\$237,236.64</b>	<b>\$191,313.84</b>	<b>\$21,924.36</b>	<b>\$14,354.84</b>	<b>\$35,000.35</b>	<b>\$2,185.36</b>	<b>\$15,886.40</b>	<b>\$7,624.62</b>	<b>\$3,287.62</b>

#### 4. ESTIMATED ANNUAL COST

Table 4-1: Estimated Annual Budget – Year 4

Budget Category	Month Budget	Month Actual	YTD Budget	YTD Actual	Annual Budget
Labor (D.L. + FB)	\$124,386	\$112,350	\$746,317	\$695,253	\$1,492,633
Utilities	\$2,500	\$2,171	\$15,000	\$11,727	\$30,000
Chemicals Costs	\$22,667	\$14,819	\$136,000	\$130,218	\$272,000
Maintenance and Repair Costs	\$27,833	\$51,072	\$167,000	\$206,630	\$334,000
Sludge Disposal Costs	\$0	\$0	\$0	\$0	\$0
Lab Supplies & Equipment	\$3,375	\$997	\$20,250	\$17,823	\$40,500
Office Supplies	\$1,500	\$1,349	\$9,000	\$10,899	\$18,000
Miscellaneous Expenses	\$5,017	\$5,330	\$30,100	\$33,742	\$60,200
Other Operating Costs	\$12,494	\$12,596	\$74,964	\$74,813	\$149,927
Overhead (G&A of D.L.)	\$28,087	\$25,369	\$168,523	\$156,993	\$337,046
<b>Subtotal of Costs - Contract Year 4</b>	<b>\$227,859</b>	<b>\$226,054</b>	<b>\$1,367,153</b>	<b>\$1,338,097</b>	<b>\$2,734,306</b>
Fixed Fee for Contract Year 4	\$16,406	\$16,276	\$98,435	\$96,343	\$196,870

## 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	2,308	10,953
Electrical	0	16,615
Street	13,269	62,375
Water Distribution	6,301	29,920
Sewer Collection	1,270	3,455
Instrumentation	790	1,718
Mechanical	20,224	52,284
Vehicle	5,888	21,708
Tools	35	200
Janitorial/Misc.	740	3,988
HVAC Maintenance	171	2,859
Maintenance Agreements	23	113
Landscaping	54	442
Snow Removal	0	0
<b>Total Expenditures</b>	<b>51,072</b>	<b>206,630</b>
<b>Threshold</b>	<b>27,833</b>	<b>167,000</b>
<b>Over (Under)</b>	<b>23,239</b>	<b>39,630</b>

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

##### Water/Street Facilities

Maintenance staff completed 80 preventative and 28 corrective work orders for the water plants, distribution system, and fleet in October. 133 requests for service were responded to by service personnel. 227 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 12 water meters
- Repaired water main 900 block East Broadway
- Repaired water main 100 block South 10<sup>th</sup>
- Repaired water main 100 block West 6th
- Repaired water service 215 East 8<sup>th</sup> Ave
- Repaired water service 927 South 5<sup>th</sup> Street
- Replaced water service 725 West Broadway



- Repaired water service 401 South 2<sup>nd</sup> Street
- Repaired water service 212 South 11<sup>th</sup> Street
- Repaired water service 121 North D Street
- Cleaned sewer 400 block North 6<sup>th</sup> Street
- Water Well Solutions repaired piping on well head which was leaking, re-machined threads on 3 sections of column pipe on Well #4

### Wastewater Facilities

Maintenance staff performed 104 preventatives and 3 corrective work orders at the Consolidated Plant, and, 42 preventatives work orders and 3 corrective work order at the Pre-Treatment plant.

- Replaced diaphragm in alum pump
- Removed, cleaned, rebuilt, re-installed valves on sodium aluminate feed system
- Cleaned valve box riser on anaerobic pump station
- Cleaned wet well at Industrial Park lift station
- Jetted and cleaned sludge line on storm water clarifiers
- Pulled pump, cleaned, inspected, removed debris from Parkway Manor lift station

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

- Various tree removal
- Street patching
- Scheduled vehicle service work (lube, oil, filters)
- Replaced exhaust system T17
- Replaced muffler and repaired electrical short T14
- Replaced right side brake line T4
- Replaced glow plug T17
- Backfilled, tilled, and seeded graves at the Cemetery
- City grounds keeping including 2 cemeteries, all City owned lots, private lots as directed by Code Enforcement Officer, City right of ways, Water Plants, Wastewater Treatment Plants, City garage, Fountain maintenance, and downtown beautification

## 5.2 CHEMICAL COST DETAIL

Process chemical costs for water treatment

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

	Month	YTD
Chlorine	876	11,301
Salt	13,943	100,437
Polyphosphate	0	18,481
<b>Total</b>	<b>14,819</b>	<b>130,218</b>
<b>Threshold</b>	<b>22,667</b>	<b>136,002</b>
<b>Over (Under)</b>	<b>(7,848)</b>	<b>(5,784)</b>

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## 6. HEALTH & SAFETY

Reviewed/updated lock out tag out written program and procedures

Reviewed the global SDS – Safety Data Sheet - hazard communication program and procedures per OSHA guidelines

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## 7. CAPITAL PROJECTS

Well 10 bore hole at 1,070 feet through October, well rig suffered a breakdown in the gear box that drives the bit a few days before Thanksgiving which has delayed drilling by about 20 days as the rig had to be returned to Layne's shop for repairs. Layne indicated that the rig would be back and set up on Monday December 5<sup>th</sup> and drilling to commence again that evening. The revised schedule has the drilling completed by December 15<sup>th</sup>. Following that will be the 24-hour pump testing to determine the well yield. This should be completed before the Christmas holiday.

CSO Phase 1 will be advertised for bid in December with an expected bid letting in early January.

Monmouth College began construction of their parking lot on East Boston, included in that project will be installation of a 24" storm sewer to collect and transport run-off from the parking lot, East Boston and North 5<sup>th</sup>, and, East Boston and North 6<sup>th</sup> Street.