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COMMITMENT & INTEGRITY DRIVE RESULTS

Monthly Operating REPORT

Monmouth, Illinois

Department of
Public Works

December 2017



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EXECUTIVE SUMMARY

The December 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.

Highlighted activities for the month are listed below:

- Smithfield force main replacement project was awarded to Legacy Construction, they are in the process of getting their performance bond and insurance requirements to satisfy the contract documents.
- We had 2 snow removal events in December
- CSO project slightly ahead of schedule, anticipating startup the first or second week of January, substantial completion March 1st.
- Due to the extreme cold, crews repaired 5 water main breaks during the period of December 22-25.
- Updated the Federal Multi-Year Highway for state fiscal years 2020-2022 to include improvements on West Harlem Avenue. The submittal is a non-committal plan to, at minimum, get the project in the que for potential federal funding.

Feel free to stop by the office or give me a call, 309-734-4026 if you have any questions or comments.

Regards, Andy

1. HEALTH AND SAFETY/STAFF

Staff completed the annual Bloodborne Pathogen review and training plus continuous awareness discussions on the effects of working in sub-zero temperatures. There were no safety incidents or near misses in December. One recordable lost time accident for the year involving a minor hand injury.

No new staff issues or items.

2. WASTEWATER TREATMENT

The Consolidated WWTP treated and discharged 83 million gallons of wastewater in the month of December. There were 0 combined sewer overflow events in December. The weather station at the plant reported 7.5” 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 2-1: Water Quality vs. NPDES Permit Limits

	Monthly Average	Permit Limit
Flow (MGD)	2.68	4.62
Ammonia N mg/l	0.7	1.5
CBOD5 mg/l	1	10
Total Phos	0.8	1
Chlorides mg/l	410	500
Suspended Solids mg/l	6	12

3. WATER TREATMENT

The water treatment plants produced 82 million gallons of finished water in December. 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 3-1: Monthly Chemical Usage for Ion Exchange Softening

	Daily Average	Monthly Total
Treated Water to System	2.64 MG	82 MG
Poly Phosphate Usage-lbs.	81	2,496lbs
Salt Usage — tons	5.3	164 tons
Chlorine Usage - lbs.	106	3,286 lbs

5. ESTIMATED ANNUAL COST

Table 5-1: Estimated Annual Budget – Year 5

Budget Category	Month Budget	Month Actual	YTD Budget	YTD Actual	Annual Budget	over(under)
Labor (D.L. + FB)	\$125,165	\$138,379	\$1,001,318	\$961,202	\$1,501,976	(\$40,116)
Utilities	\$2,542	\$4,434	\$20,333	\$18,007	\$30,500	(\$2,326)
Chemicals Costs	\$23,044	\$34,812	\$184,355	\$194,116	\$276,533	\$9,761
Maintenance\Repair	\$28,297	\$27,688	\$226,378	\$238,235	\$339,567	\$11,857
Sludge Disposal Costs	\$2,069	\$0	\$16,553	\$2,200	\$24,830	(\$14,353)
Lab Supplies\Equip	\$3,431	\$2,258	\$27,450	\$25,496	\$41,175	(\$1,954)
Office Supplies	\$1,525	\$1,403	\$12,200	\$12,909	\$18,300	\$709
Miscellaneous Expenses	\$12,201	\$3,565	\$97,605	\$43,813	\$146,408	(\$53,792)
Other Operating Costs	\$5,912	\$5,151	\$47,298	\$125,701	\$70,947	\$78,403
Overhead (G.A.)	\$28,263	\$31,247	\$226,104	\$217,046	\$339,156	(\$9,058)
Subtotal Year 5	\$232,449	\$248,937	\$1,859,595	\$1,838,724	\$2,789,392	(\$20,871)
Fixed Fee Year 5	\$16,736	\$17,923	\$133,891	\$132,388	\$200,836	(\$1,503)
Total	\$249,186	\$266,861	\$1,993,486	\$1,971,112	\$2,990,229	(\$22,374)

6. MAINTENANCE/REPAIR ACTIVITIES

A SUMMARY OF MAINTENANCE & REPAIR ACTIVITIES:

Water/Street Facilities

Maintenance staff completed 70 preventatives and 35 corrective work orders for the water plants, distribution system, and fleet in December. 75 requests for service were responded to by service personnel. 146 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 15 water meters
- Repaired curb stop 812 South C
- Repaired curb stop 427 North E
- Repaired curb stop 900 East 11th
- Repaired curb stop 420 West 2nd
- Repaired water main 1000 East Detroit
- Repaired water main 800 East 8th
- Repaired water main 700 North 11th
- Repaired water main 100 West Harlem
- Repaired water main 400 East 11th
- Replaced chlorine pump piping at North Water plant
- Advanced Plumbing replaced 40 feet of 21” sewer west of Smithfield property near the dialysis center

Wastewater Facilities

Maintenance staff performed 84 preventatives and 1 corrective work orders at the Consolidated Plant, and, 35 preventative work orders and 5 corrective work orders at the Pre-Treatment plant.

- Installed new pump guide rails at anaerobic lift station
- Blower #2 motor rewind, installation, and alignment
- Replaced attachment links and 8’ of chain on phos plant skimmer mechanism
- Repaired HVAC system in phos plant building – replaced sensor and valve wiring
- Replaced broken clamp on GEMS unit

Street/Grounds/Right of Way/Fleet

- Various tree removal and trimming
- Scheduled vehicle service work (lube, oil, filters)
- Leaf pickup
- Snow removal from 2 storms
- Replaced exhaust shield, battery, rear axle wheel bearing T19
- Replaced brake pads on T41

- Replaced flasher on T17
- Replaced front tires on the John Deere backhoe

7. CAPITAL PROJECTS

Force main replacement project:

Received 7 bids, Legacy Corporation was low bid at \$488,000

CSO Screw Pump:

Grouting and pipe connections completed, wiring and SCADA integration underway

North Plant Clarifier:

Project construction will commence around June 1st, the replacement mechanism is ordered with a 6-month lead time for delivery