

Director of Operations and Compliance Report

March 23, 2022

Plant Loading, CSO Report, and Director's Notes

Plant Influent Report

Biochemical Oxygen Demand, 5-Day (Avg. 36164 lbs/day)	57 percent of design
Total Suspended Solids (Avg. 54794 lbs/day)	50 percent of design
Average Daily Flow (43.80 million gallons/day)	107 percent of design
Maximum Daily Flow (74.85 million gallons/day)	60 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	2/2	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	6.0/4.5/4.0	9.36/8.77/8.67	0
pH, S.U.	Daily Min/Max	6.0/9.0	7.67/8.12	0
Total Nickel, mg/L	Mo. Avg	0.0381	0.016	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)	2	14.58	4.98
Lincoln Park (Outfall 004)	0	0.0	0.0
McKinley Avenue (Outfall 007)	2	12.0	16.81
Seventh Ward (Outfall 008)	1	3.9	10.27

Director's Notes:

Nutrient Program Management Items:

District staff have started conducting coordination meetings with staff from Black & Veatch (BV) and Geosyntec (Geo). We are working on supplying the consultants with any data that we have available for their purposes, attempting to workout schedules, and based on their prior experience in these matters allow them to guide District staff efforts to allow for the project(s) to move forward as judiciously as possible. We have produced a bi-weekly meeting schedule which will be used to

coordinate Nutrient Assessment Reduction Plan (NARP) activities, and to take the necessary steps to initiate a future Watershed Group. The alternating bi-weekly meetings are scheduled, one for NARP/Watershed items, and the other for treatment plant modification planning items.

CSO Public Notice Meeting:

On February 16, 2022 the District held an open meeting to inform the general public in the matter of the Combined Sewer Outfall (CSO) Operation & Maintenance, the CSO Pollution Prevention Plan, and the CSO Public Notification Plan which are requirements of the new NPDES Permit. No one from the general public attended. The District will now complete the necessary finalizing of the required plans, certifications, and documentation and submit them as a final report to the Illinois EPA within the next few weeks.

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 – February/March 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 making adjustments to 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 have been preparing digesters for additional work to be performed by Christy-Foltz. This consists of transfer of biosolid inventory to other digesters, Wyckles facility etc. to allow room for Digester #1 to begin facade replacement work, etc.
- 2) Operators have been tasked of late to manage the plant operations in such a way to accommodate some pieces of equipment being out of service during some recent high flow events. They have managed to maintain treatment of the influent with little to no adverse impact on the level of treatment to the plant effluent.
- 3) Operations working with District maintenance staff managed to work through issues created by two effluent pump failures in recent weeks. These could have caused issues with discharge violations but through rapid response and diligent effort the plant discharge quality was not affected. The plant currently has sufficient pumping capacity to meet the permit requirements.
- 4) Operations staff operators have been trained on the new Beehive software.
- 5) On February 17th Tim Gorden, Brent Deardorff, Matt McElroy, and Brandi Rosenberger attended a webinar hosted by the US EPA "Optimizing Nutrient Removal in Sequencing Batch Reactors" which is the second of a four-part series of webinars that offer a combined total of 6.0hrs of CEUs at no cost to the District.
- 6) Three members of the Operations staff have recently written or are in the process of writing for a Certification exam of one classification or another. No results are available at this time.
- 7) Operations staff continue to actively address PMs as time, workload, and staff levels allow.

Laboratory Activities:

Routine:

A total of 1,641 analyses were performed in the laboratory during the month of February 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 February 2022 for the "COVID-19 in Wastewater" study funded by the Illinois Department of Public Health. A Zoom call was held on February 4, 2022, with the study participants and the researchers to discuss the results of the study thus far. Keith Richard was interviewed about this study for a news report that aired on February 23, 2022, on News Channel 20.
- 2) The quarterly NPDES sampling of the influent, effluent, and sludge to Wyckles was conducted during the second week of February 2022.
- 3) Keith Richard hosted a Zoom call with the IWEA Laboratory Committee on February 3, 2022. The purpose of the call was to plan for the committee's activities at the upcoming IWPC conference that will be held in Springfield in late April. Keith continues to serve as the Chair of the IWEA Laboratory Committee.
- 4) Keith Richard attended a webinar on February 23, 2022, that was hosted by the US EPA. The webinar was titled "Assessing the Toxicity of PFAS Chemicals to Aquatic Organisms" and it discussed the aquatic toxicity testing being performed by US EPA labs to determine the environmental risk posed by various PFAS chemicals. It was noted in the webinar that there are hundreds of PFAS chemicals but only a handful have been tested thus far. This toxicity data will be used in the development of water quality guidelines for PFAS chemicals.

Pretreatment Activities:

Pretreatment - General Activities:

- 1) Pretreatment personnel monitored eleven commercial and industrial users (IU) during February 2022 and conducted six industrial site inspections.
- 2) The SDD amended **Prairie Farms Dairy's** discharge permit. Since the facility has ceased production, they no longer needed a wastewater discharge permit, but a control mechanism should remain in place since the building is still being utilized. Discharge permit #105 has been converted to a zero-process wastewater discharge permit. Periodic site inspections will occur to verify that **Prairie Farms** is meeting their permitted requirements.
- 3) There are no updates to the USEPA desk audit.
- 4) The SDD sent wastewater hauler application packages to **Gulliford's, PSS, H&M Trucking, Alpha Drains** and **Smith Septic**.
- 5) The SDD received a permit application package from **Bulkmatic**.
- 6) The SDD sent permit application packages to **Canadian National/Illinois Central, Norfolk and Southern Railway, ADM JRRRC**, and the **City of Decatur Nitrate Removal Plant**.

- 7) Work on the Pretreatment Annual Report has begun. This report details the SDD's Pretreatment Program activities during calendar year 2021, as well as plant sampling results.
- 8) Self-Monitoring reminder letters and forms were issued to our Industrial Users.
- 9) The local limits evaluation is ongoing. Calculations show that the zinc limit calculated in 2019 is much more stringent than necessary, mostly due to the decreased zinc loading from one of our largest industrial users.

Pretreatment Ordinance - Verbal Notices:

- 1) The SDD issued a Verbal Notice to **ADM** on February 10, 2022, because they violated their daily maximum ammonia limit. **ADM's** WWTP was experiencing higher than normal loading during the excursion, mostly due to issues in the degumming process at the West Plant. The issue has since been resolved.
- 2) The SDD issued a Verbal Notice to **Tate and Lyle** on February 18, 2022, for exceeding their dry weather flow limit. Snow melt was the likely culprit.
- 3) The SDD issued a Verbal Notice to **Caterpillar** on February 17, 2022, because they discharged wastewater containing Total and Non-Polar FOG above their permitted limits. After investigation, it was determined that their pretreatment system was having issues in the days leading up to the violation. Maintenance was performed on the unit, and it is suspected that the cold weather may have caused issues as well. Resampling has been conducted but the SDD has not analyzed them yet.
- 4) The SDD issued a Verbal Notice to **Stripmasters** on February 21, 2022, for violating their zinc limit. Although a cause hasn't been identified, subsequent resampling has shown that they are well in compliance.
- 5) The SDD issued a Verbal Notice to **ADM** on February 28, 2022, because the West Plant failed to provide an adequate effluent sample. **ADM** has been reminded of their sample requirements.
- 6) The SDD issued a Verbal Notice to **Caterpillar** on March 3, 2022, for violating their zinc limit. The pretreatment systems issues noted above and residual snow melt from salt covered trucks could be the culprit. Subsequent resampling has shown that they are back in compliance.

Pretreatment Ordinance - Warning Notices:

No Warning Notices were issued during February 2022.

Pretreatment Ordinance - Notices of Violation (NOV):

No Notices of Violation were issued during February 2022.

Pretreatment Ordinance - Executive Orders:

No Executive Orders were issued during February 2022.

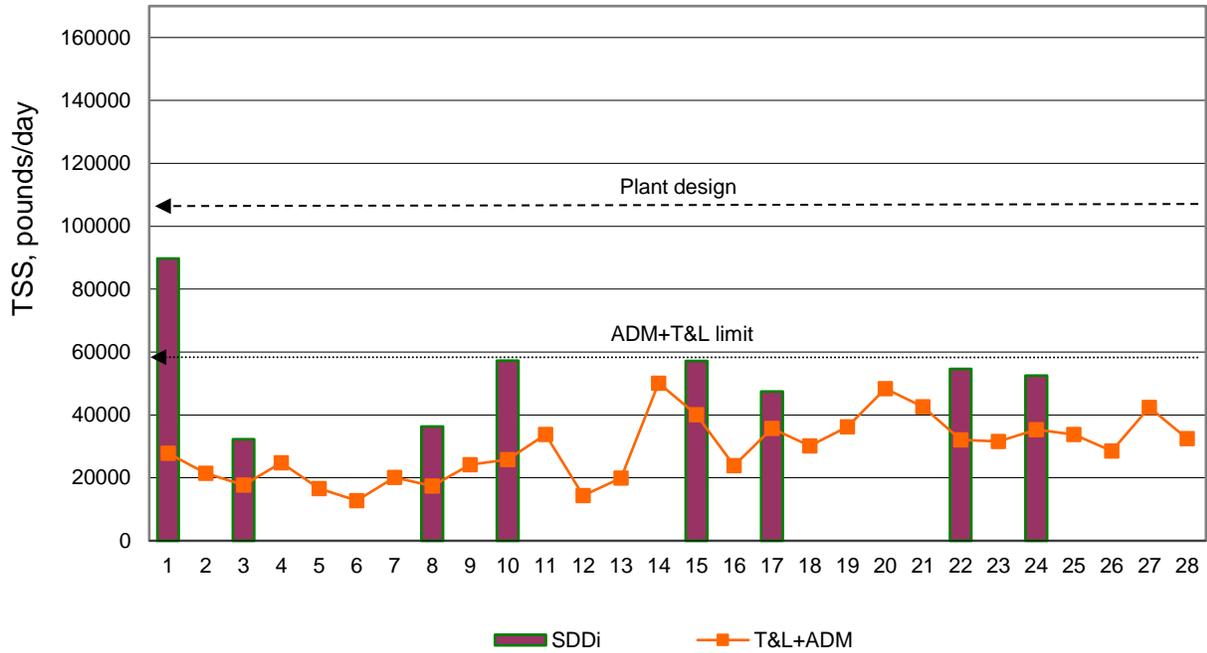
Pretreatment Ordinance - Penalty Assessments:

The following industrial penalties were assessed for February 2022:

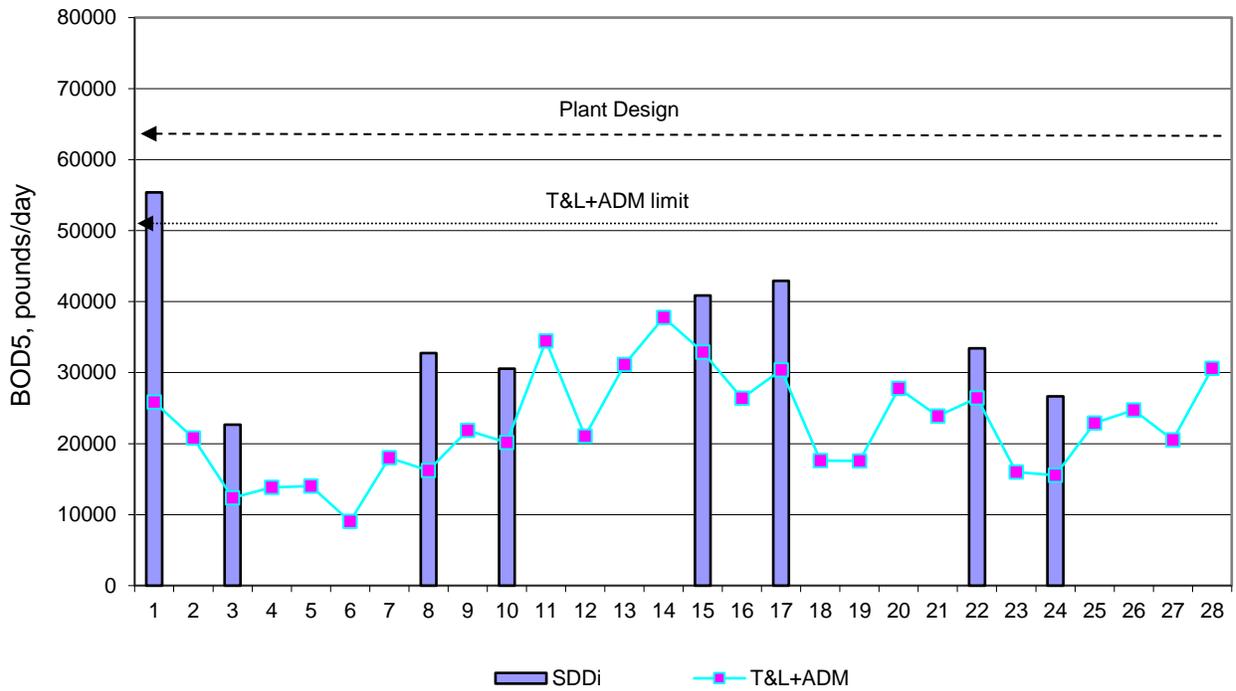
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|-------------------------|-----------------|
| 1) Tate and Lyle | \$24,500 |
| 2) ADM | \$2,000 |

Plant Operating Graphs:

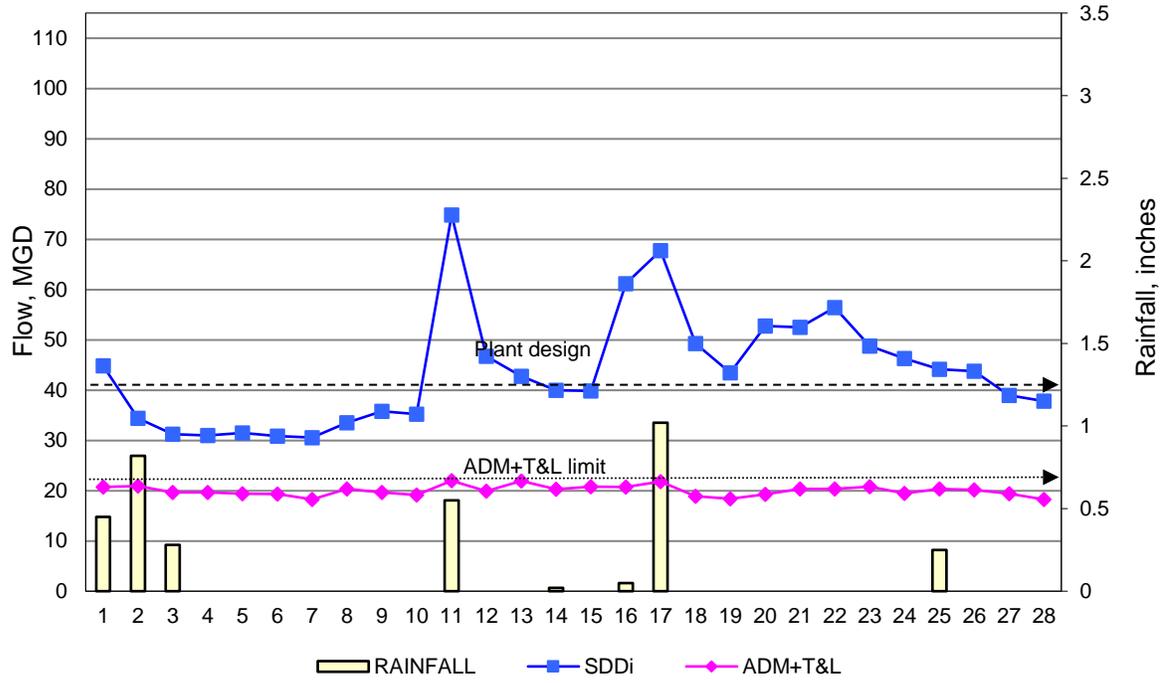
TSS Comparison: SDD Inf T&L+ADM Discharges



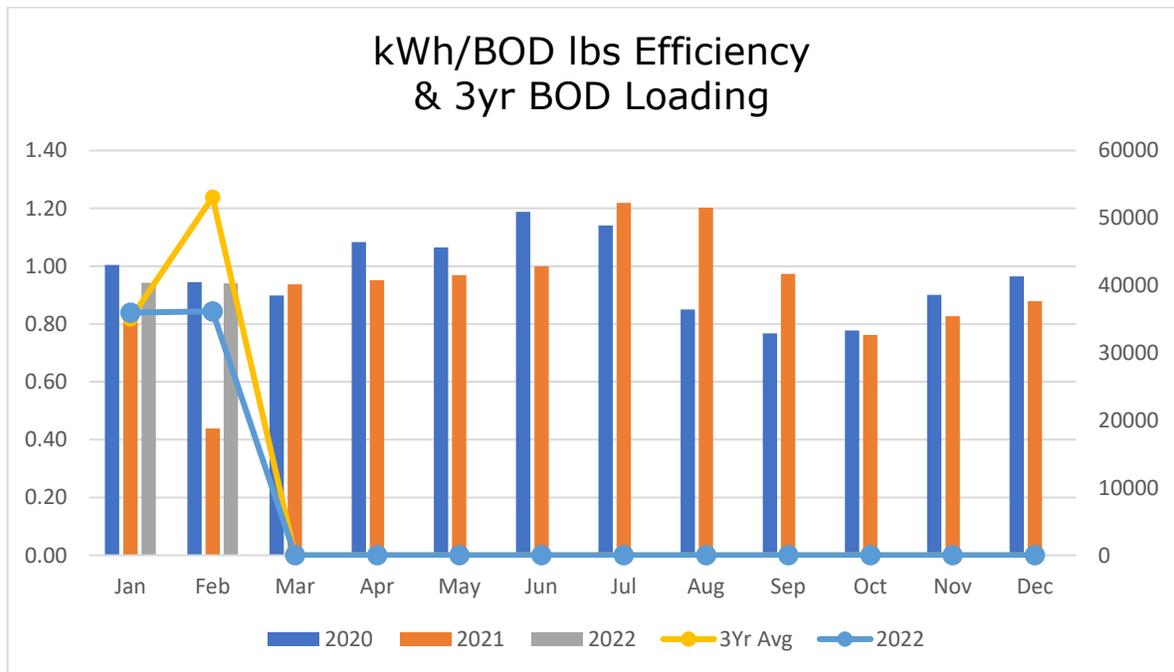
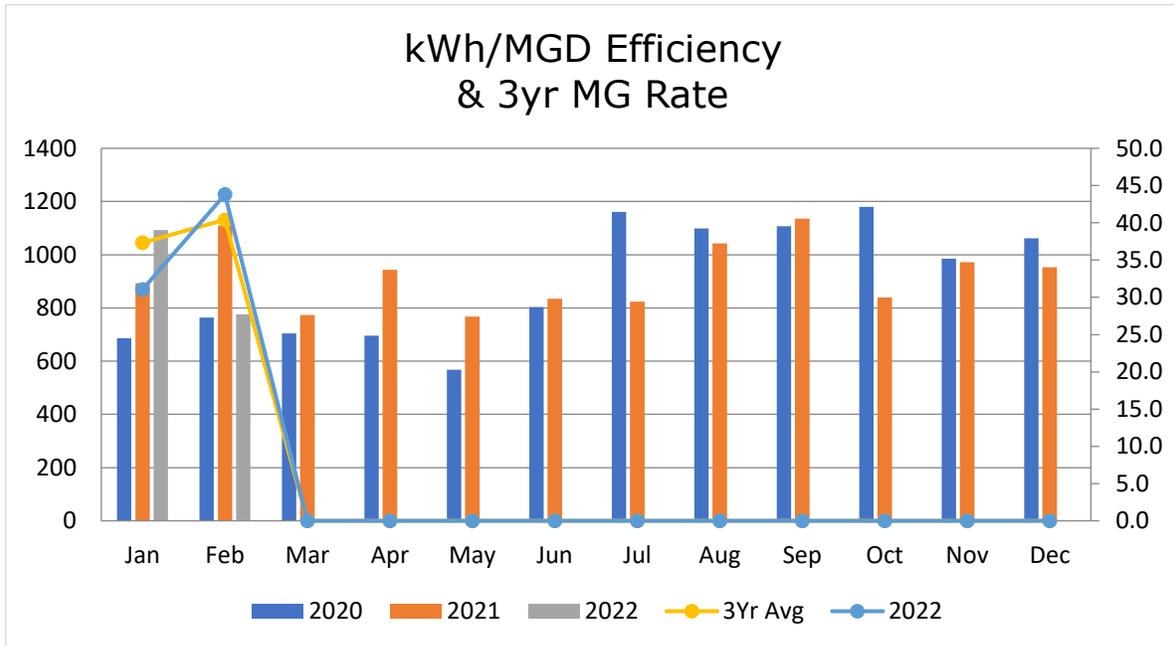
BOD Comparison: BOD Inf vs. T&L + ADM Discharges



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



Plant Efficiency Graphs:



Phosphorus Tracking Graphs:

