

Director of Operations and Compliance Report

February 19, 2020

Plant Loading, CSO Report, and Director's Notes

Plant Loading

Biochemical Oxygen Demand, 5-Day (Avg. 33408 lbs/day)	52 percent of design
Total Suspended Solids (Avg. 37074 lbs/day)	34 percent of design
Average Daily Flow (48.85 million gallons/day)	119 percent of design
Maximum Daily Flow (110.38 million gallons/day)	88 percent of design

	Permit Limits (avg/max)	Reported Values	Violations
CBOD ₅ , mg/L	20/40	2/2	0
TSS, mg/L	25/45	5/7	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)	N/A	0
Dissolved Oxygen, mg/L	6.0 (min)	8.88	0
pH, S.U.	6.0/9.0 (min/max)	8.05/8.43	0
Total Nickel, mg/L	0.015 (avg.)	0.010	0
Total Zinc, mg/L	0.075/0.416	0.015/0.025	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)	2	31.4	45.1
Lincoln Park (Outfall 004)	2	46.7	14.4
McKinley Avenue (Outfall 007)	2	17.3	43.3
Seventh Ward (Outfall 008)	1	12.2	4.0

Director's Notes:

Permit Issues:

District Staff with Legal Representatives from HeplerBroom met with the Illinois EPA Staff on February 10, 2020 to discuss the details concerning a potential new Draft Permit which could be forthcoming from the Agency. In general, the discussions went well. Based on guidelines from the Agency the District will consider how to best comply with the Agency's requirements while developing plans for operational changes that best suits the circumstances necessary for the least negative impact to the District and the community it serves; additional communication is expected with the Agency.

Staff Training Activities:

Keith Richard, Matt Nihiser, David Collard, Tim Gorden and Tyson Royer attended the Central Illinois Professional Wastewater Operators (CIPWO) winter meeting at Hudson Farms in Urbana on January 29, 2020. The meeting included presentations from two speakers on the topics of process control analyzers and algae-based wastewater treatment.

Additional Topics:

Illinois EPA has proposed draft amendments to the groundwater standards for five PFAS chemicals. The IAWA has submitted comments on the issue and District staff are following the process. The proposed additional restrictions could potentially impact the biosolids permit limits in the District's land application permit. The Agency is preparing to submit the changes to the Illinois Pollution Control Board later this year.

Operations, Laboratory, and Pretreatment Activity Reports – January 2020

Operations Activities:

- 1) Normal operational activities were conducted as proscribed by standard procedures or in response to conditions within the plant and the Operators participated in the weekly safety training sessions.
- 2) Operations staff completed 298 PMs during the month of January totaling 106 hours of work which equaled 0.61 FTE.
- 3) Started the West Headworks on 1/9/20 and since then operations has been working with Jamie Oliver to fine tune the West Headworks operations.
- 4) Operations staff have also been working on gate adjustments at the 201 structure to optimize flows and grit loads between the two headworks systems. This work is still in progress.
- 5) Operators have been working with maintenance staff in relation to repair work within the facility such as gate and actuator repairs, pumps shutdowns etc.
- 6) Operators have also been performing flow adjustments, and clarifier operations to optimize clarifier functionality at the nitrification clarifiers.

Laboratory Activities:

Routine:

A total of 2,038 analyses were performed in the laboratory during the month of January 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 sampling of the groundwater monitoring wells was conducted at the Wyckles Lagoons. The monitoring wells at the South Sludge Lagoons were inaccessible due to river flooding so they were not sampled.

- 2) Keith Richard and David Collard attended the quarterly meeting of the Heart of the Sangamon River Ecosystem Partnership on January 9, 2020. The partnership is a consortium of local government agencies and non-government organizations that are working together to ensure the continued well-being of the Upper Sangamon River watershed.
- 3) The fermentation bench study continued with three additional week-long trials being performed. A total of four trials have now been performed using different ratios of raw primary sludge to waste activated sludge. The preliminary results show that the greatest volatile fatty acid production occurred when raw primary sludge was the major component of the mixture.
- 4) Keith Richard participated in a conference call with the WEF Laboratory Practices Committee on January 21, 2020. Keith serves on the committee which is comprised of wastewater laboratory professionals from across the country.
- 5) The river study with Eastern Illinois University continued in January 2020. Water samples from all six field sites were analyzed for nickel content. The nickel levels this month were less than the reporting limit at all six sites.

Pretreatment Activities:

General Activities:

- 1) Pretreatment personnel monitored thirteen industrial users and performed four industrial user inspections during January 2020.
- 2) There are no updates to the AOC this month.
- 3) Annual Reports continue to arrive from our industrial users. The annual reports from our industries are used to fill out our Pretreatment Program Annual Report, which we submit to IEPA and USEPA.
- 4) Matt Nihiser attended the CIPWO meeting with Dave Collard, Keith Richard and Tim Gorden.
- 5) Matt Nihiser calculated Significant Non-Compliance (SNC) for the period of July 1st, 2019 to December 31st, 2019. During this period, one industry met the definition of SNC: **Canadian National Railroad (CN)**. **CN** met the definition of SNC because they exceeded their Technical Review Criteria limit for Total Fats, Oils and Grease, Non-Polar Fats, Oils and Grease and Phenols. After investigation, **CN** found that their Oil/Water Separator (OWS) needed service. **CN** cleaned and made necessary repairs to their OWS in December 2019 and subsequent sampling has shown that they are back in compliance.
- 6) A permit application was received from **Fuyao Glass, Illinois**.

Pretreatment Ordinance - Verbal Notices:

- 1) A Verbal Notice was issued to **Tate and Lyle** on January 12, 2020 because they exceeded their wet weather flow limit on January 11, 2020.
- 2) A Verbal Notice was issued to **Stripmasters** on January 15, 2020 because they discharged wastewater to the SDD with a pH below 6.0. The issue was attributed to process sewer line jetting performed by an outside contractor.
- 3) A Verbal Notice was issued to **ADM Railcar Repair** on January 21, 2020 because they discharged wastewater to the SDD that exceeded their total Fats, Oils and Grease limit. **ADM Railcar** was having issues with their pretreatment system at the time of sampling. The issue has since been resolved.
- 4) A Verbal Notice was issued to **HR Ewell** on January 30, 2020 because they discharged wastewater to the SDD with a pH below 6.0.

5) A Verbal Notice was issued to **HR Ewell** on February 5, 2020 because they exceeded their daily maximum Biochemical Oxygen Demand limit (BOD) in two samples. These exceedances also caused **HR Ewell** to violate their monthly average BOD limit for the month of January. The issue is still under investigation.

Pretreatment Ordinance - Warning Notices:

Warning Notice 20-001 was issued to **Tate and Lyle** for multiple BOD and pH violations in December 2019 and January 2020. The response to the Warning Notice was received on February 7, 2020.

Pretreatment Ordinance - Notices of Violation (NOV):

No Notices of Violation were issued during January 2020.

Pretreatment Ordinance - Executive Orders:

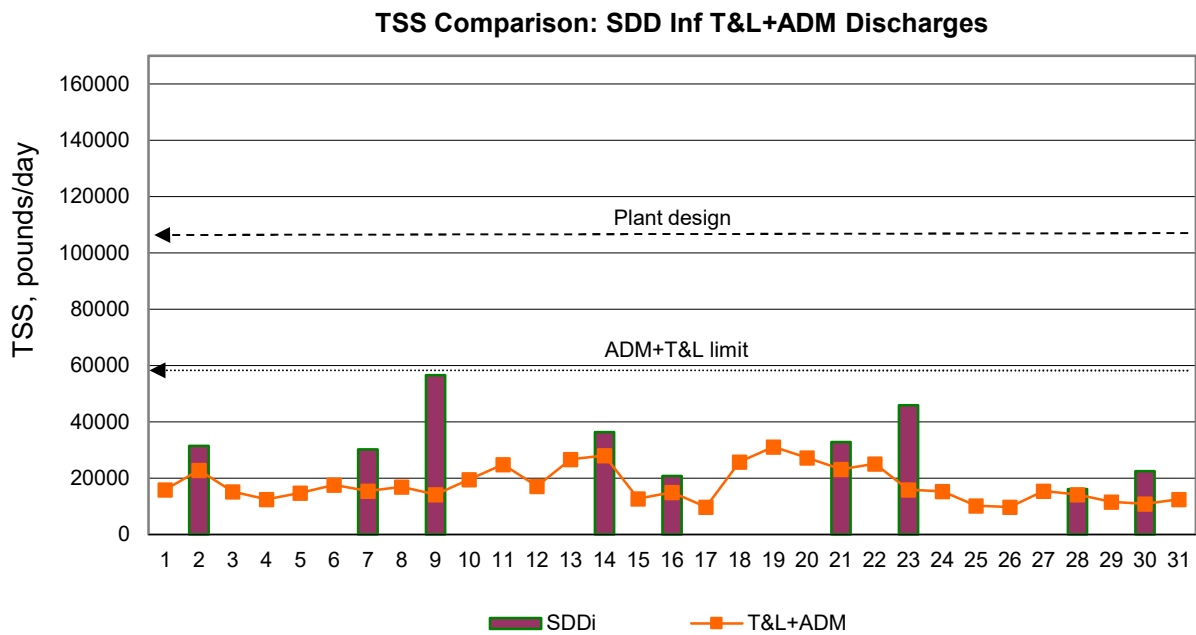
No Executive Orders were issued during January 2020.

Pretreatment Ordinance - Penalty Assessments:

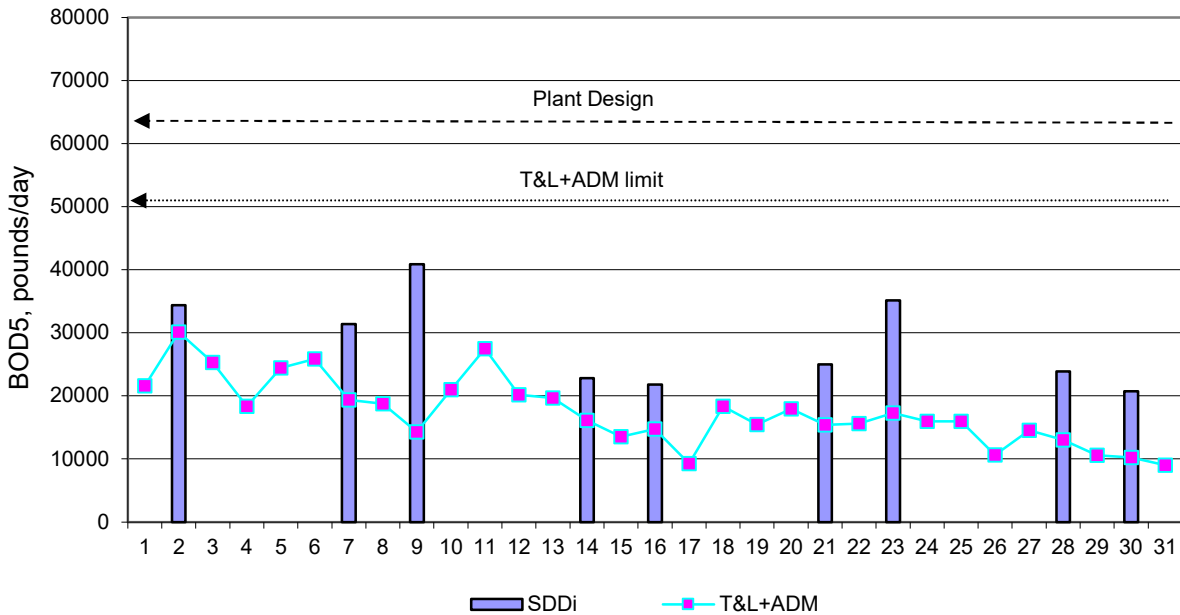
The following industrial penalties were assessed for January 2020:

- 1) **Tate and Lyle** **\$3,000**

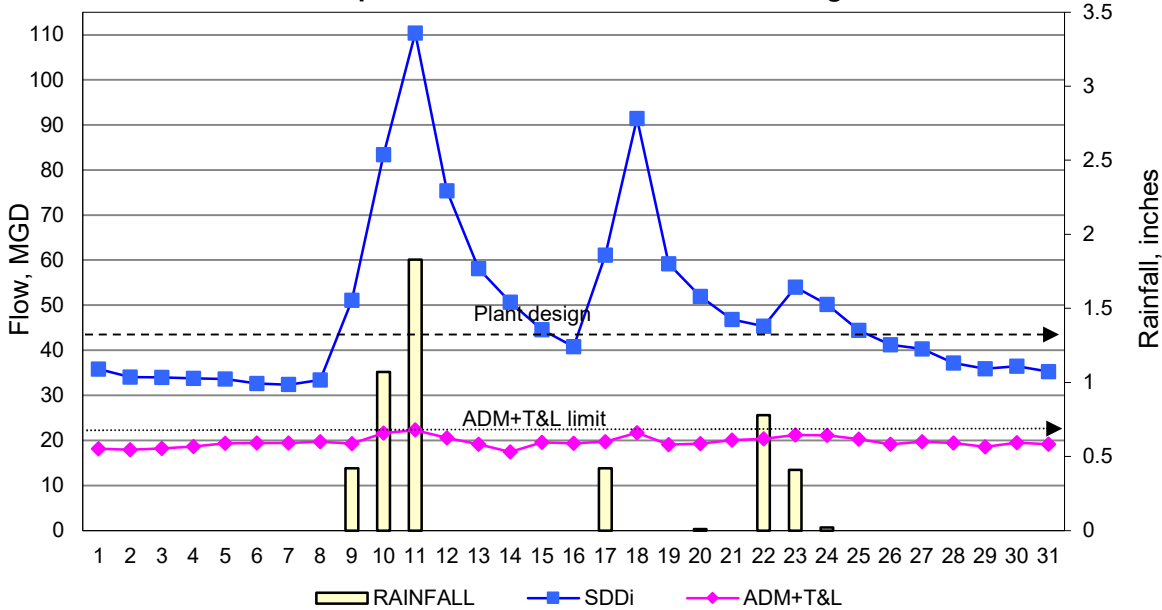
Plant Operating Graphs:



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



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



Plant Efficiency Graphs:

*Note: Access to data was unavailable to create efficiency charts this month.