

Director of Operations and Compliance Report

May 20, 2020

Plant Loading, CSO Report, and Director's Notes

Plant Loading

Biochemical Oxygen Demand, 5-Day (Avg. 27620 lbs/day)	43 percent of design
Total Suspended Solids (Avg. 34794 lbs/day)	32 percent of design
Average Daily Flow (43.01 million gallons/day)	105 percent of design
Maximum Daily Flow (109.49 million gallons/day)	88 percent of design

	Permit Limits (avg/max)	Reported Values	Violations
CBOD ₅ , mg/L	20/40	3/3	0
TSS, mg/L	25/45	5/9	0
NH ₃ -N, mg/L	1.5/3.0	0.12/0.12	0
Fecal coliform per 100mL	400* (max)	N/A	0
Chlorine Residual, mg/L	0.05* (max)	0.011	0
Dissolved Oxygen, mg/L	6.0 (min)	7.98	0
pH, S.U.	6.0/9.0 (min/max)	7.68/8.39	0
Total Nickel, mg/L	0.015 (avg.)	0.011	0
Total Zinc, mg/L	0.075/0.416	0.015/0.026	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)	3	4.91	15.7
Lincoln Park (Outfall 004)	1	8.6	6.0
McKinley Avenue (Outfall 007)	2	1.62	6.4
Seventh Ward (Outfall 008)	1	5.91	2.9

Director's Notes:

Permit Issues:

A letter from Black & Veatch to the Illinois EPA in response to the Agency's request for justification for additional time for the District to comply with the potential new limits is nearing completion as of the writing of this report.

2020 Biosolids Land Application Bids:

A request for bids for the land application of liquid biosolids for the Sanitary District was posted in the local newspaper and on the District's website on or about April 23, 2020. The bids submission process included a pre-qualification application which is required, as all bidders must meet minimum standards to Bid for the three-year project.

The pre-qualification process is used to allow the District to vet potential bidders to assure that they can reliably handle a project of this nature, size, and scope. This has been a long-standing policy of the District's which has been utilized in previous land application bid processes. The District received three pre-qualification applications submissions for this cycle and two applicants were pre-approved to place bids. A pre-bid meeting was convened via conference call due to the Covid-19 issues on Friday May 8th to allow for any questions, or comments to be presented by the prospective bidders.

As of the writing of this report the Bids have not been opened. The opening is scheduled for May 18th, 2020 at 10:00a.m. via conference call and live stream (if available) which should allow for a motion to be presented to the Board during this (May 20th) meeting to accept the lowest responsive responsible bidder's bid, and request that a new contract be approved for the same.

Operations, Laboratory, and Pretreatment Activity Reports – April/May 2020

Operations Activities:

Normal operational activities were conducted as outlined by standard procedures or in response to conditions within the plant related to the new measures being employed due to Covid-19.

- 1) Operations staff completed 22 PMs during the month of April totaling 17.5 hours of work which equaled 0.10 FTE. This reflects a combination of the reduction of manning due to the Covid-19 issues and the additional work required to get the facility systems ready for the disinfection season which began May 1st.
- 2) Operations worked with the Maintenance Staff on installation of temporary fixtures to facilitate primary sludge wasting which is currently serving the purpose. The Engineering Department is working to secure bids and effect a permanent resolution to this on-going concern.
- 3) Operations staff managed facility operations during April in dealing with two separate discharges from an industrial discharger. The first was a discharge of material that caused equipment service issues at the preliminary treatment system(s). The second was an Ammonia/Nitrate discharge that required blower changes and monitoring until the event passed.
- 4) Operations staff coordinated digester operations to facilitate repairs to HeatEx #1 due to a leak in one of the seals on the sludge tubes.
- 5) Operators also managed the plant through some relatively high flows towards the end of April. The plant saw nearly 200MGD in the last two days of the month which is rare. While the facility can see flows of that nature for short durations it is not as normal to have an event like this last 48 hours.

Laboratory Activities:

Routine:

A total of 1,651 analyses were performed in the laboratory during the month of April 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 laboratory continued to work with a reduced on-site staff throughout the month of April 2020 due to the COVID-19 pandemic in accordance with State of Illinois Executive Orders, and CDC guidelines.
- 2) Keith Richard served as a poster judge for the Millikin University "Celebrations of Scholarship and Poster Symposium" on April 24, 2020. The poster symposium was an opportunity for students to present the research projects they had worked on during the school year. This year, due to the COVID-19 pandemic, the poster symposium was "virtual" with all the posters and presentations uploaded to a website for online judging instead of in-person judging.
- 3) The river study with Eastern Illinois University was again suspended in April 2020. The graduate students that normally collect the river samples were instructed not to leave campus due to the COVID-19 pandemic, so they were unable to collect the monthly river samples.

Pretreatment Activities:

General Activities:

- 1) Pretreatment personnel monitored eight commercial and industrial users (IU) during April 2020 and performed zero industrial user inspections due to the COVID-19 outbreak.
- 2) The department is continuing to postpone all non-emergency site inspections until further notice, and we are rescheduling sampling where it is not possible to comply with social distancing requirements in accordance with Illinois executive orders, and CDC guidelines.
- 3) The SDD received updated permit application documents from **Fuyao Glass, Illinois**. Fuyao is installing a new production line that will increase their process wastewater flow to the SDD above the 25,000 GPD threshold, so they will be issued a new discharge permit once the line is functional. **Fuyao** was previously permitted, however they were deemed to not be a significant industrial user and the permit was rescinded.
- 4) The SDD received an application to amend a wastewater discharge permit from **Norfolk Southern Railroad (NSRR)**. **NSRR** is installing a new pump station in their railyard to handle polluted storm water more efficiently, and their sample point will subsequently be changing. At this time there will be no other changes to the permit. **NSRR** is still in negotiations with the City of Decatur to discharge directly into their sewer system.
- 5) The SDD received a wastewater hauler discharge permit application from **Portable Sanitation Systems** because their current permit is due to expire on May 31, 2020.

Pretreatment Ordinance - Verbal Notices:

- 1) A Verbal Notice was issued to **Canadian National Railroad (CN)** on April 2, 2020 for exceeding their total phenols limit. **CN** is currently investigating the cause of the exceedance, including doing more sampling. Results of the sampling are still pending. They have also cleaned their Oil/Water Separator since that was the cause of their last phenols exceedance.
- 2) A Verbal Notice was issued to **H&M Trucking** on April 8, 2020 because they exceeded their BOD, pH and FOG-T limits.
- 3) A Verbal Notice was issued to **H&M Trucking** on April 17, 2020 for exceeding their BOD and pH limits in their self-monitoring. This violation was related to their previous violations and verified the results that we got in our laboratory.

Pretreatment Ordinance - Warning Notices:

No Warning Notices were issued during April 2020.

Pretreatment Ordinance - Notices of Violation (NOV):

Notice of Violation 20-001 was issued to **Tate and Lyle (T&L)** on April 15, 2020 for BOD and TSS violations that occurred in March. The TSS excursions are related to issues with settling in **T&L's** clarifier. **T&L** is currently installing a membrane filtration system which will help them maintain compliance with their TSS limits, however the anticipated completion date has been moved from June to December 2020 due to social distancing restricting the amount of contractors that can work on the project.

The BOD violations appear to stem from a loss from the greens tank (syrup). A greens tank pump failed, which released 50 GPM of product into the containment area. The containment was allowed to overflow, and the product flowed to the sewer. The initial loss outside of containment was caught in a tank, however the tank eventually filled up and was bypassed, allowing the product to flow directly to the SDD. **T&L** is evaluating liquid level alarms for the greens tank containment area.

T&L's refinery area also had a loss of product during March that caused a BOD exceedance. The investigation into this loss is ongoing.

A compliance call is scheduled with **T&L** on May 13th to discuss these issues further.

Pretreatment Ordinance - Executive Orders:

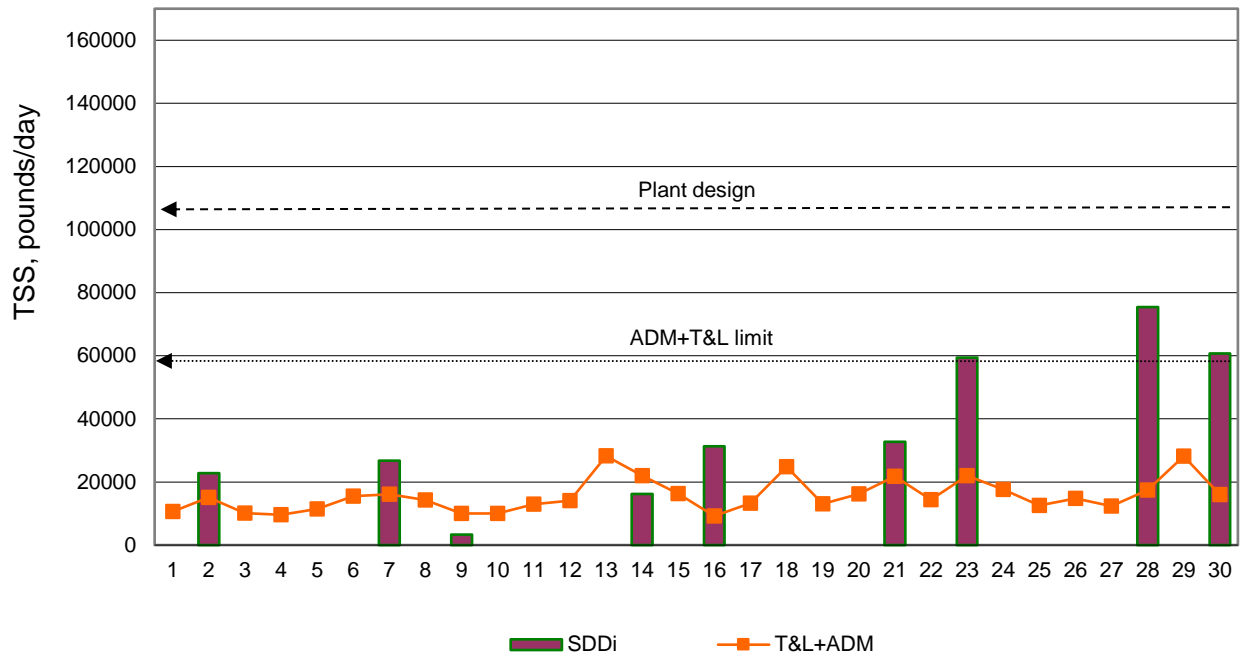
No Executive Orders were issued during April 2020.

Pretreatment Ordinance - Penalty Assessments:

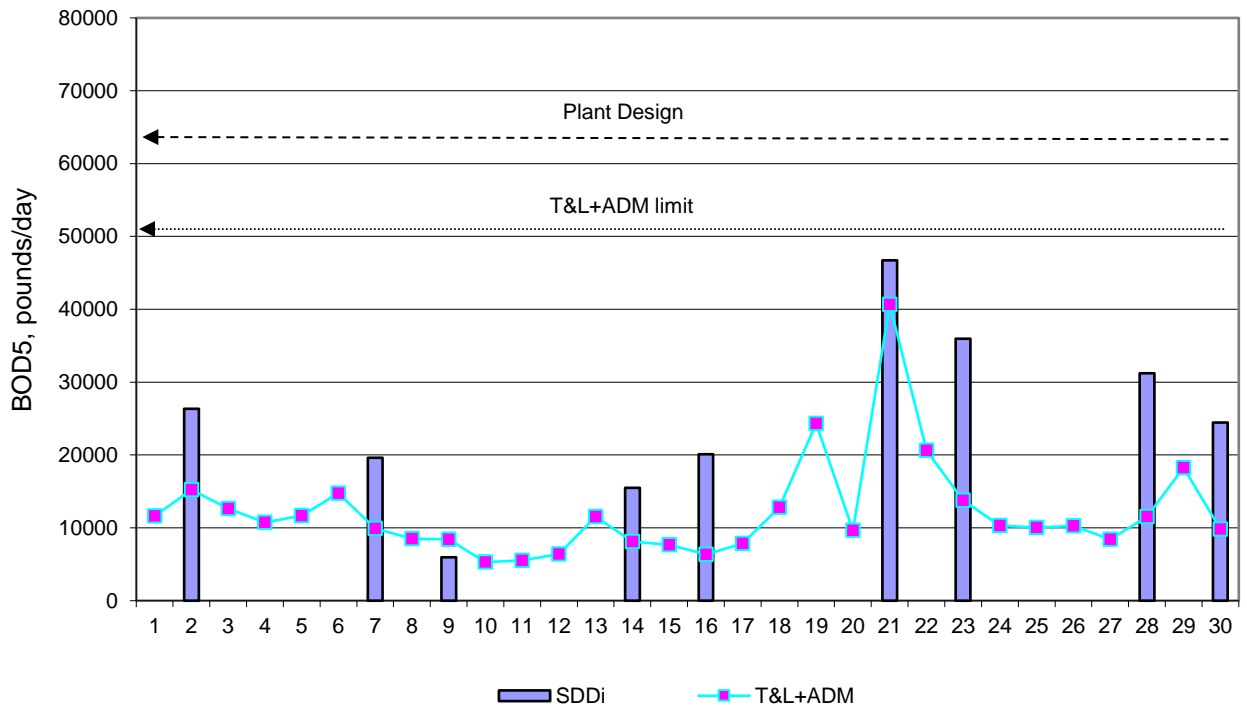
No industrial penalties were assessed for April 2020.

Plant Operating Graphs:

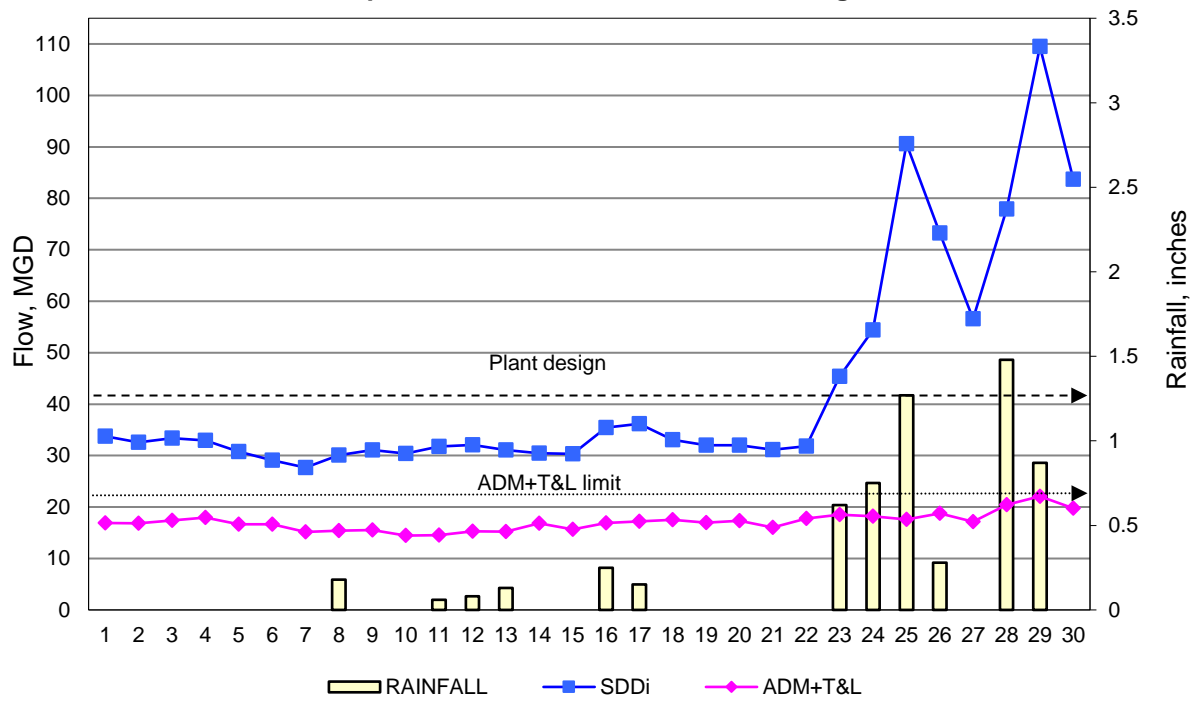
TSS Comparison: SDD Inf T&L+ADM Discharges



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



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



Plant Efficiency Graphs:

