

## Director of Operations and Compliance Report

October 21, 2020

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

#### Plant Loading

Biochemical Oxygen Demand, 5-Day (Avg. 36619 lbs/day)	58 percent of design
Total Suspended Solids (Avg. 48684 lbs/day)	45 percent of design
Average Daily Flow (25.38 million gallons/day)	62 percent of design
Maximum Daily Flow (32.88 million gallons/day)	26 percent of design

	Permit Limits (avg/max)	Reported Values	Violations
CBOD <sub>5</sub> , mg/L	20/40	2/2	0
TSS, mg/L	25/45	2/3	0
NH <sub>3</sub> -N, mg/L	1.3/3.0	0.42/0.50	0
Fecal coliform per 100mL	400* (max)	250	0
Chlorine Residual, mg/L	0.05* (max)	0.011	0
Dissolved Oxygen, mg/L	6.0 (min)	7.24	0
pH, S.U.	6.0/9.0 (min/max)	7.88/8.08	0
Total Nickel, mg/L	0.015 (avg.)	0.014	0
Total Zinc, mg/L	0.075/0.416	0.013/0.017	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	0.18	1.3
Lincoln Park (Outfall 004)	0	0.0	0.0
McKinley Avenue (Outfall 007)	0	0.0	0.0
Seventh Ward (Outfall 008)	0	0.0	0.0

#### Director's Notes:

##### **Permit Issues:**

On October 9, 2020, the Illinois EPA released the District's permit (NPDES #IL0028321) for Public Notice for a one-month period ending November 9, 2020. This allows all interested parties, and stakeholders an opportunity to comment on the document.

##### **IWPC Facility Tour:**

On October 5, 2020 Wade Lagle (U-CSD) and David Miller (Rantoul WW, Retired) representing the IWPC visited the plant to gather pictures and information related to the District's nomination as a Class 1 Plant of the Year. All plants that are nominated are visited in this manner. The IWPC Conference will take place in April of 2021 and the winners will be announced at that time. I would

offer a commendation to all of the District staff on the work they do day-to-day that affords us an opportunity to be nominated for this award, and specifically those that pulled extra duties to get the plant in good order prior to the IWPC visit.

### **IDEXX Tests:**

The Laboratory has contacted IDEXX Laboratories Inc. about the research the District is conducting related to their product that has shown false-positive results on multiple occasions at our facility. Though they did not commit to lend any assistance in the matter they did offer some information that has led to additional areas of research for our staff. Currently, we are researching one specific chemical, and a group of potential bacterial causes for the false-positive results. More details on this topic can be found in the Laboratory Activities section below.

## **Operations, Laboratory, and Pretreatment Activity Reports – September 2020**

### **Operations Activities:**

Normal operational activities were conducted as proscribed by standard procedures or conditions within the plant related to the new measures being employed due to Covid-19. Temporary adjustments are made occasionally to accommodate the needs of the plant as they arise.

- 1) Plant flows during September continue to be extremely low and the operations staff continue to make the necessary adjustments to maintain the plant operations to meet the Permit requirements.
- 2) The J. Oros Environmental Inc. group are currently hauling biosolids to local farmers fields from the District's Wyckles facility. The operation is going well, and they have hauled six million gallons as of 10/13/20. The current weather patterns are very conducive to this type of activity.
- 3) The West Headworks is currently in operation and seems to be working well. The plan is to utilize this equipment as continuously as possible for the remainder of the warranty period. This also now affords the maintenance staff the ability to affect repairs/maintenance on the East Headworks equipment without the need to rush to bring that equipment back online.
- 4) Dakota Bledsaw one of the District's two OITs has recently completed the first section of training offered through the Sacramento University for Wastewater Operations. He continues to show great promise and an affinity for the duties required of the Operations department staff.
- 5) Brent Deardorff and Harvey Dozier are preparing to sit for the IL Class 1 & 3 exams respectively as soon as the State schedules a new date for this purpose. Steve Smith sat for the Class 1 exam on the 6<sup>th</sup> of October but has heard nothing on the results at this time.
- 6) Mike Irons began an extended pre-retirement time-off period beginning 9/30/20. This will lead into Mike's retirement date at the end of December. The District is very happy for Mike and wishes him a long and happy retirement. He has been a valuable member of the District family and he will be sorely missed.

### **Laboratory Activities:**

#### **Routine:**

A total of 1,617 analyses were performed in the laboratory during the month of September 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) Keith Richard attended the Illinois Water Environment Association (IWEA) Executive Board and Committee Chair Meeting that was held virtually on September 11, 2020. The group meets quarterly to discuss current and upcoming activities of the IWEA and its committees. Keith continues to serve as the Chair of the IWEA Laboratory Committee.
- 2) A study of the dissolved oxygen profile of the nitrification aeration basins was started on September 24, 2020. A weekly profile will be conducted to observe how the dissolved oxygen levels vary throughout the length of the nitrification aeration basins during different flow and loading conditions. This new test protocol should supply data for a better understanding of the biological activity and the changes thereof to allow Operations to gain a better understanding of the plant processes.
- 3) The investigation into the suspected false-positive IDEXX fecal coliform results are ongoing. An additional suspected false-positive IDEXX result was obtained on September 29, 2020. A sample of the plant effluent that was collected at the same time as the fecal coliform sample has been sent to an outside lab for a full-scan gas chromatograph mass spectrophotometer (GC-MS) analysis. The results from this GC-MS analysis will be compared to the results from the previous GC-MS analysis to determine if any of the same compounds were observed in both samples.
- 4) Keith Richard participated in a conference call with the WEF Laboratory Practices Committee on September 30, 2020. The call was the annual business meeting that occurs during WEFTEC. Keith serves on the committee which is comprised of wastewater laboratory professionals from across the country.

#### **Pretreatment Activities:**

##### **General Activities:**

- 1) Pretreatment personnel monitored nine commercial and industrial users (IU) during September 2020 and performed eight industrial user inspections.
- 2) There are no updates to the AOC.
- 3) The SDD issued wastehauler permit applications to **Bodine Services, Bodine Environmental, Parks Sewer Services, Kelley's Septic Tank and Sewer Services, Septic Specialist, Zeschke Septic Cleaning, Midwest Pottyhouse, Merdon Inc (dba K&M Portable Toilets), Environmental Works** and **City of Decatur Municipal Services**. These are all renewals of existing wastehauler permits.
- 4) Wastewater Discharge Permit applications were received from **ADM Railcar Repair** and **Akorn**. **ADM Railcar Repair's** current permit expires in December, and **Akorn** has changed ownership.
- 5) Kent Newton, Don Miller, David Collard and Matt Nihiser had an introductory phone call with Michelle Frey. Dr. Frey is ADM's Global Manager for Water and Wastewater in the Utilities Center of Excellence.
- 6) Matt Nihiser has been working with representatives from **Caterpillar** on their wastewater discharge permit renewal application.

**Pretreatment Ordinance - Verbal Notices:**

The SDD issued a Verbal Notice to **Prairie Farms Dairy** on September 16, 2020 for failing to collect their second August self-monitoring samples. **Prairie Farms** representatives indicated that they had a catastrophic failure of their mix freezer on the day they were scheduled to pull the samples. This is a reporting violation and automatically puts **Prairie Farms** into Significant Non-Compliance.

**Pretreatment Ordinance - Warning Notices:**

The SDD issued Warning Notice 20-004 to **Prairie Farms Dairy** on October 9, 2020 for violations on September 25, 2020. **Prairie Farms** spilled and subsequently discharged approximately 6,279 gallons of raw milk to the SDD over a five to six hour period. Multiple procedural failures were identified that led to the loss, including improper mix tank hose placement, and neglecting to put the drain covers back on the drains after washing the floor. In the Warning Notice, the SDD is requiring **Prairie Farms** to investigate and potentially install a different method for plugging floor drains.

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

No Notices of Violation were issued during September 2020.

**Pretreatment Ordinance - Executive Orders:**

No Executive Orders were issued during September 2020.

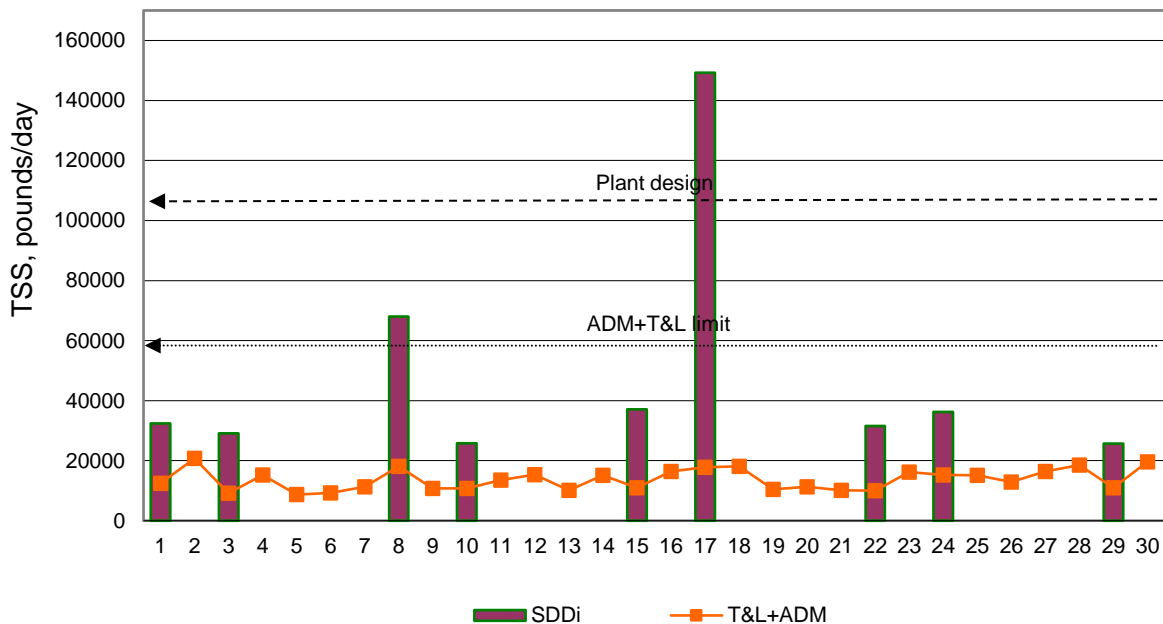
**Pretreatment Ordinance - Penalty Assessments:**

The following industrial penalties were assessed for September 2020:

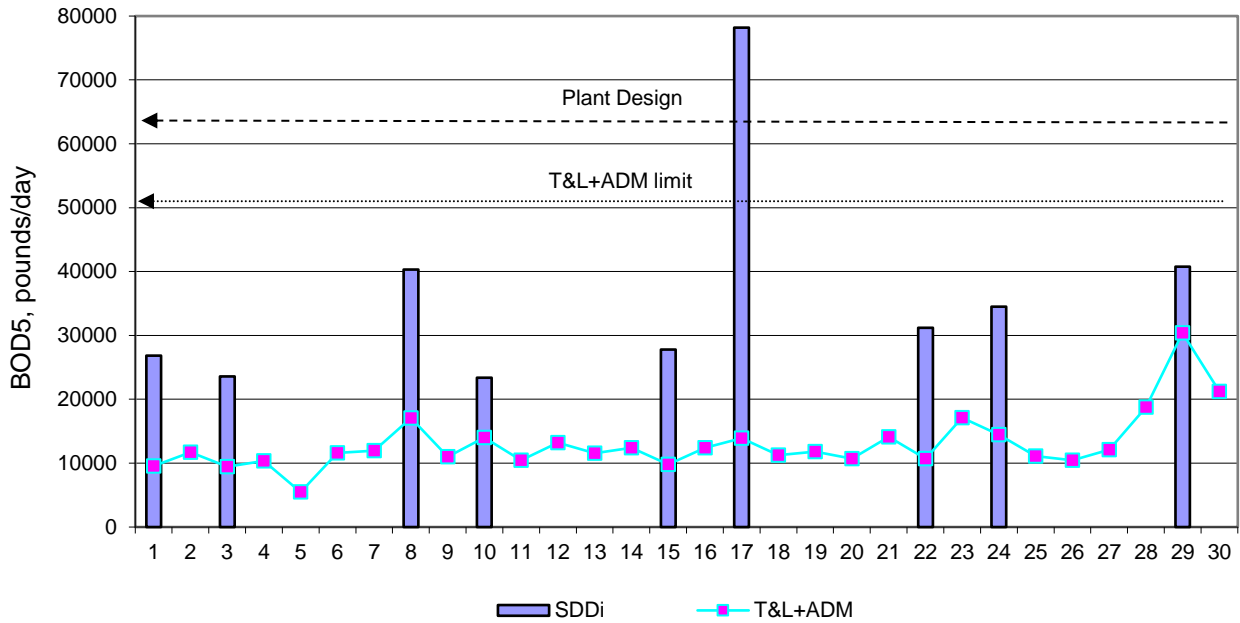
- 1) **Prairie Farms** **\$4,500**

**Plant Operating Graphs:**

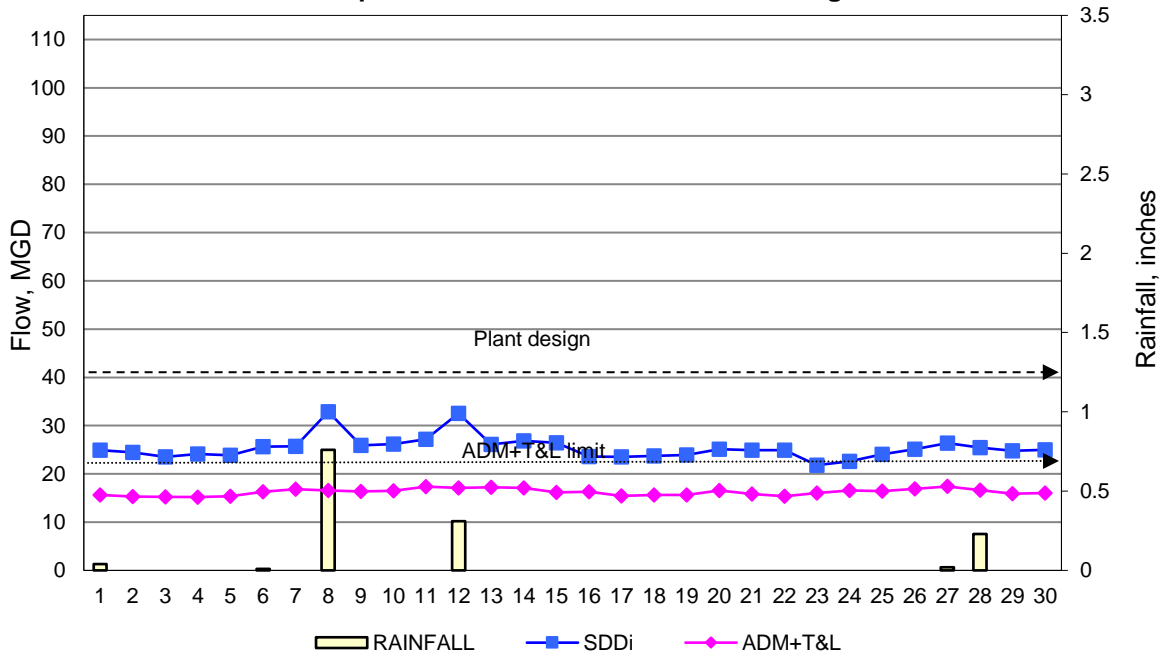
**TSS Comparison: SDD Inf T&L+ADM Discharges**



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



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



**Plant Efficiency Graphs:**

