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COMMITMENT & INTEGRITY DRIVE RESULTS

Monthly Operating REPORT

Monmouth, Illinois

Department of
Public Works

March 2017



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EXECUTIVE SUMMARY

The March 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 119 million gallons of wastewater in the month of March. There was 1 combined sewer overflow event in March. The weather station at the plant reported 3.2" of rainfall and 4" of snow 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)	3.83	4.62
Ammonia N mg/l	0.1	1.5
CBOD5 mg/l	2	10
Chlorides mg/l	397	500
Suspended Solids mg/l	5	12
Total Phosphorus	0.8	1.0

2. WATER TREATMENT

The water treatment plants produced 79 million gallons of finished water in March. 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	2.56 MG	79 MG
Poly Phosphate Usage-lbs.	88	2,731 lbs
Salt Usage — tons	5	157 tons
Chlorine Usage - lbs.	101	3,141 lbs

3. BILLING AND COLLECTION

Table 3-1: Billing/Collection

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

DATE	PAYMENTS	PAYMENTS MARCH 2017							FARM SURCHARGE	PENALTY
		WATER	SEWER	LANDFILL	RECYCLE	GARBAGE	YARD WASTE	FARM BONDS		
03/01/17	\$8,634.65	\$3,584.08	\$2,284.81	\$811.96	\$546.56	\$1,302.15	\$100.61	\$0.00	\$0.00	\$4.48
03/02/17	\$19,296.37	\$8,717.11	\$6,779.63	\$1,130.07	\$767.30	\$1,759.53	\$137.54	\$0.00	\$0.00	\$5.19
03/03/17	\$20,584.80	\$8,774.24	\$5,853.61	\$1,709.00	\$1,158.22	\$2,865.92	\$223.43	\$0.00	\$0.00	\$0.38
03/06/17	\$90,429.17	\$42,297.92	\$32,604.56	\$4,628.24	\$3,141.28	\$7,182.61	\$558.86	\$0.00	\$0.00	\$15.70
03/07/17	\$144,996.99	\$58,004.34	\$65,664.80	\$1,228.24	\$840.84	\$2,043.77	\$158.44	\$15,886.40	\$1,166.53	\$3.63
03/08/17	\$17,670.78	\$8,191.46	\$6,020.64	\$1,052.42	\$711.39	\$1,573.10	\$121.77	\$0.00	\$0.00	\$0.00
03/09/17	\$21,439.67	\$10,289.32	\$5,926.19	\$1,545.74	\$1,037.08	\$2,448.19	\$192.30	\$0.00	\$0.00	\$0.85
03/10/17	\$86,829.29	\$39,654.16	\$31,923.42	\$4,455.42	\$2,990.05	\$7,103.59	\$553.87	\$0.00	\$0.00	\$148.78
03/13/17	\$4,190.78	\$1,722.58	\$1,298.23	\$300.23	\$200.64	\$489.66	\$39.53	\$0.00	\$0.00	\$139.91
03/14/17	\$5,191.97	\$2,098.45	\$1,543.86	\$406.08	\$271.37	\$641.62	\$51.19	\$0.00	\$0.00	\$179.40
03/15/17	\$7,810.89	\$3,223.99	\$2,284.26	\$581.70	\$388.77	\$985.87	\$75.64	\$0.00	\$0.00	\$270.66
03/16/17	\$5,720.15	\$2,376.83	\$1,719.68	\$414.68	\$277.13	\$683.09	\$53.46	\$0.00	\$0.00	\$195.28
03/17/17	\$8,222.02	\$3,372.53	\$2,548.55	\$689.48	\$460.64	\$792.60	\$62.21	\$0.00	\$0.00	\$296.01
03/20/17	\$10,561.68	\$4,406.32	\$3,256.29	\$607.44	\$410.01	\$1,405.49	\$110.16	\$0.00	\$0.00	\$365.97
03/27/17	\$4,572.02	\$1,741.16	\$1,360.42	\$419.90	\$277.46	\$701.42	\$53.11	\$0.00	\$0.00	\$18.55
03/28/17	\$6,304.45	\$2,616.57	\$1,608.79	\$612.74	\$413.52	\$976.69	\$76.14	\$0.00	\$0.00	\$0.00
03/29/17	\$6,534.17	\$2,503.20	\$1,815.36	\$647.64	\$436.85	\$1,048.77	\$81.81	\$0.00	\$0.00	\$0.54
03/30/17	\$10,681.81	\$4,711.93	\$3,546.05	\$714.02	\$485.23	\$1,059.81	\$82.62	\$0.00	\$0.00	\$82.15
03/31/17	\$8,167.47	\$3,383.54	\$2,371.63	\$722.39	\$482.81	\$1,118.07	\$88.91	\$0.00	\$0.00	\$0.12
	\$0.00									
TOTAL	\$487,839.13	\$211,669.73	\$180,410.78	\$22,677.39	\$15,297.15	\$36,181.95	\$2,821.60	\$15,886.40	\$1,166.53	\$1,727.60

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	\$130,338	\$1,368,247	\$1,261,871	\$1,492,633
Utilities	\$2,500	\$4,589	\$27,500	\$34,992	\$30,000
Chemicals Costs	\$22,667	\$30,753	\$249,333	\$247,802	\$272,000
Maintenance and Repair Costs	\$27,833	\$33,369	\$306,167	\$322,301	\$334,000
Sludge Disposal Costs	\$0	\$0	\$0	\$5,000	\$0
Lab Supplies & Equipment	\$3,375	\$2,772	\$37,125	\$32,784	\$40,500
Office Supplies	\$1,500	\$3,307	\$16,500	\$19,286	\$18,000
Miscellaneous Expenses	\$5,017	\$6,144	\$55,183	\$62,059	\$60,200
Other Operating Costs	\$12,494	\$3,654	\$137,433	\$100,151	\$149,927
Overhead (G&A of D.L.)	\$28,087	\$29,431	\$308,959	\$284,939	\$337,046
Subtotal of Costs - Contract Year 4	\$227,859	\$244,357	\$2,506,447	\$2,371,184	\$2,734,306
Fixed Fee for Contract Year 4	\$16,406	\$17,594	\$180,464	\$170,725	\$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	1,902	14,611
Electrical	7,007	29,420
Street	1,570	76,528
Water Distribution	132	44,217
Sewer Collection	9,203	17,245
Instrumentation	656	2,996
Mechanical	7,729	78,892
Vehicle	4,107	45,473
Tools	141	824
Janitorial/Misc.	613	7,264
HVAC Maintenance	286	3,715
Maintenance Agreements	23	225
Landscaping	0	748
Snow Removal	0	0
Misc. Maintenance	0	141
Total Expenditures	33,369	322,300
Threshold	27,833	306,163
Over (Under)	5,536	16,137

A SUMMARY OF MAINTENANCE & REPAIR ACTIVITIES:

Water/Street Facilities

Maintenance staff completed 63 preventatives and 19 corrective work orders for the water plants, distribution system, and fleet in March. 87 requests for service were responded to by service personnel. 110 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 300 block North 9th
- Repaired water service 502 East Franklin
- Repaired water service 222 South 6th
- Rebuilt storm sewer manhole at North A and West Detroit
- Replaced 80 feet of 18" storm sewer, new tub, and 3 connections in the 700 block of North 11th

- Replaced 100' of 12" PVC drain culvert at Citizens Lake
- Installed 8 concrete bollard posts in the 400 block of West 6th Avenue (across from Wells Pet Food) along the right of way to protect the boulevard from wheel rutting
- Installed 100' of 4" drain tile and intake tub along the south right of way in the 1000 block of West Boston
- Replaced check valve and injector body on chlorine booster pump at North Water Plant
- Replaced 5feet of brine piping at North Water Plant

Wastewater Facilities

Maintenance staff performed 87 preventatives and 3 corrective work orders at the Consolidated Plant, and, 38 preventatives work orders and 2 corrective work order at the Pre-Treatment plant.

- Electric Pump replaced seals and coolant on raw wastewater pump #4 under warranty work
- Installed 3 new bulbs on the pole lights at the WWTP
- C&D Electric tuned the add-a-phase apparatus at Parkway Manor Lift Station
- Replaced diaphragm on Sodium Aluminate chemical feed pump #1
- Installed blower motor #4 to blower #5 – blower motor #5 suffered bearing failure

Street/Grounds/Right of Way/Fleet

- Various tree removal and trimming
- Scheduled vehicle service work (lube, oil, filters)
- Street sweeping
- Patching
- Replaced quick connect pin on the Komatsu endloader
- Replaced rear brakes, bearings, and rotors on T18
- Replaced drive sprocket, chain, upper and lower belt bearings on the Street Sweeper
- Replaced tire on T5

5.2 CHEMICAL COST DETAIL

Process chemical costs for water treatment

Table 5-2: Process Chemical Costs

	Month	YTD
Chlorine	2,491	22,311
Salt	17,018	188,753
Polyphosphate	11,244	36,739
Total	30,753	247,803
Threshold	22,667	249,337
Over (Under)	8,086	(1,534)

6. HEALTH & SAFETY

Staff reviewed the annual “Preventing Back Injuries” lesson 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 March and the Department has had 1 incident year to date involving a minor hand injury.

7. CAPITAL PROJECTS

Well 10 – awaiting C2 permit, received raw water main construction permit from the Illinois Environmental Protection Agency, contractor is looking at options for installation so as not to risk any excavation issue at the cemetery.

CSO Phase 1 – contractor, (Leander) has secured their bonds and insurance per the contract documents, signatures and notice to proceed have been issued to Leander. Anticipate construction will commence once the weather straightens up.

North WWTP Design – engineering group working on the clarifier design and bio gas feasibility with several deliverables due in June.