

Director of Operations and Compliance Report

April 20, 2022

Plant Loading, CSO Report, and Director's Notes

Plant Influent Report

Biochemical Oxygen Demand, 5-Day (Avg. 31243 lbs/day)	49 percent of design
Total Suspended Solids (Avg. 61759 lbs/day)	57 percent of design
Average Daily Flow (43.56 million gallons/day)	106 percent of design
Maximum Daily Flow (90.44 million gallons/day)	72 percent of design

Plant Effluent Report

Parameter	Report Frequency	Permit Limits	Reported Values	Violations
CBOD ₅ , mg/L	Mo./Wk. Avg	20/40	2/2	0
TSS, mg/L	Mo./Wk. Avg	25/45	4/6	0
NH ₃ -N, mg/L	Wk. Avg/Daily Max	1.5/3.0	0.12/0.12	0
DO, mg/L	Mo. Avg/Wk. Avg/ Daily Min	6.0/6.25/5.0	9.22/8.62/8.37	0
pH, S.U.	Daily Min/Max	6.0/9.0	7.63/8.15	0
Total Nickel, mg/L	Mo. Avg	0.0381	0.014	0
CL ₂ Residual, mg/L	Daily Max	0.05*	NA	0
Fecal Coliform CFU/100mL	Daily Max	400*	NA	0

*Effluent disinfection is required May 1 through October 31.

CSO Report

Location	Events	Est. Total Duration of Discharges (hrs.)	Discharge (million gallons)
Oakland Avenue (Outfall 003)	3	28.81	17.98
Lincoln Park (Outfall 004)	1	7.3	5.7
McKinley Avenue (Outfall 007)	2	23.8	11.18
Seventh Ward (Outfall 008)	0	0.0	0.0

Director's Notes:

Program Management Items:

Geosyntec (Geo) is currently reviewing the data that they have collected from the District as well as IL EPA via the FOIA process. We understand once they have a handle on this information, we will be able to begin to plan for stream testing within the next few months and begin the process of creating a watershed group with interested stakeholders within that same period.

2022 Chemical Bids:

A request for bids for chemicals and fuels that are used at the Sanitary District was posted in the newspaper and on the District’s website on February 24, 2022. All bids were opened and read on April 6, 2022.

The purchase period offered on all chemicals this year was for one year only, therefore the period included within the bid sheet covers the period May 1, 2022 – April 30, 2023. This change to the one-year submission only is reflective of the unstable conditions in the chemical markets and while all bids returned much higher than expected and this supports the decision to ask for only one-year bids to allow for market corrections next year.

A motion for the acceptance of the following bids will be presented to the Board during this month’s Board Meeting.

A summary of the low bids and previous year accepted bids are as follows:

2022 Winning Chemical Bids										
2022 Tentative Winning Bidder	Chemical	Unit	2018	2019	2020	2021	2022	2023	2024	2025
Kemira	Ferrous Chloride	lbs	\$0.336	\$0.511	\$0.522	\$0.70	\$0.729			
Evergreen FS	Gas & Fuel	gal	\$0.154	\$0.154	\$0.154	\$0.157	\$0.159			
PVS Chemicals	Sodium Bisulfite	100 lbs	\$12.00	\$12.50	\$13.00	\$13.50	\$18.00			
Hawkins	Sodium Hypochlorite	gal	\$0.745	\$0.760	\$0.746	\$0.746	\$1.49			
		ton	\$235.00	\$244.00	\$209.00	\$236.25				
SNF-Polydyne	Polymer Flocculant	lbs.	\$1.05	\$1.05	\$1.14	\$1.30	\$1.35	\$1.40		
Notes:										
1	Multi-year Price Locked In	These bids have been previously accepted for multiple years.								
2	All bids are tentative until they are approved by the District Board.									

Additional Notes:

- 1) Polydyne is beginning the second year of the previous three-year bid period.
- 2) Evergreen FS is beginning the third and final year of the previous three-year bid period.

Pretreatment AOC Update:

No change. The District is still awaiting a response from the USEPA to the letter requesting finalization of the process.

Operations, Laboratory, and Pretreatment Activity Reports – March/April 2022

Operations Activities:

Normal operational activities were conducted as prescribed by standard procedures or in response to conditions within the plant. These include operating, monitoring, and adjusting facility equipment, performing process control testing, records keeping, and coordination with the other departments to realize optimal performance of the Plant.

- 1) The Operations staff continues to operate the digester complex in a manner to accommodate Christy-Foltz’s work.
- 2) Operators continue to operate the primary clarification system to allow for effective treatment of the influent during high flows while also protecting them from damage until repairs can be made to the mechanisms.

- 3) Operations ran the blower system manually while the maintenance and I&C staff replaced the MCC in the blower building.
- 4) Operators are beginning to use the new Beehive software for PMs, workorders, etc.
- 5) On March 31st Tim Gorden, Brent Deardorff, Matt McElroy, Brandi Rosenberger and Donnie Reynolds attended an online seminar hosted by the US EPA "Optimizing Nutrient Removal in Activated Sludge WWTPs" which is the third of a four-part series of webinars that offer a combined total of 6.0hrs of CEUs at no cost to the District.
- 6) Operators bypassed the chlorine contact tanks to allow maintenance staff to perform the annual cleaning and maintenance of these structures prior to disinfection season.
- 7) Operations staff continue to actively address PMs as time, workload, and staff levels allow.

Laboratory Activities:

Routine:

A total of 1,795 analyses were performed in the laboratory during the month of March 2022.

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 SDD lab continued to send samples of raw influent twice a week throughout the month of March 2022 for the "COVID-19 in Wastewater" study funded by the Illinois Department of Public Health. A Zoom call was held on March 4, 2022, with the study participants and the researchers to discuss the results of the study thus far.
- 2) The annual balance, pH meter, and thermometer calibrations were conducted during the month of March 2022. All equipment was found to be working within the acceptable calibration ranges.

Pretreatment Activities:

Pretreatment - General Activities:

- 1) Pretreatment personnel monitored eight commercial and industrial users (IU) during March 2022 and conducted four industrial site inspections.
- 2) The SDD submitted the required technical review of our local limits to USEPA and IEPA. After review, the SDD has recommended that the local limit for zinc be relaxed to reflect the limits in 40 CFR part 433 (metal finishing). Although the calculations show that our POTW can handle loading more than those limits, we felt that they would be sufficiently stringent and not pose an undue burden on our local industry. All other limits should remain the same.
- 3) There are no updates to the USEPA desk audit.
- 4) The SDD submitted the Pretreatment Annual Report to USEPA and IEPA. This report details the day-to-day operations of our Pretreatment Program, including changes and achievements.
- 5) A compliance meeting was held with **Tate & Lyle (now Primient)** on March 23, 2022, to discuss NOV 22-001 and the steps they are taking to get back into compliance.

- 6) A video call was held with SDD staff and **Caterpillar** staff on March 29, 2022, to discuss **Caterpillar's** FOG exceedances and the steps they are taking to remedy the situation.

Pretreatment Ordinance - Verbal Notices:

- 1) The SDD issued a Verbal Notice to **H&M Trucking** on March 8, 2022, because their Annual Report, which was due March 1st, had not been received. They sent the completed form immediately.
- 2) The SDD issued a Verbal Notice to **Bulkmatic** on March 8, 2022, because their Annual Report, which was due March 1st, had not been received. They sent the completed form the next day.
- 3) The SDD issued a Verbal Notice to **DMH** on March 8, 2022, because their Annual Report, which was due March 1st, had not been received. They sent the completed form the following week.
- 4) The SDD issued a Verbal Notice to **KAG Specialty Products** on March 8, 2022, because their Annual Report, which was due March 1st, had not been received. They sent the completed form the following week.
- 5) The SDD issued a Verbal Notice to **ADM** on March 9, 2022, for discharging wastewater containing total Fats, Oils and Grease (FOG) above their daily maximum limit. Although a specific incident has not been identified as a cause, **ADM** has hired a contractor to clean their stormwater retention pond frequently.
- 6) The SDD issued a Verbal Notice to **Tate and Lyle** on March 9, 2022, for violating their dry weather discharge flow limit. Excess snow melt caused the exceedance.
- 7) The SDD issued a Verbal Notice to **Decatur Plating** on March 16, 2022, for discharging wastewater containing zinc above their daily maximum discharge limit. The SDD is working with Decatur Plating to solve the issue.

Pretreatment Ordinance - Warning Notices (WN):

The SDD issued WN 22-003 to **Caterpillar** on March 9, 2022, for discharging wastewater containing total and non-polar FOG above their discharge limit. An official response has not been received; however, **Caterpillar** representatives are investigating the exceedances and have identified multiple potential causes.

Pretreatment Ordinance - Notices of Violation (NOV):

The SDD issued NOV 22-001 to **Tate and Lyle** on March 3, 2022, for multiple BOD exceedances stemming from multiple process upsets and issues.

Pretreatment Ordinance - Executive Orders:

No Executive Orders were issued during March 2022.

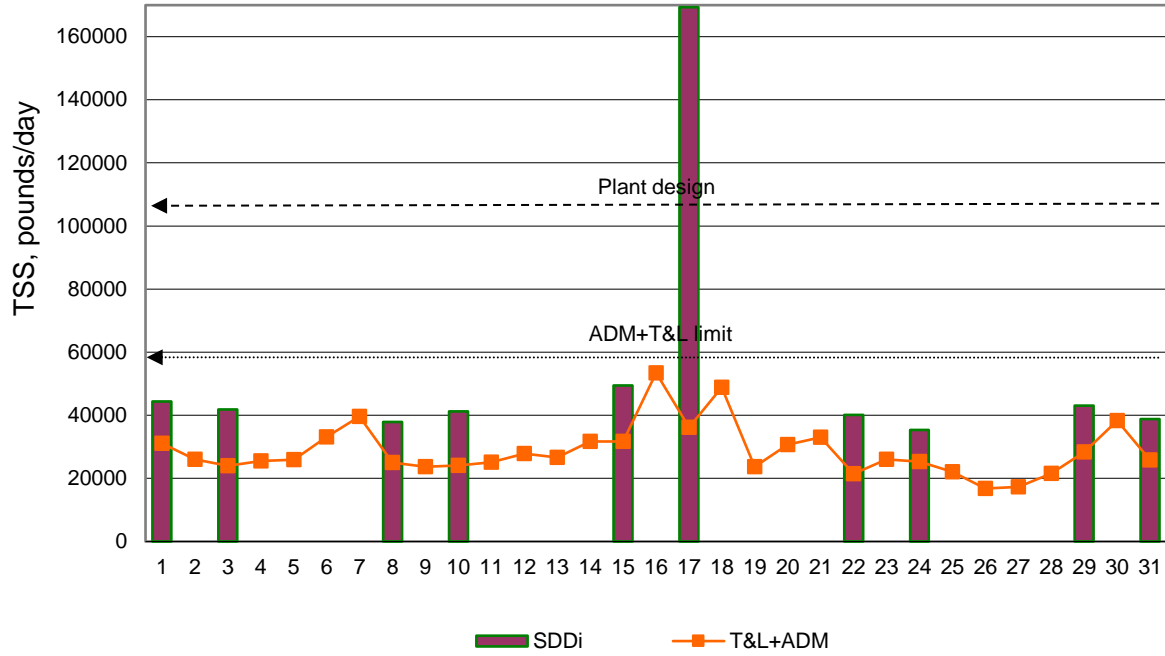
Pretreatment Ordinance - Penalty Assessments:

The following industrial penalties were assessed for March 2022:

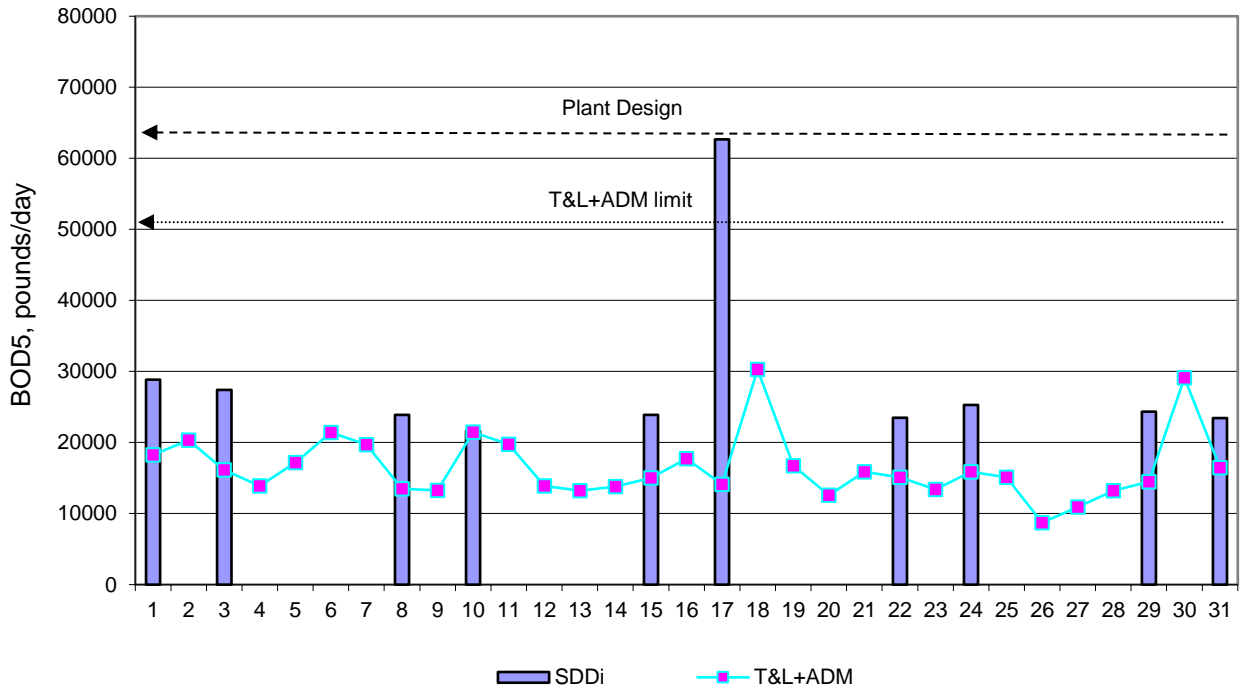
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|-------------------------|----------------|
| 1) Tate and Lyle | \$2,000 |
| 2) ADM | \$1,000 |

Plant Operating Graphs:

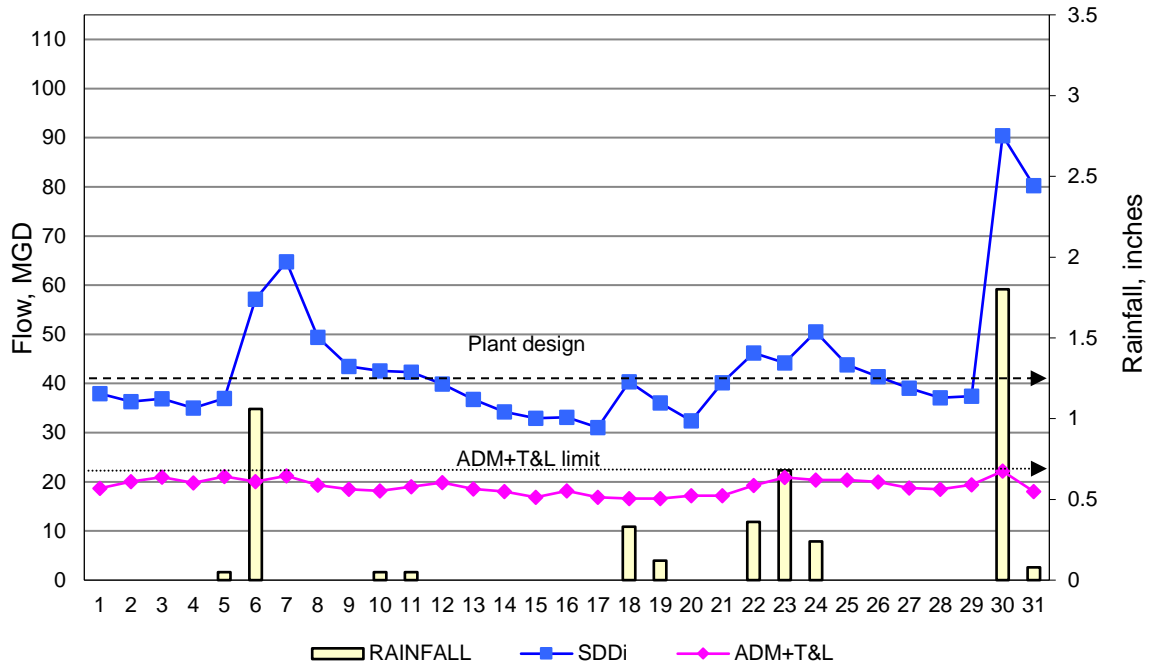
TSS Comparison: SDD Inf T&L+ADM Discharges



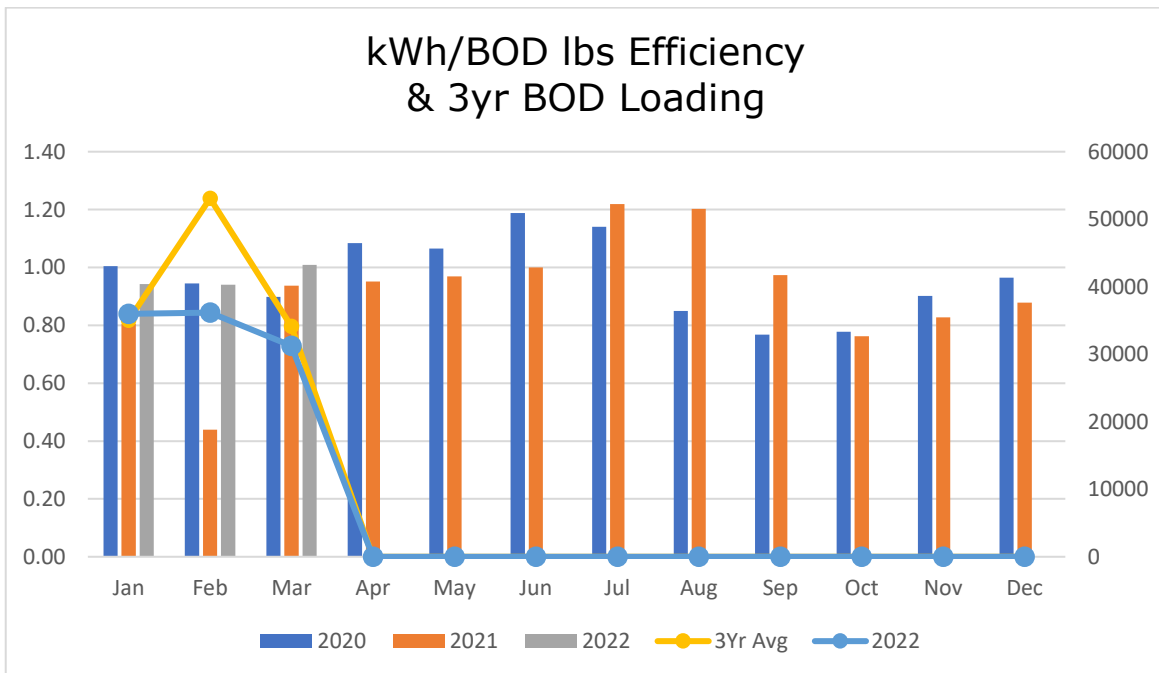
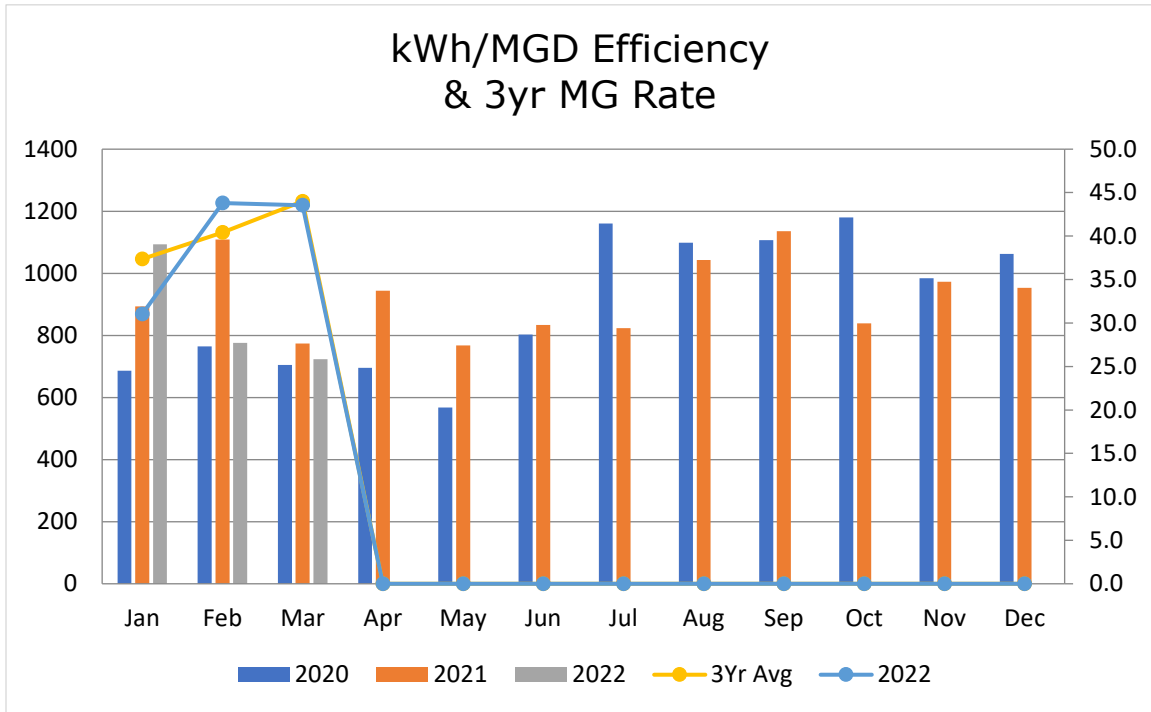
BOD Comparison: BOD Inf vs. T&L + ADM Discharges



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



Plant Efficiency Graphs:



Phosphorus Tracking Graphs:

