

Director of Operations and Compliance Report

September 23, 2020

Plant Loading, CSO Report, and Director's Notes

Plant Loading

Biochemical Oxygen Demand, 5-Day (Avg. 35071 lbs/day)	55 percent of design
Total Suspended Solids (Avg. 29641 lbs/day)	27 percent of design
Average Daily Flow (27.13 million gallons/day)	66 percent of design
Maximum Daily Flow (37.43 million gallons/day)	30 percent of design

	Permit Limits (avg/max)	Reported Values	Violations
CBOD ₅ , mg/L	20/40	2/3	0
TSS, mg/L	25/45	3/5	0
NH ₃ -N, mg/L	1.3/3.0	0.39/0.50	0
Fecal coliform per 100mL	400* (max)	90	0
Chlorine Residual, mg/L	0.05* (max)	0.011	0
Dissolved Oxygen, mg/L	6.0 (min)	7.08	0
pH, S.U.	6.0/9.0 (min/max)	7.87/8.16	0
Total Nickel, mg/L	0.015 (avg.)	0.014	0
Total Zinc, mg/L	0.075/0.416	0.016/0.036	0

*Effluent disinfection is required May 1 through October 31.

CSO Report

Location	Events	Discharge (million gallons)	Estimated Total Duration of Discharges (hrs)
Oakland Avenue (Outfall 003)	0	0.0	0.0
Lincoln Park (Outfall 004)	0	0.0	0.0
McKinley Avenue (Outfall 007)	1	0.22	1.0
Seventh Ward (Outfall 008)	0	0.0	0.0

Director's Notes:

Permit Issues:

On September 14, 2020, the District received a response from the Illinois EPA concerning the letter of justification which was submitted to the Agency on August 21, 2020. The document looks very promising from a cursory perspective however it is still under detailed review by District staff and the staff of HelperBroom as of the writing of this report.

IEPA Facility Inspection:

On September 15, 2020 Jeff Holste of the IL EPA Champaign Regional Office visited the District to conduct a portion of the Facilities Inspection. On this day, the verbal Q&A portion of the inspection was conducted, and Mr. Holste will be back in touch with the District when he gets a better idea when he can return to complete the facilities physical inspection. He also informed the District that his intent is to complete the West Headworks Project final loan inspection at that time as well. It is expected the next visit will take place in October 2020.

False Positive IDEXX Tests:

As noted below in the Laboratory section of this report the District identified another false positive with the IDEXX test method. The laboratory staff has sent a sample out for more detailed analysis to isolate the analyte(s) responsible for the inaccurate results. While there are no definitive results yet; the District is intent on finding the causes of the test failures. Additionally, we are reaching out to the manufacturers of the test to ascertain if they would assist in the research.

New Operator in Training:

As mentioned last month during my verbal report the OIT position was filled by Shannon Propst. She is a resident of Mt. Zion and started her duties with the District on August 17th.

Operations, Laboratory, and Pretreatment Activity Reports – August 2020**Operations Activities:**

Normal operational activities were conducted as prescribed by standard procedures or conditions within the plant related to the new measures being employed due to Covid-19. Temporary adjustments are made occasionally to accommodate the needs of the plant as they arise.

- 1) Plant flows during August have been extremely low which brings on different kinds of operational issues (ammonia nitrogen, sludge age, etc.). The operations staff have made the necessary adjustments to maintain the plant operations.
- 2) The first week of the month influent conditions still required a considerable amount of additional aeration, but the plant was back to relatively normal operations with the aeration after August 6th. One exception to this is that as mentioned last month the aeration residuals setpoints have been raised to accommodate the issue of incomplete nitrification.
- 3) The Operators have experienced some trouble while operating the West Headworks, as they are still learning the new system and working out problems by modifying the procedures as needed.
- 4) Late in the month another spike in influent BOD and ammonia occurred which caused a subsequent spike in the nitrite level at the nitrification effluent. This was caught quickly due to the new testing protocols and adjustments were made that controlled the production and protected the effluent quality of the plant.

Laboratory Activities:**Routine:**

A total of 1,777 analyses were performed in the laboratory during the month of August 2020.

Monitoring of treatment plant, industrial users, and receiving stream samples for compliance purposes and process monitoring continued. Laboratory personnel continued to perform additional background nutrient monitoring to help fully characterize the nutrient loading on the plant.

Non-Routine:

- 1) The quarterly NPDES sampling of the influent, effluent, and sludge to Wyckles was conducted during the second week of August 2020.
- 2) Additional fecal coliform testing has been conducted throughout the 2020 disinfection season as a follow-up investigation to the suspected false-positive fecal coliform results obtained last year using the IDEXX test method. A similar suspected false-positive IDEXX result was obtained on August 27, 2020. A sample of the plant effluent that was collected at the same time as the fecal coliform sample was sent to an outside lab for a full-scan gas chromatograph mass spectrophotometer (GC-MS) analysis. The GC-MS analysis identified several compounds of interest in the effluent sample. Further investigation of those compounds will be conducted to determine if any of them are potentially interfering with the IDEXX test.

Pretreatment Activities:

General Activities:

- 1) Pretreatment personnel monitored twelve commercial and industrial users (IU) during August 2020 and performed three industrial user inspections.
- 2) There are no updates to the AOC.
- 3) The District issued Executive Order 19-002 to ADM on April 15, 2019 for violations of their wastewater permit related to a plant upset in February 2019. This executive order included escalating penalties for all violations of ADM's wastewater discharge permit and our ordinance. The order also allowed ADM to request the District terminate or amend the escalating penalties after they achieved "acceptable compliance," defined as less than or equal to one violation per month for a period of twelve months. This is a standard condition of all executive orders that include escalating penalties.

On August 17, 2020 ADM formally requested that the District review Executive Order 19-002 and terminate the escalating penalties. A review by the District found that ADM had returned to acceptable compliance and will therefore terminate the escalating penalty conditions in accordance with the Executive Order and standard conditions. Each distinct violation of ADM's discharge permit and our ordinance will now be penalized at the standard \$1,000.00 per day per violation. The District issued a letter on September 10, 2020 notifying ADM that the escalating penalties have been lifted.

- 4) The District received the monitoring results necessary to issue a permit to **Fuyao Glass Illinois, Inc (FGI)**. FGI added a new solar glass process that is expected to increase their daily discharge to the District above 25,000 gallons per day, making a discharge permit necessary.
- 5) The District sent and received waste hauler permit applications from **Bodine Services, Bodine Environmental, Parks Sewer Services, Kelley's Septic Tank and Sewer Services, Septic Specialist, Zeschke Septic Cleaning, Midwest Pottyhouse, Merdon Inc (dba K&M Portable Toilets), and City of Decatur Municipal Services**. These are all renewals of existing waste hauler permits.
- 6) We are continuing to monitor ammonia levels in the collection system. The levels are still elevated at our domestic pump stations.

Pretreatment Ordinance - Verbal Notices:

1) A Verbal Notice was issued to **St. Mary’s Hospital** on August 17, 2020 for discharging wastewater below their lower pH limit from their point B discharge. Point B is primarily wastewater from the boiler system at St. Mary’s, so the pH excursion is likely related to boiler chemicals. St. Mary’s is updating their boiler system, which should help prevent future pH violations.

Pretreatment Ordinance - Warning Notices:

No Warning Notices were issued during August 2020.

Pretreatment Ordinance - Notices of Violation (NOV):

No Notices of Violation were issued during August 2020.

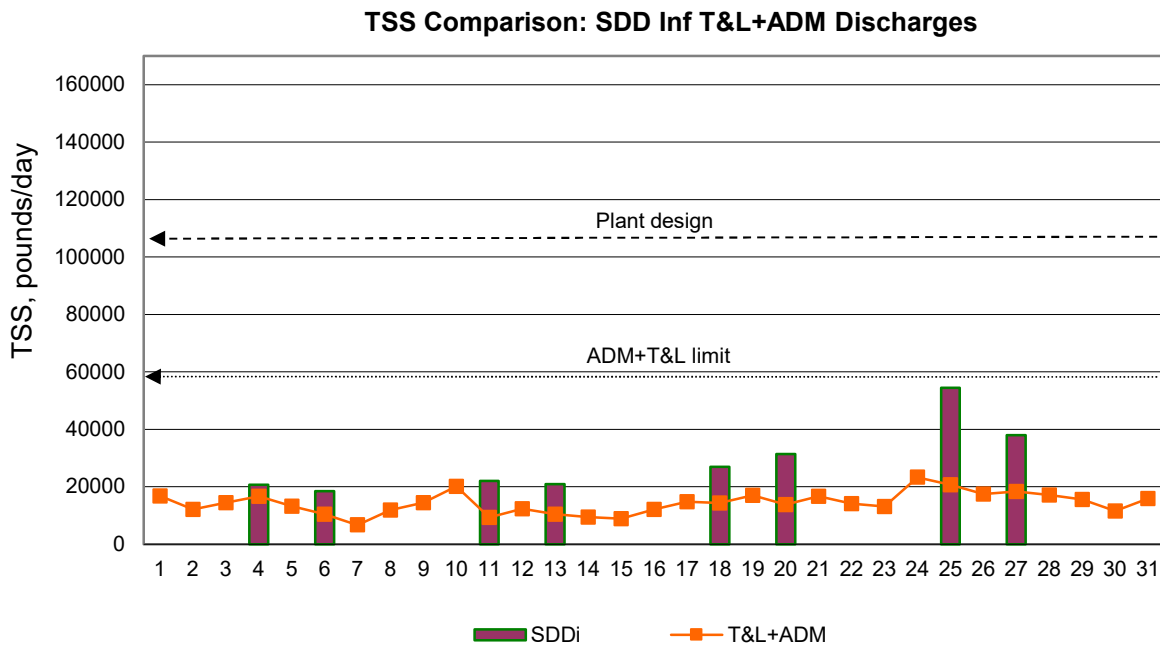
Pretreatment Ordinance - Executive Orders:

No Executive Orders were issued during August 2020.

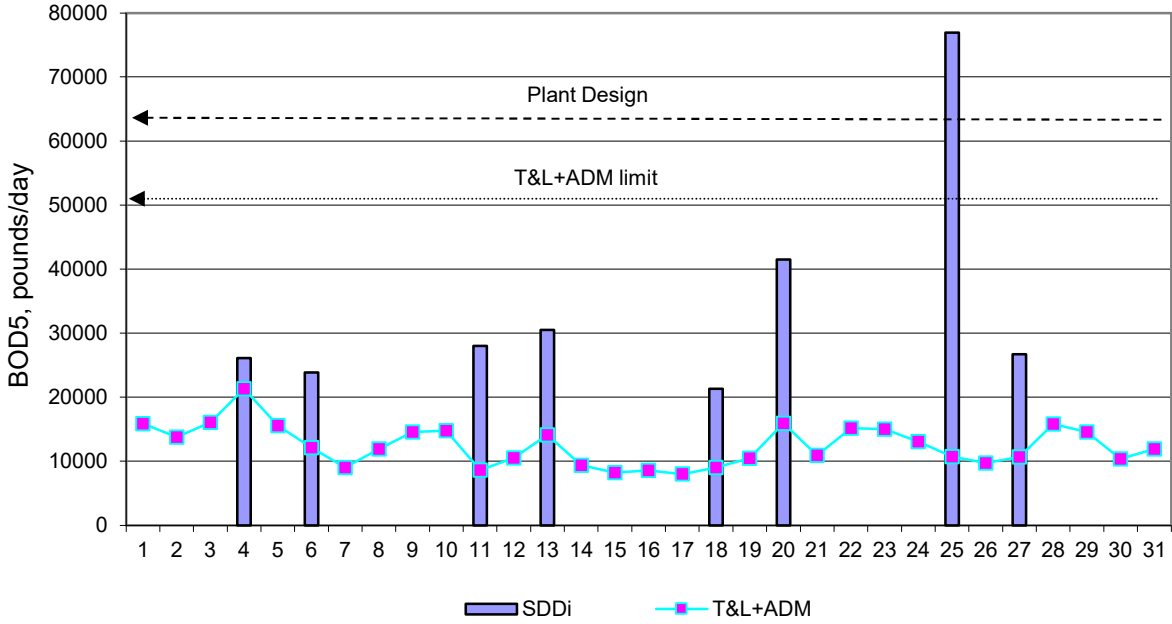
Pretreatment Ordinance - Penalty Assessments:

There were no industrial penalties assessed for August 2020.

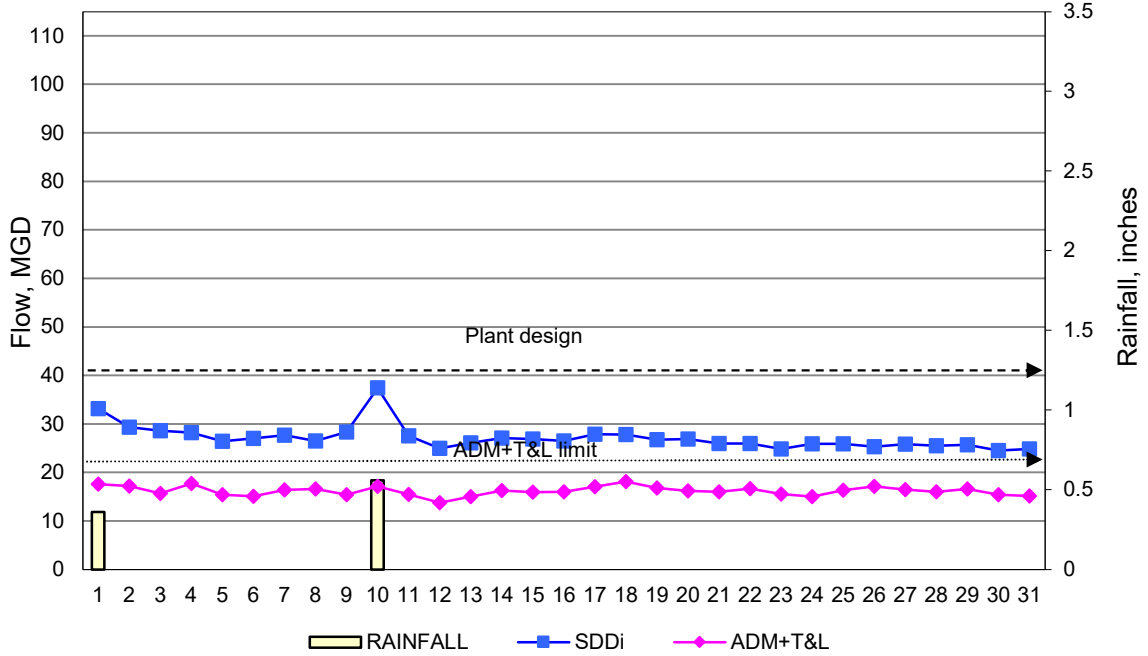
Plant Operating Graphs:



BOD Comparison: BOD Inf vs. T&L + ADM Discharges



Flow Comparison: SDD vs. ADM + T&L Discharges and Rainfall



Plant Efficiency Graphs:

