

Director of Operations and Compliance Report

March 17, 2021

Plant Loading, CSO Report, and Director's Notes

Plant Effluent Report

Biochemical Oxygen Demand, 5-Day (Avg. 88850 lbs/day)	140 percent of design
Total Suspended Solids (Avg. 46331 lbs/day)	43 percent of design
Average Daily Flow (35.16 million gallons/day)	86 percent of design
Maximum Daily Flow (54.36 million gallons/day)	43 percent of design

<u>Parameter</u>	<u>Report Frequency</u>	<u>Permit Limits</u>	<u>Reported Values</u>	<u>Violations</u>
CBOD ₅ , mg/L	Mo. Avg/Wk. Avg	20/40	29/109	4
TSS, mg/L	Mo. Avg/Wk. Avg	25/45	5/7	0
NH ₃ -N, mg/L	Wk. Avg/Daily Max	1.5/3.0	0.12/0.12	0
DO, mg/L	Daily Min	6.0	8.06	0
pH, S.U.	Daily Min/Max	6.0/9.0	7.82/8.30	0
Total Nickel, mg/L	Mo. Avg	0.015	0.015	0
Total Zinc, mg/L	Mo. Avg	0.075/0.416	0.015/0.038	0
CL ₂ Residual, mg/L	Daily Max	0.05*	0.0	0
Fecal Coliform CFU/100mL	Daily Max	400*	N/A	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)	1	1.32	3.57
Lincoln Park (Outfall 004)	0	0.0	0.0
McKinley Avenue (Outfall 007)	1	1.41	2.9
Seventh Ward (Outfall 008)	0	0.0	0.0

Director's Notes:

NPDES Permit:

The District is still awaiting a new version of a draft permit from the IEPA. An IEPA representative reported to HeplerBroom on March 8, 2021 that the Agency was in the process of reviewing the records from the Site-Specific Rule for Nickel.

Land Application of Biosolids:

J. Oros Environmental Inc. is preparing to begin clean-up of the East Wyckles Lagoon as soon as they have the materials and equipment in place and the weather allows for the work to commence. The estimated start date for this project is expected to be as early as March 10th, 2021.

Permit Exceedance Report:

Beginning on February 16th an industrial customer experienced a plant-wide shut down causing excessive loading to be discharged to the District and led to a pass-through event. You will note four exceedances in the "Plant Effluent Report" above, all of these were directly attributable to this pass-through event. IEPA was notified as required.

During this event, the District was receiving peak loads of nearly 300,000 lbs of BOD per day. The treatment plant is designed and rated for 63,646 lbs. of BOD loading per day. While the plant was able to remove and treat 86% of the BOD (approx. 250,000 lbs on the highest loading day) the remaining BOD passed through the plant.

As of this writing of this report the District is still dealing with the effects of this excessive loading and at various times has needed to utilize all available treatment processes including, but not limited to, primary clarifiers, nitrification tanks, nitrification clarifiers, blowers, and rotating drum thickeners on an as-needed basis.

Operations, Laboratory, and Pretreatment Activity Reports – February/March 2021

Operations Activities:

Normal operational activities were conducted as prescribed 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 continue to adjust the ferrous feed and digester operations to lower the H2S readings for improved maintenance reliability.
- 2) All Operations staff are currently working on maintaining PM workorders as they are received.
- 3) Operator's ran the West Headworks systems while maintenance made repairs to a broken potable water line in the #217 Grit Building. Being able to rely on the new West Headworks afforded the maintenance staff assigned to the repairs the time needed to complete repairs and improve the seal water systems which now offers more flexibility to operators in the grit system operations going forward.
- 4) The operations staff spent a considerable amount of additional time operating and monitoring conditions of the plant processes during the extreme cold conditions from the polar vortex event in February.
- 5) Operators have been dealing with the effects of excessive loading of BOD coming into the plant and a related filamentous bacteria growth event. (*See Director's Notes Above*)
- 6) David Collard attended a SEDAC Webinar on March 9th, 2021 for "Upgrade vs. Replacement: When is it Time? A Panel" training on efficiency in treatment plant O&M.

Laboratory Activities:

Routine:

A total of 1,574 analyses were performed in the laboratory during the month of February 2021.

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 first week of February 2021.
- 2) Keith Richard attended a webinar conducted by the Centers for Disease Control (CDC) titled "Update on COVID-19 Vaccination for Essential Workers" on February 10, 2021. The purpose of the webinar was to update workers in the water/wastewater industry on their status with regards to receiving COVID-19 vaccinations. There was much heated debate as to why water/wastewater workers were placed low on the priority list for vaccinations given the criticality of clean water in maintaining public health.
- 3) Keith Richard participated in a conference call with the WEF Laboratory Practices Committee on February 16, 2021. The main topic of the call was a presentation given by Dominic Brose of MWRD discussing their efforts to replace the BOD test with the TOC test. Also, updates were given for the various initiatives the committee is working on. Keith serves on the committee which is comprised of wastewater laboratory professionals from all across the country.
- 4) Extra process control testing was performed in the laboratory during the last two weeks of February in response to the Tate & Lyle plant upset and the subsequent treatment issues experienced by the SDD.

Pretreatment Activities:

General Activities:

- 1) Pretreatment personnel monitored 8 commercial and industrial users (IU) during February 2021 and conducted one industrial site inspection.
- 2) Industrial site inspections have resumed. District personnel are wearing face coverings when entering our Industrial Users and practicing social distancing when possible.
- 3) There are no updates to the AOC.
- 4) The SDD issued new wastewater discharge permits to **Caterpillar** and **Prairie Farms Dairy**.
- 5) The United States Environmental Protection Agency (USEPA) notified the District that they are performing a "desk audit" of the District's Pretreatment Program. The USEPA will send a request for documents soon. Typically, these audits are much more data and document intensive compared to the traditional in-person site audit. USEPA has postponed all in-person audits due to the pandemic.
- 6) Work on the Pretreatment Annual Report is ongoing.
- 7) Matt Nihiser calculated significant non-compliance (SNC) for the fourth quarter of 2020. **Mueller Foundry** was found to be in SNC for zinc violations. All of the IU's that were found to be in SNC during 2020 were published in the Herald & Review on February 25th, per USEPA and District regulations.

Pretreatment Ordinance - Verbal Notices:

- 1) The SDD issued a Verbal Notice to **Tate and Lyle** on February 7, 2021 for discharging wastewater that contained TSS above their daily maximum limit. The source of this loss was not found, so it was attributed to poor sample mixing by Tate and Lyle staff. This loss is unrelated to the large loss later in the month.
- 2) A Verbal Notice was issued to **Decatur Memorial Hospital** on February 15, 2021 for discharging wastewater above their upper pH limit at their pt. C outfall. The cause of this violation is likely related to cleanup in their food service department.

- 3) A Verbal Notice was issued to **Prairie Farms Dairy** on February 18, 2021 for discharging wastewater containing TSS above their daily maximum limit on February 16th and 17th. The loss was attributed to improper disposal of manufacturing waste.
- 4) A Verbal Notice was issued to **Prairie Farms Dairy** on March 1, 2021 for a pH violation that occurred in February. Prairie Farms discharged wastewater above their upper pH limit. An investigation is ongoing, but the likely culprit is cleanup of their pasteurization process.

Pretreatment Ordinance - Warning Notices:

- 1) The SDD issued WN 21-003 to **ADM** on February 18, 2021 for discharging Corn Germ to the sanitary sewer. ADM experienced an issue with their germ bed dryer, which caused a germ loss that was subsequently discharged to the SDD. The response to the Warning Notice has not been received.
- 2) The SDD issued WN 21-002 to **Tate and Lyle** on February 23, 2021 for discharging excess loading to the sanitary sewer. Tate and Lyle had an issue related to the cold weather in mid-February and discharged a considerable amount of BOD and TSS to the SDD. The response to the Warning Notice has not been received.

Pretreatment Ordinance - Notices of Violation (NOV):

No Notices of Violation were issued during February 2021.

Pretreatment Ordinance - Executive Orders:

No Executive Orders were issued during February 2021.

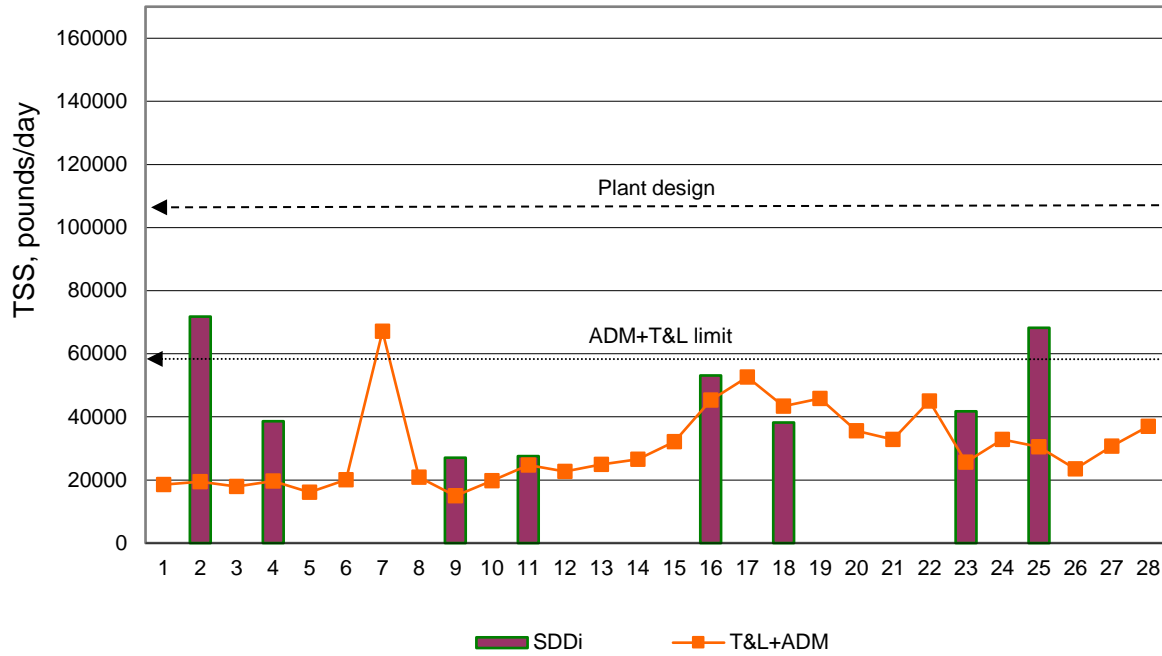
Pretreatment Ordinance - Penalty Assessments:

The following industrial penalties were assessed for February 2021:

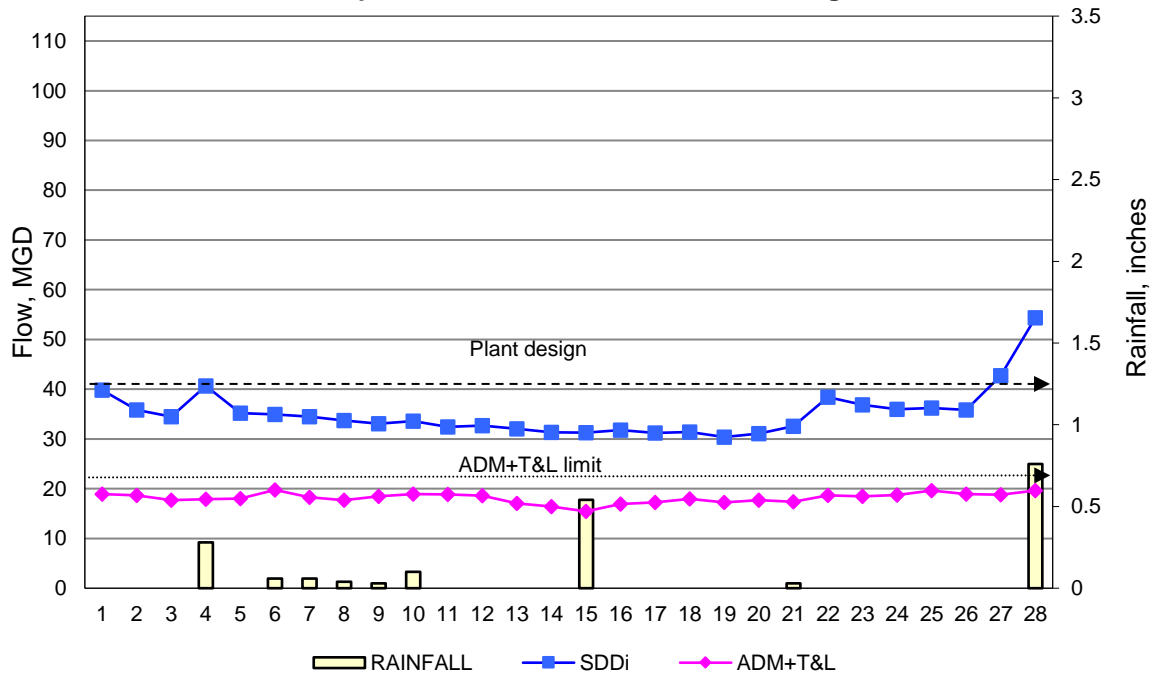
1) Tate and Lyle	\$452,000
2) ADM	\$1,000
3) Prairie Farms	\$8,500

Plant Operating Graphs:

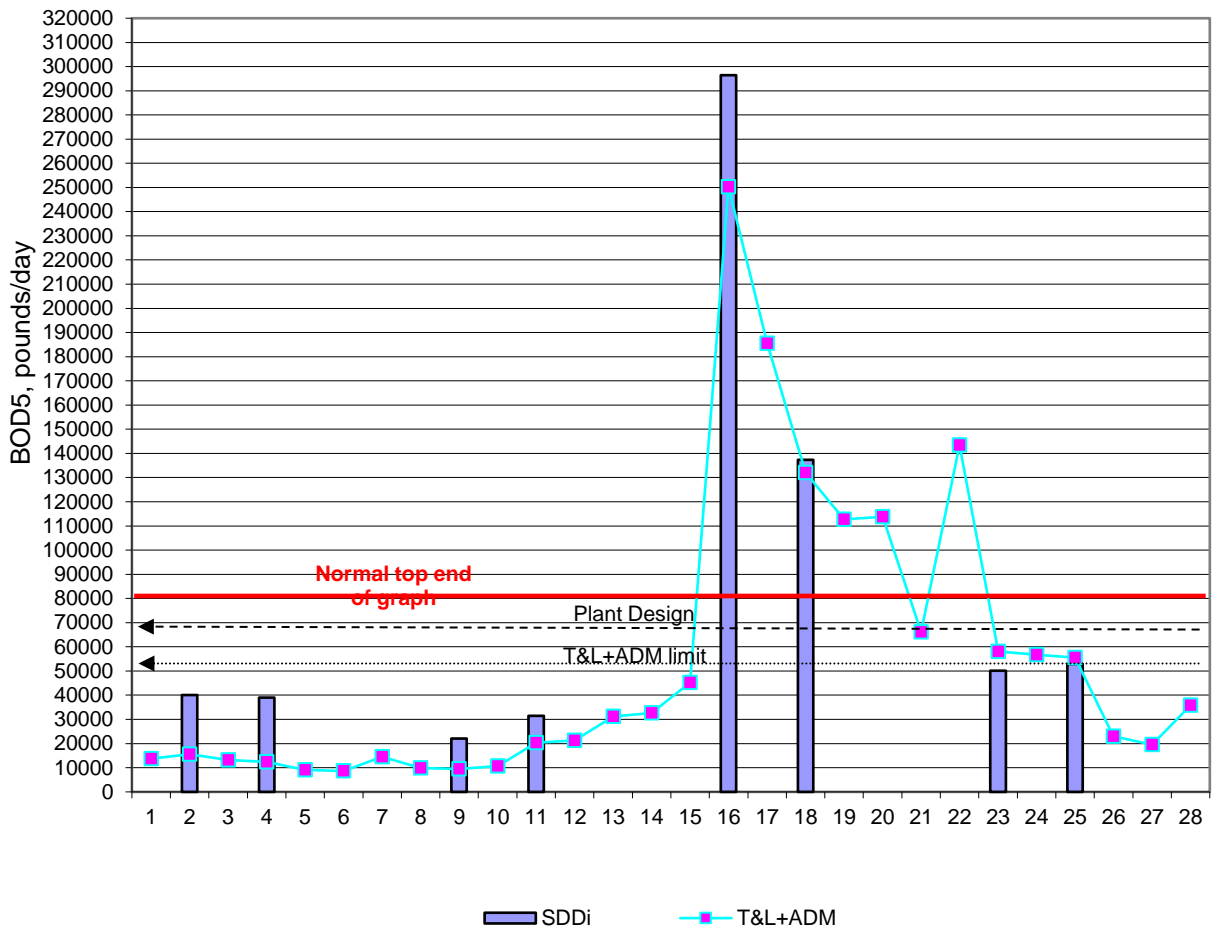
TSS Comparison: SDD Inf T&L+ADM Discharges



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



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



Plant Efficiency Graphs:

