

Operation and Compliance & Innovation Report

June 21, 2023

Plant Loading, CSO Report, and Director's Notes

Plant Influent Report

Biochemical Oxygen Demand, 5-Day (Avg. 27992 lbs/day)	44 percent of design
Total Suspended Solids (Avg. 56918 lbs/day)	52 percent of design
Average Daily Flow (27.97 million gallons/day)	68 percent of design
Maximum Daily Flow (40.85 million gallons/day)	33 percent of design

Plant Effluent Report

Parameter	Report Frequency	Permit Limits	Reported Values	Violations
CBOD ₅ , mg/L	Mo./Wk. Avg	20/40	2/3	0
TSS, mg/L	Mo./Wk. Avg	25/45	6/8	0
NH ₃ -N, mg/L	Mo. Avg/Daily Max	1.5/3.0	0.42/0.49	0
DO, mg/L	Mo. Avg/Wk. Avg/Daily Min	6.0/6.25/5.0	7.99/7.62/7.62	0
pH, S.U.	Daily Min/Max	6.0/9.0	7.76/8.13	0
Total Nickel, mg/L	Mo. Avg	0.0381	0.016	0
CL ₂ Residual, mg/L	Daily Max	0.05	<0.011	0
Fecal Coliform CFU/100mL	Daily Max	400	120	0

CSO Report

Location	Events	Est. Total Duration of Discharges (hrs.)	Discharge (million gallons)
Oakland Avenue (Outfall 003)	2	2.62	0.46
Lincoln Park (Outfall 004)	0	0	0
McKinley Avenue (Outfall 007)	2	5.3	1.85
Seventh Ward (Outfall 008)	0	0	0

Director's Notes:

Midwest Biosolids Association:

The Sanitary District applied for membership and has been accepted into the Midwest Biosolids Association (MBA). The organization is made up of a broad spectrum of individuals and organizations, representing universities, municipalities, service providers, state regulators, consultants and others involved in biosolids management in the Midwest. The association will benefit the District by addressing emerging issues and other topics related to biosolids management in areas such as:

research, education, networking and advocating for environmentally sound and cost-effective biosolids management.

The mission of the association is to: promote environmentally sound management of biosolids and residuals; foster cooperation among the association members, governmental agencies, private corporations, other associations and the general public in the management of biosolids; and promote research and share results, technical and general information about biosolids and the benefits of organics recycling with interested parties. With its focus on sustainable management of biosolids, the MBA will complement the efforts of other organizations and associations in the wastewater treatment industry.

Industrial Pretreatment Coordination Meetings:

The District meet with both large industrial contributors, ADM and Primient, to discuss the results of the industrial pretreatment evaluation performed by Black & Veach and consultants from Jacobs. This meeting allowed the industries to see the steps the District is and has been taking for future phosphorus removal. The District then asked for both ADM and Primient to reconvene with us in a month to communicate what research, plans and/or progress they have made to limit the phosphorus they contribute to the influent flow to the SDD.

Staff Training Activities:

Tim Gorden, Kent Newton and Ashley Bailey attended the Illinois Association of Wastewater Agencies (IAWA) technical committee meeting on May 12, 2023, at the Starved Rock Lodge in Utica, Illinois. In the meeting the group viewed a presentation on the subject of *Microplastics: The Next PFAS* and discussed the IAWAs position statement on PFAS as a whole.

May 15-19, 2023, Austin Gruber and Ashley Bailey attended the 2023 National Pretreatment Workshop in Boise, Idaho. The first day of the conference Austin and Ashley attended the Pretreatment 101 training seminar which was an introduction to Pretreatment Programs for Wastewater Utilities. The seminar included pretreatment program regulations and standards. As for the rest of the conference, the programing focused on the regulatory issues that are important to pretreatment programs both today and in the future and on topics that impact the day-to-day management of pretreatment programs such as, PFAS, local limits, etc. The conference allowed for great roundtable discussions with fellow pretreatment colleagues along with Regional 5 EPA members.

Operations, Laboratory, and Pretreatment Activity Reports – May/June 2023

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) Digester #2- Operators are removing the sludge from the digester. As of now, the gas is at a safe level to allow entry to search for the leak. We will continue to monitor gas levels for digesters 1, 2 and 4. Accessing the tops of the digesters has also been limited to as needed and no electronics are allowed.
- 2) # 1 digester mixer has been repaired but remains offline due to gas in the attic space.
- 3) Disinfection is going well. Operators are adjusting the chemicals as needed to keep the usage down.

- 4) Operations staff continue to actively address PMs as time, workload, and staff levels allow.
- 5) Blower usage has been higher than normal due to low flows and higher concentrations of Ammonia and Nitrates.

Laboratory Activities:

Routine:

A total of 1,989 analyses were performed in the laboratory during the month of May 2023.

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 laboratory continued to send samples of raw influent twice a week throughout the month of May 2023 for the "COVID-19 in Wastewater" study funded by the Illinois Department of Public Health. A Zoom call was held on May 5, 2023, with the study participants and the researchers to discuss the results of the study thus far. It was recently announced that the monthly calls will now qualify for CEU credits for wastewater operators.
- 2) The quarterly NPDES sampling of the influent, effluent, and sludge was conducted during the first week of May 2023. This also included our annual priority pollutants testing that includes 110 different compounds including pesticides, PCBs, volatile organic compounds, and various other toxic compounds that could be found in wastewater or sludge.
- 3) The SDD laboratory/pretreatment collected and analyzed samples on May 13, 2023, for the ongoing nutrient study for Black and Veatch.
- 4) Keith Richard hosted a Zoom call with the IWEA Laboratory Committee on May 24, 2023. The purpose of the call was to discuss the committee's activities at IWPC 2023 and to start planning for IWPC 2024. The topic of an upcoming lab-training webinar to be conducted by the committee was also discussed. Keith continues to serve as the Chair of the IWEA Laboratory Committee.

Pretreatment Activities:

Pretreatment - General Activities:

- 1) Pretreatment personnel monitored nine commercial and industrial users (IU) during May 2023. Industrial site inspections were completed on nine different sites.
 - a. Decatur Correctional Center, Norfolk-Southern, Keenan Advantage Group, Advanced Disposal Valley View Landfill, City of Decatur South Water Treatment Plant, ADM, Caterpillar, Canadian National/Illinois Central Railroad, and Fuyao Illinois.
- 2) Bimonthly sampling for the Nutrient Study is ongoing. SDD personnel are utilizing our portable samplers to collect the extra samples from **Primient** and **ADM**.
- 3) No industrial user permit renewals took place in the month of May.
- 4) No Wastehauler Permit Applications were granted in the month of May.
- 5) Pretreatment personnel attended the 2023 National Pretreatment Workshop put on by NACWA in Boise, Idaho. Topics covered included upcoming PFAS regulations, the relationship between

Pretreatment programs and industries with evolving regulations, water re-use, and FOG program management, among other topics.

Pretreatment Ordinance - Verbal Notices:

The SDD issued a total of 4 Verbal Notices to **Primient and HR Ewell** in May 2023:

1. Notice 1 was issued on 5/6/2023 to Primient for a pH excursion and carried a \$1,000 penalty.
2. Notice 2 was issued on 5/9/2023 to Primient for a pH excursion and carried a \$1,000 penalty.
3. Notice 3 was issued on 5/10/2023 to HR Ewell for a Non-Polar FOG violation. This was a verbal notice only and carried no additional penalty.
4. Notice 4 was issued on 5/23/2023 to Primient for a violation of their sulfides limit and carried a \$7,500 penalty.

Pretreatment Ordinance - Warning Notices (WN):

No Warning Notices were issued during May 2023.

Pretreatment Ordinance - Notices of Violation (NOV):

No Notices of Violation were issued during May 2023.

Pretreatment Ordinance - Executive Orders:

No Executive Orders were issued during May 2023

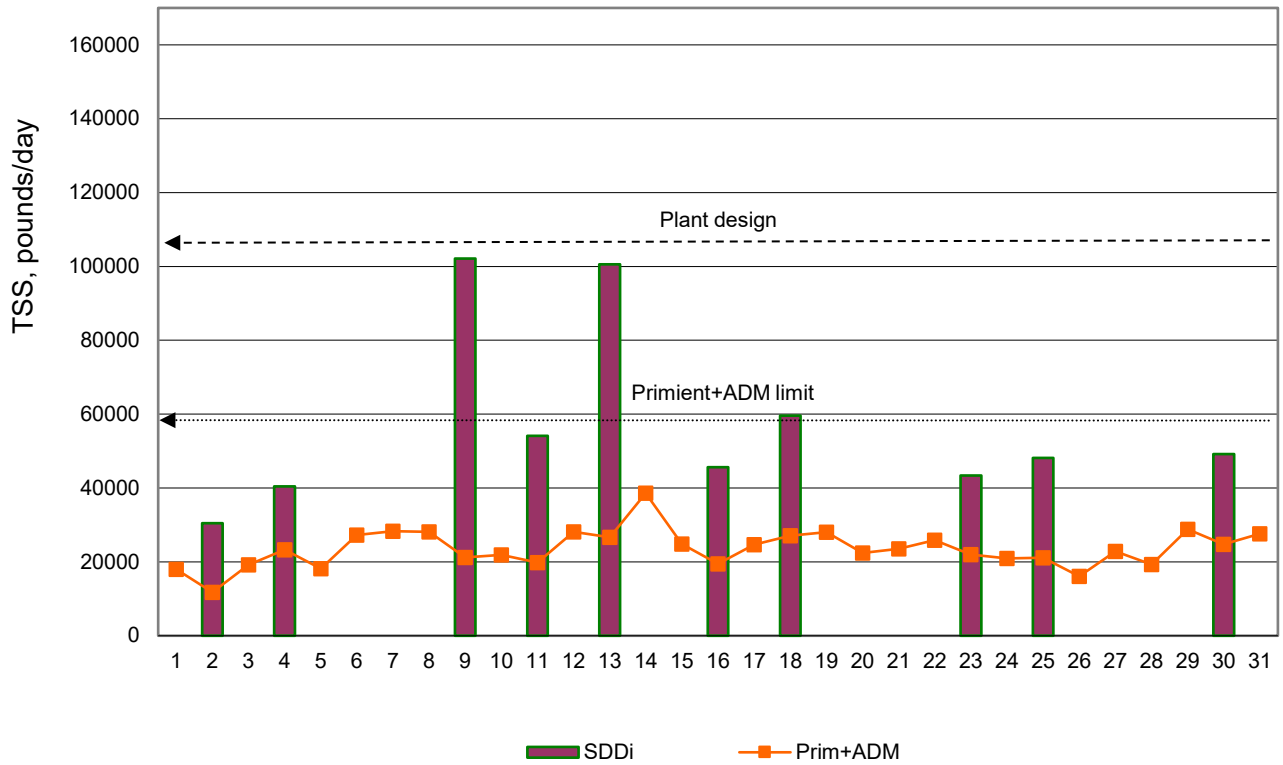
Pretreatment Ordinance - Penalty Assessments:

The following industrial penalties were assessed for May 2023:

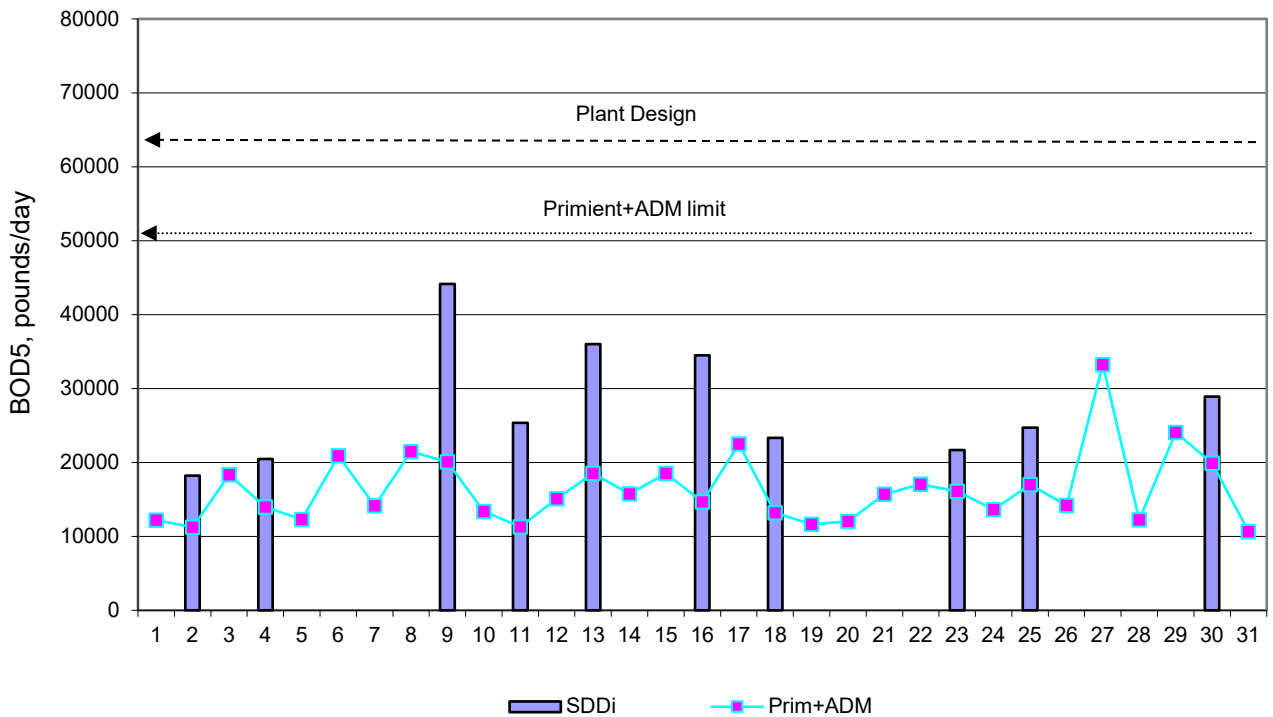
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| 1) Primient | \$9,500 |
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Plant Operating Graphs:

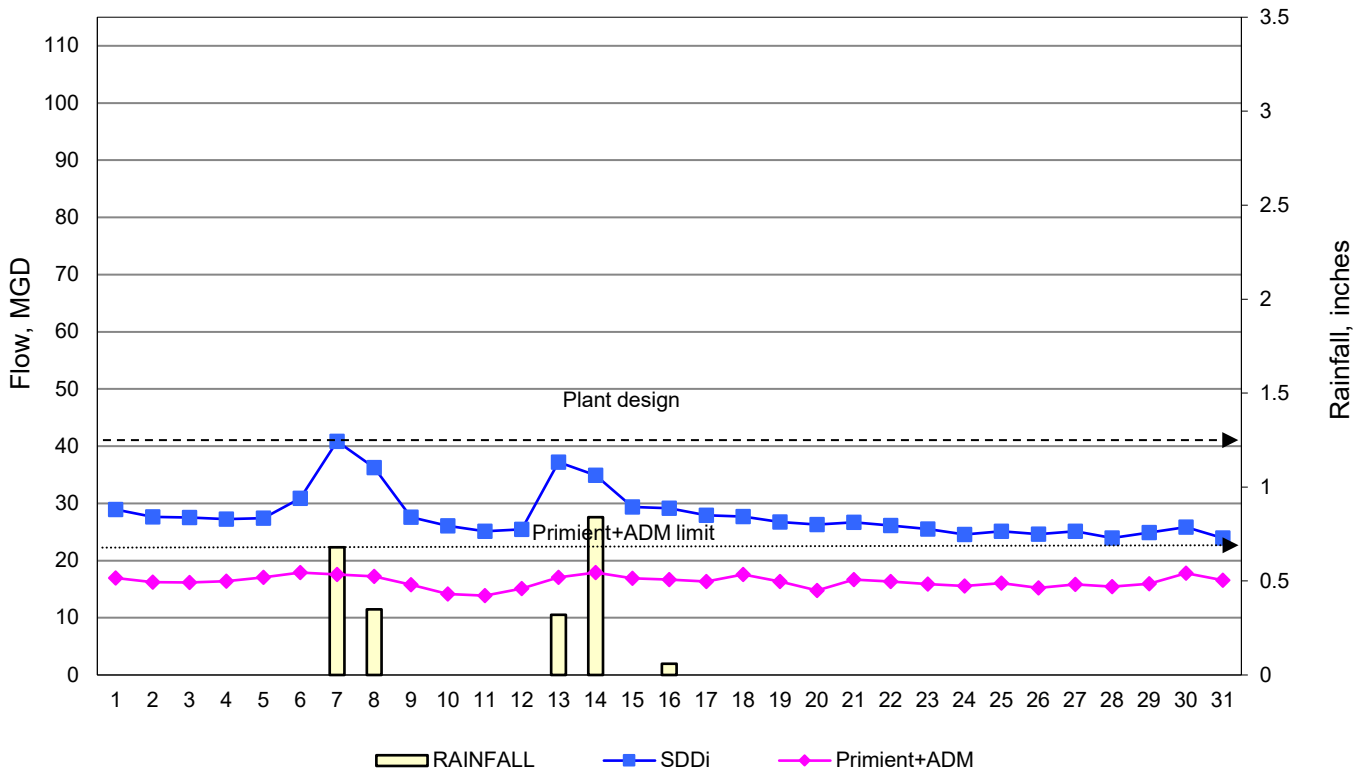
TSS Comparison: SDDi Inf Primient+ADM Discharges



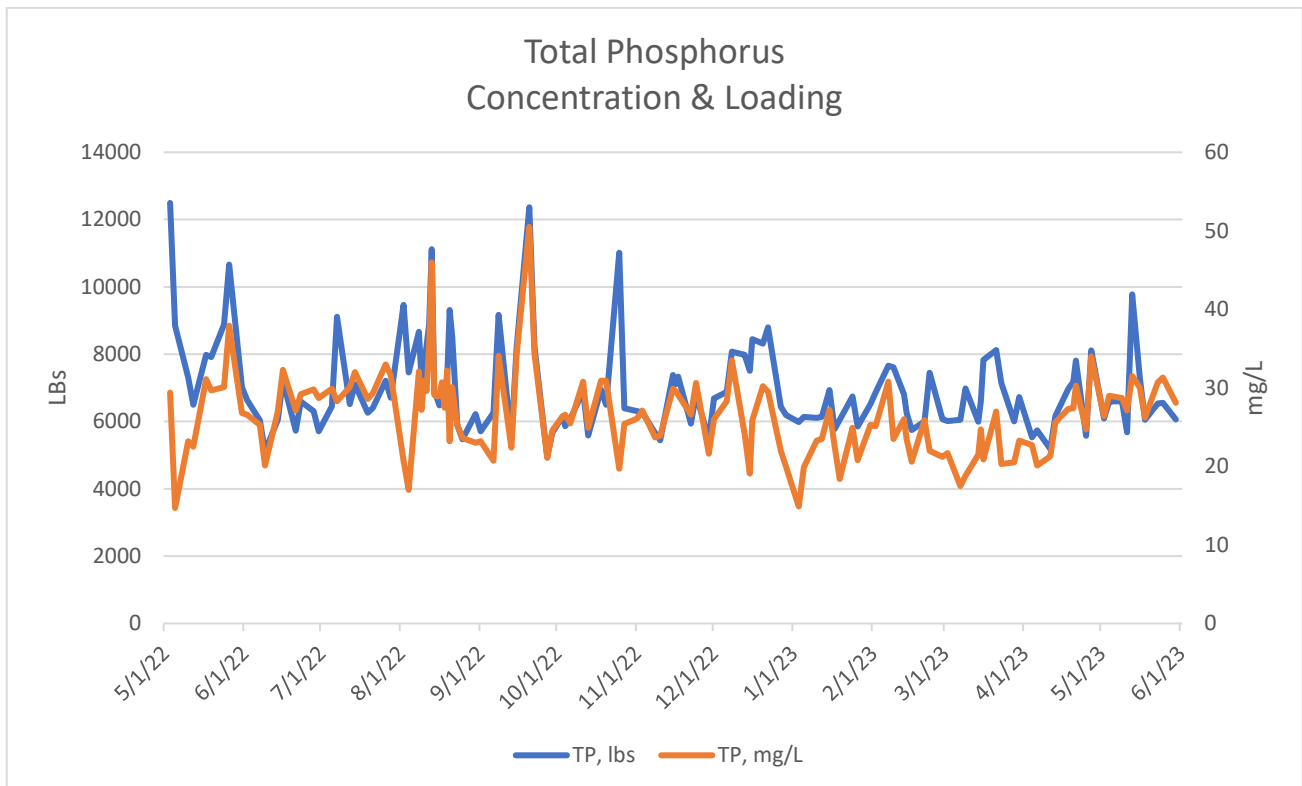
BOD Comparison: BOD Inf vs. Primient + ADM Discharges



Flow Comparison: SDD vs. Primient + ADM Discharges and Rainfall

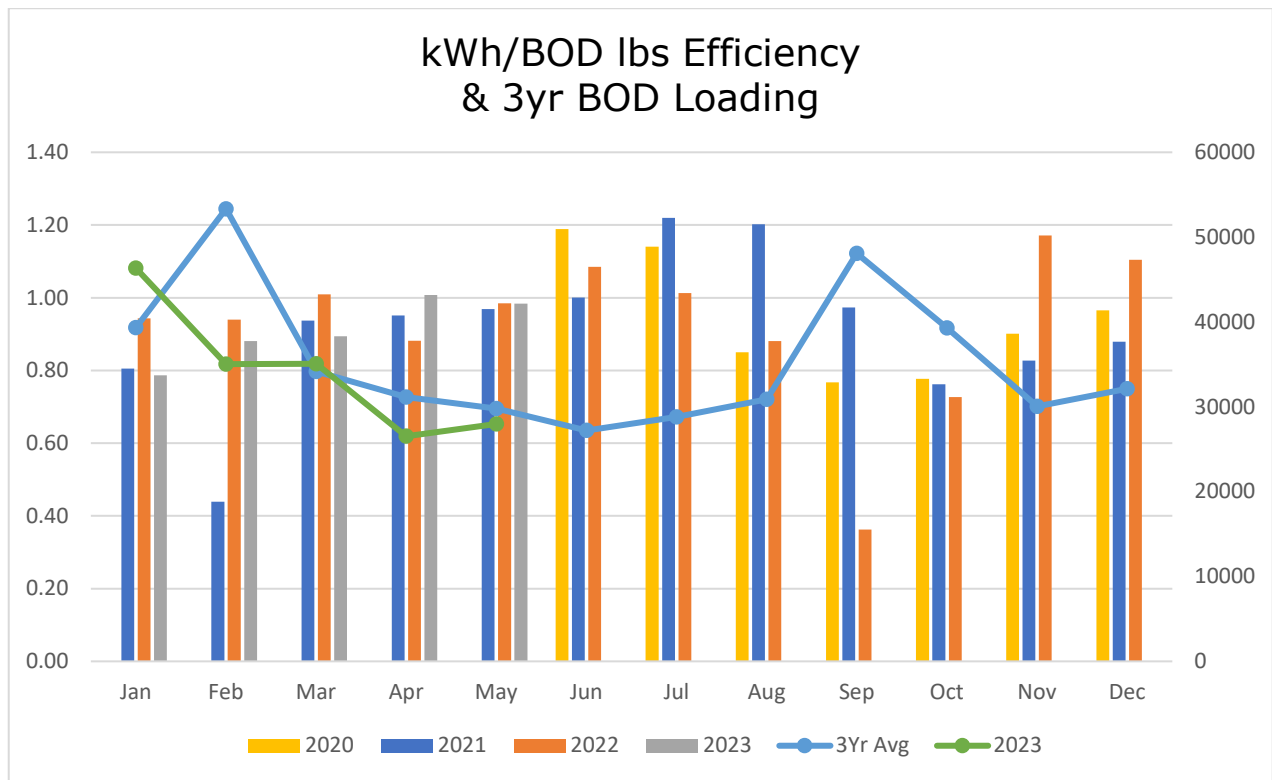
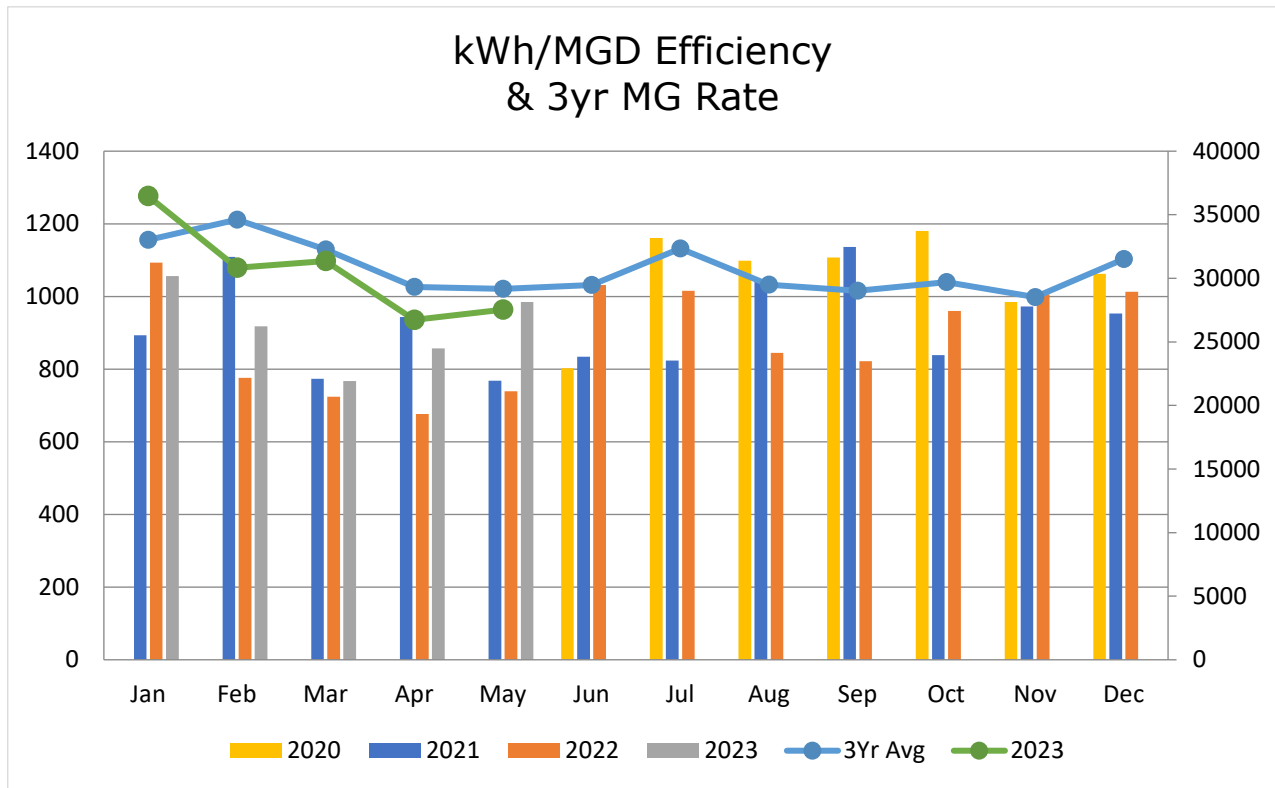


Phosphorus Tracking Graph:



Plant Efficiency Graphs:

May 2023



**Sanitary District of Decatur
Nutrient Program Management Report**

June 21, 2023

During the month of May District personnel attended meetings with members of the Black & Veatch Team to affect progress in nutrient reduction planning and activities.

Currently, activities continue to surround the gathering and sharing of data and information so that all parties can assist in how to move the projects forward as efficiently as possible. In the month of May, the District continued to gather and forward all requested industrial special sampling lab results and plant performance data as requested by the B&V.

B&V concentrated on continuing their efforts associated to the analysis and evaluations of solid stream alternatives. B&V also continued refining their analysis of liquid stream alternatives including reviewing their final Technical Memorandum with District staff. B&V has continued to request, receive, and assimilate data provided by SDD for integration into a Power BI dashboard for the Program and has provided a draft dashboard for SDD review. B&V also continues their efforts associated to the Industrial Pre-Treatment Program Update task with their subconsultant Jacobs in preparation for the initial quarterly meeting with ADM and Primient. In addition, B&V has continued the development of their full facility model, continued moving forward with established next steps for the aging infrastructure evaluations including initial onsite evaluations, as well as continued to assist with bid phase services of the Frac Tank Pilot Study including evaluation of cost savings and preparation of a letter of recommendation to proceed with the Pilot.

Below you will find a list of the actual meetings conducted in chronological order. The information covers the subject, date, and agenda items of each meeting. Additional information related to any of these meetings or specific agenda items can be supplied to the Board upon request including meeting minutes and documentation used during the meeting as it is all being stored as part of the permanent record.

Nutrient Reduction Program Meetings Conducted during May 2023

<u>Subject</u>	<u>Date</u>	<u>Agenda Items</u>
Review of updates to Final Submittals of TM 1 and TM 2	05/08/2023	<ol style="list-style-type: none"> 1. Updates to TM1 – Current Conditions and Future Drivers 2. Updates to TM 2 – BNR Liquid Stream Evaluations 3. Next Steps
Nutrient Program Management Bi-weekly Meeting	05/10/2023	<i>Objective:</i> Provided Status Update on Program Tasks <ol style="list-style-type: none"> 1. Frac Tank Pilot 2. Power BI 3. Pretreatment Program Update 4. PDOP/Annual Progress Report 5. Watershed Services 6. Aging Infrastructure 7. WRRF Upgrade Plan
Initial Aging Infrastructure Facility Evaluation	5/18/2023	Black & Veatch conducted initial onsite condition assessment evaluations.
Nutrient Program Management Bi-weekly Meeting	05/24/2023	<i>Objective:</i> Provided Status Update on Program Tasks <ol style="list-style-type: none"> 1. Frac Tank Pilot 2. Power BI 3. Pretreatment Program Update 4. PDOP/Annual Progress Report 5. Watershed Services 6. Aging Infrastructure 7. WRRF Upgrade Plan

Subject	Date	Agenda Items
Solids Handling Evaluation Workshop	05/25/2023	<ol style="list-style-type: none"> 1. Overview of BNR Solids Handling Alternatives 2. Design Basis for Each Solids Handling Alternative <ul style="list-style-type: none"> • Solids Production • Process Design Summary 3. Capital and Operating Costs 4. Summary/Discussion 5. Next Steps
Preparatory Meeting ahead of Industrial Coordination Quarterly Meeting	06/01/2023	<ol style="list-style-type: none"> 1. Objective: Preparation Meeting for the industrial quarterly meetings scheduled with ADM and Primient 2. Agenda <ul style="list-style-type: none"> • Summary of Regulatory Requirements • Total Influent and Industrial Flow and Pollutant Loadings • Treatment Alternatives • Industrial Pretreatment Program • Discussion/Next Steps

**Sanitary District of Decatur
Watershed Management Report**

June 21, 2023

During the month of May District personnel attended meetings with members of the Black & Veatch and Geosyntec Teams to affect progress in meeting the NARP requirements as listed in the NPDES permit as well as moving forward on the formation of a future watershed workgroup for the Middle Sangamon River.

Recent activities pertained to items necessary to complete the NARP Study. Foremost in these efforts included Geosyntec continuing their modeling efforts and next steps for the NARP Study in addition to the development/coordination of the Bylaws for the Watershed Group formation.

Below you will find a list of the meetings conducted. The information covers the subject, date, and agenda items of each meeting. Black & Veatch provided a written summary. Additional information related to any of these items can be supplied to the Board upon request including meeting minutes and documentation used during the meeting as it is all being stored as part of the permanent record.

Watershed Management Meetings Conducted during May 2023

Subject	Date	Agenda Items
Watershed Services Bi-weekly Meeting	05/03/2023	<i>Objective:</i> Provided Status Update on Watershed Services Tasks 1. Watershed Group 2. Instream Water Quality Model 3. Watershed Alternatives 4. Next Steps
Watershed Services Bi-weekly Meeting	05/17/2023	<i>Objective:</i> Provided Status Update on Watershed Services Tasks 1. Watershed Group 2. Instream Water Quality Model 3. Watershed Alternatives 4. Next Steps
NARP Initial Watershed Modeling Results	05/31/2023	1. Modeling Framework 2. Model Calibration Results 3. Model Validation Results 4. Next Steps