

## Director of Operations and Compliance Report

November 17, 2021

### Plant Loading, CSO Report, and Director's Notes

#### Plant Influent Report

Biochemical Oxygen Demand, 5-Day (Avg. 40369 lbs/day)	63 percent of design
Total Suspended Solids (Avg. 56578 lbs/day)	52 percent of design
Average Daily Flow (36.67 million gallons/day)	89 percent of design
Maximum Daily Flow (85.09 million gallons/day)	68 percent of design

#### Plant Effluent Report

<u>Parameter</u>	<u>Report Frequency</u>	<u>Permit Limits</u>	<u>Reported Values</u>	<u>Violations</u>
CBOD <sub>5</sub> , mg/L	Mo./Wk. Avg	20/40	2/2	0
TSS, mg/L	Mo./Wk. Avg	25/45	5/11	0
NH <sub>3</sub> -N, mg/L	Wk. Avg/Daily Max	1.5/3.0	0.33/0.38	0
DO, mg/L	Mo. Avg/Wk. Avg/ Daily Min	6.0/4.5/4.0	7.9/7.51/7.48	0
pH, S.U.	Daily Min/Max	6.0/9.0	7.72/8.39	0
Total Nickel, mg/L	Mo. Avg	0.0381	0.019	0
CL <sub>2</sub> Residual, mg/L	Daily Max	0.05*	0.011	0
Fecal Coliform CFU/100mL	Daily Max	400*	30	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)	5	23.75	9.72
Lincoln Park (Outfall 004)	2	6.23	7.50
McKinley Avenue (Outfall 007)	5	16.2	11.49
Seventh Ward (Outfall 008)	4	10.68	19.98

#### Director's Notes:

##### **Pretreatment AOC Update & Ordinance:**

The USEPA has officially accepted the District's Pretreatment Ordinance which was ratified by the Board at last month's meeting. The Agency is still requesting a meeting to discuss items related to the Local Limits quite probably as they relate to the Phosphorus limit which are not currently active but are listed in the new permit.

## **2021 Disinfection Season Report:**

In 2021 the District staff managed to complete the whole season without a single disinfection exceedance! Based on the existing records that go back to 1993 this is only the fourth year during that time that there have been zero violations on disinfection.

While the results are unique and to be celebrated it is also note-worthy that this was no accident. This year is the result of multiple years of growth in understanding, of learning new items, and relearning old ones. Such as the science of the disinfection system, and the forces that act upon it. Refinements in process control and laboratory testing including methods, utilization, and implementation. This season has been a culmination of the many adjustments and refinements to the actual disinfection equipment and the changes to the maintenance thereof. And many other adjustments that impacted the disinfection system and operations that are too numerous to list.

The one item of note that was not changed in these recent seasons was the desire and efforts of the District's Staff. They have always strived to reach this goal and while any individual could cause a failure it was only the whole of the group that could make its success, and the proof is in the outcome of this season.

It is entirely reasonable to believe that this season can and should be repeated. In fact, efforts are already being made to qualify and list all the items that went into this and previous seasons which got us here. There are no guarantees of course there is always the possibility that some force outside our ability to control or to react quickly enough could see the District have an exceedance in the future. But baring that, the pieces that will allow more violation-free seasons in the future are at hand and need only be practiced for repeats.

I therefore commend for the Board's approval All District Staff who have all played their parts to make this season a success.

## **Covid-19 Update:**

Covid-19 restrictions continued to adversely affect operations staff levels during October. The additional workload and overtime requirements continue as well.

## **Wyckles Facility East Lagoon:**

The East Lagoon level detection equipment has been installed and the lagoon is now being used by operations without restrictions. The remaining equipment to update the dewatering system has not yet arrived.

## **Operations, Laboratory, and Pretreatment Activity Reports – October/November 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) The Operator's worked with maintenance personnel to shut down the disinfection system after the end of the season, this work includes removing all remaining chemicals, and prepping equipment for off-season repairs, etc.
- 2) There continues to be many overtime shifts that are necessary to cover due to short staff in operations to cover for sick leave.

- 3) Operators switched to the West Headworks to facilitate work that was scheduled on the east headworks grit system(s).
- 4) Operators have worked to facilitate maintenance work on the digester heat exchangers and waste gas burner, and to accommodate the contractors working on the brickwork replacement at the digesters.
- 5) Operations staff continue to actively address PMs as time, workload, and staff levels allow.

### **Laboratory Activities:**

#### **Routine:**

A total of 1,866 analyses were performed in the laboratory during the month of October 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 sampling of the groundwater monitoring wells was conducted at the South Sludge Lagoons and Wyckles Lagoons during the first week of October 2021.
- 2) The SDD continued to send samples of raw influent twice a week throughout the month of October 2021 for the "COVID-19 in wastewater" study funded by the Illinois Department of Public Health. Weekly data reports were received showing the test results of the previous weeks' samples. Going forward, the SDD will receive monthly data reports while weekly data reports will continue to be sent to the Macon County Health Department.

### **Pretreatment Activities:**

#### **Pretreatment - General Activities:**

- 1) Pretreatment personnel monitored twelve commercial and industrial users (IU) during October 2021 and conducted five industrial site inspections.
- 2) Victor Escalante successfully completed CDL training and passed the driving test.
- 3) There are no updates to the USEPA desk audit.
- 4) The SDD received a wastewater discharge permit application from **Stripmasters Services**.
- 5) Work on the sampling schedule for 2021 has begun. The SDD is planning to conduct a new local limit study in January.
- 6) The SDD issued a wastewater discharge permit to **ADM**.
- 7) The SDD received final approval of the Pretreatment Ordinance, Penalty Ordinance, and local limits on November 5, 2021. We are now working to incorporate the changes into individual discharge permits and working with the USEPA to finalize and close out the AOC.

#### **Pretreatment Ordinance - Verbal Notices:**

A Verbal Notice was issued to **Prairie Farms Dairy** on October 13, 2021, for discharging wastewater to the SDD below their permitted lower pH limit. The low pH was attributed to an excess amount of acidic tank cleaner being used and subsequently flushed down the drain. Prairie Farms

reviewed the cleaning and chemical use procedures with employees and subsequent sampling has shown Prairie Farms to be in compliance.

**Pretreatment Ordinance - Warning Notices:**

Warning Notice 21-007 was issued to **Tate and Lyle** on October 8, 2021. Tate and Lyle had multiple TSS and BOD violations in October, caused by an air loss to their pretreatment system and issues with the West Main Monitoring Tank. The response from WN 21-007, which will include corrective actions, has not yet been received.

**Pretreatment Ordinance - Notices of Violation (NOV):**

No Notices of Violation were issued during October 2021.

**Pretreatment Ordinance - Executive Orders:**

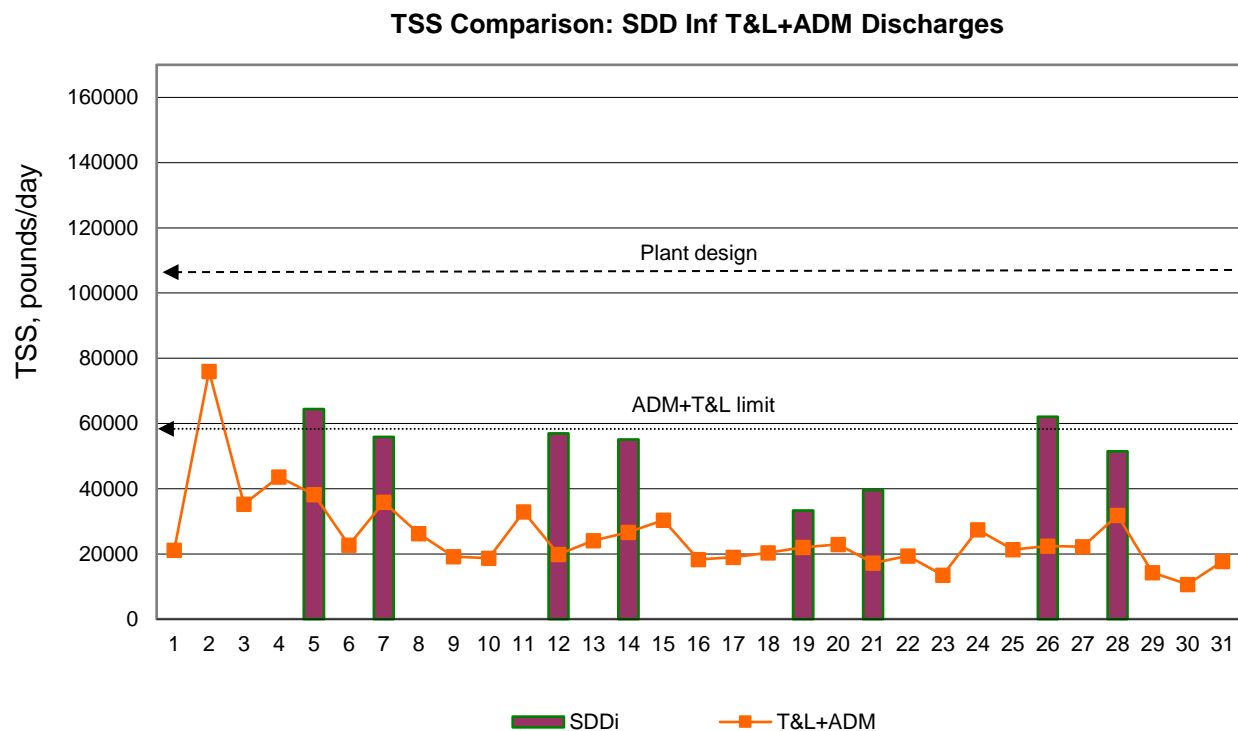
No Executive Orders were issued during October 2021.

**Pretreatment Ordinance - Penalty Assessments:**

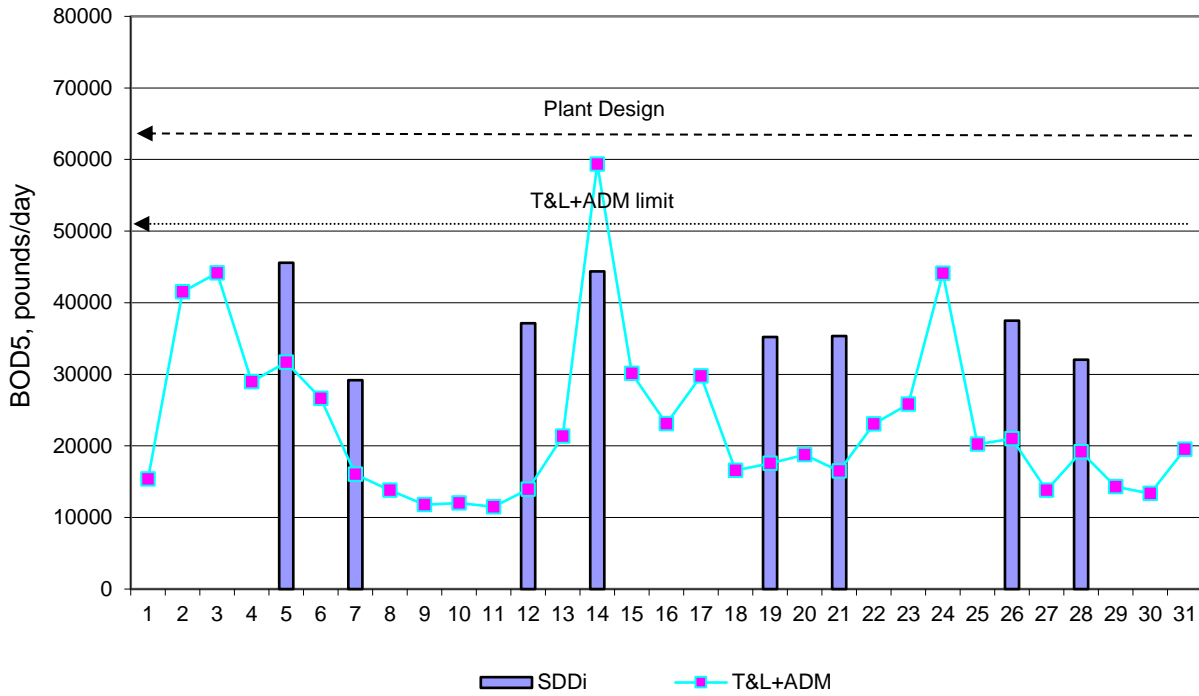
The following industrial penalties were assessed for October 2021:

- 1) **Tate and Lyle** **\$149,500**
- 2) **Prairie Farms Dairy** **\$1,000**

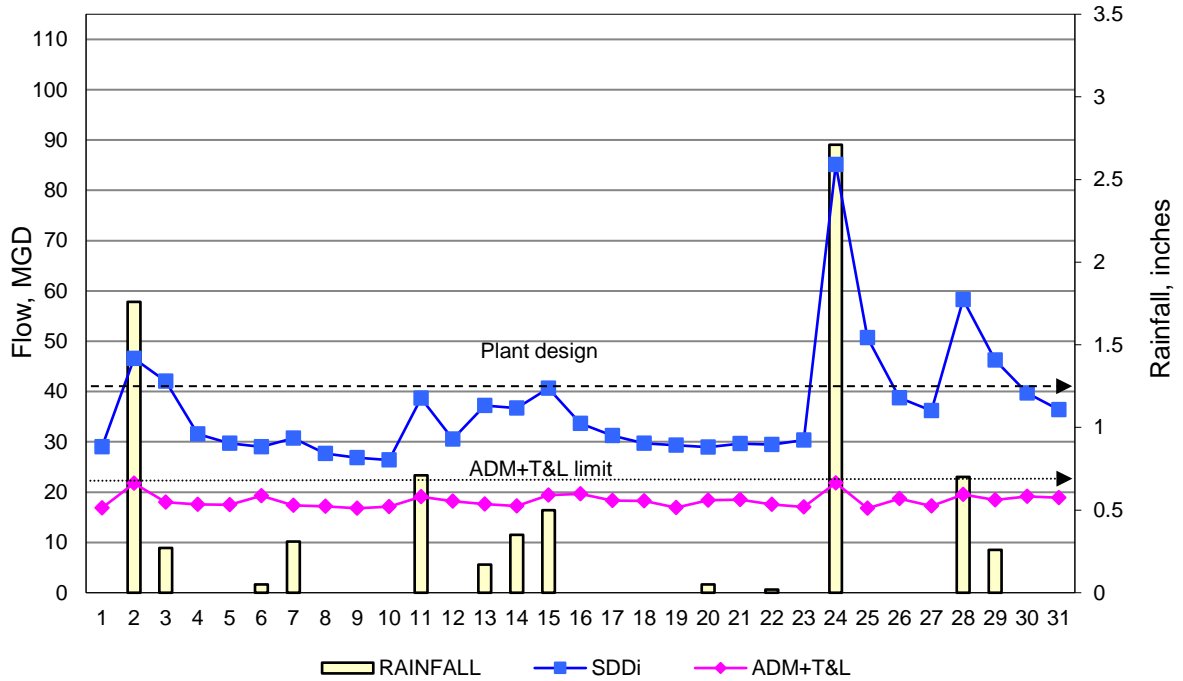
**Plant Operating Graphs:**



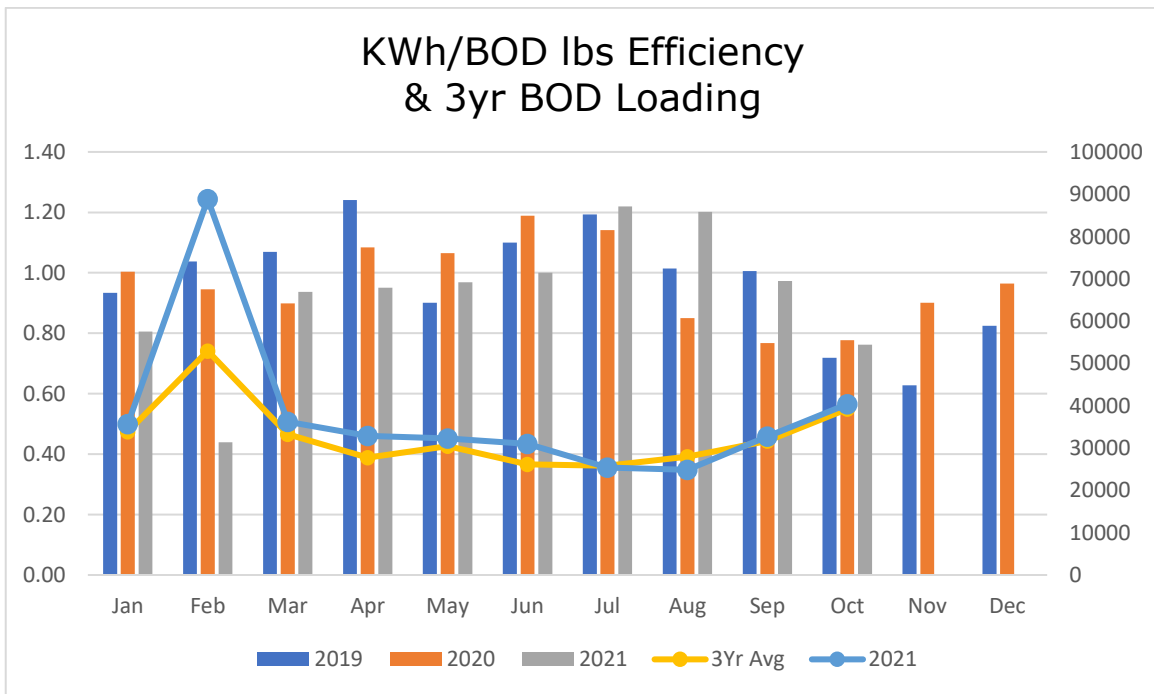
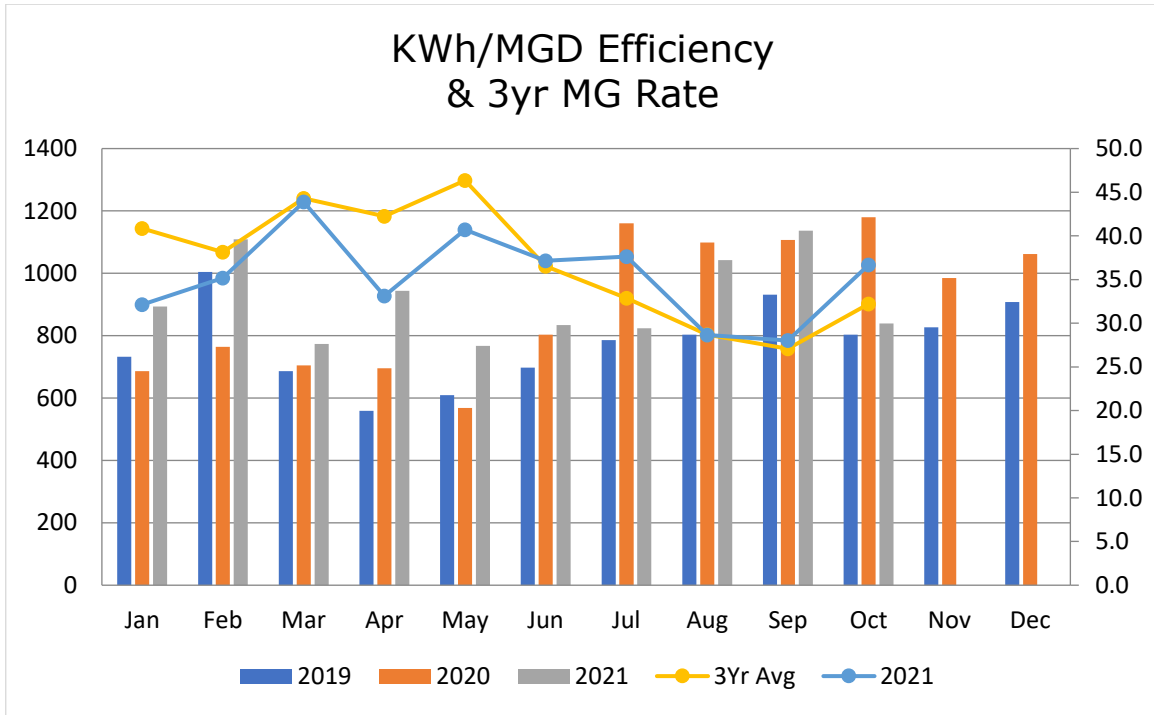
**BOD Comparison: BOD Inf vs. T&L + ADM Discharges**



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



**Plant Efficiency Graphs:**



**Phosphorus Tracking Graphs:**

