

Director of Compliance and Innovation Report

June 20, 2024

Plant Loading, CSO Report, and Director’s Notes

Plant Influent Report:

Biochemical Oxygen Demand, 5-Day (Avg. 25048 lbs/day)	39 percent of design
Total Suspended Solids (Avg. 40076 lbs/day)	37 percent of design
Average Daily Flow (33.37 million gallons/day)	81 percent of design
Maximum Daily Flow (52.34 million gallons/day)	42 percent of design

Plant Influent Total Monthly Flow (million gallons) for April	1,207.04
Estimated Unbilled Total Monthly Flow (million gallons)	486.50
Total Monthly Precipitation (inches)	7.12

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	6/9	0
NH ₃ -N, mg/L	Mo. Avg/Daily Max	1.5/3.0	0.40/0.53	0
DO, mg/L	Wk. Avg/Daily Min	6.25/5.0	7.38/7.29	0
pH, S.U.	Daily Min/Max	6.0/9.0	7.52/7.83	0
Total Nickel, mg/L	Mo. Avg	0.0381	0.013	0
Cl ₂ Residual, mg/L	Daily Max	0.05	<0.011	0
Fecal Coliform CFU/100mL	Daily Max	400	52	0

CSO Report:

Location	Events	Est. Total Duration of Discharges (hrs.)	Discharge (million gallons)
Oakland Avenue (Outfall 003)	4	10.61	3.09
Lincoln Park (Outfall 004)	1	2.0	0.3
McKinley Avenue (Outfall 007)	1	7.4	2.47
Seventh Ward (Outfall 008)	2	6.2	5.03

Director’s Notes:

2024 Biosolids Land Application Bids:

A request for rebids by pre-qualified applicants for the land application of the District’s liquid biosolids was posted in the local newspaper and changed on the District’s website on May 22, 2024.

All bids were opened and read on June 12, 2024. The District pre-qualified four prospective bidders but received only two bid submissions for this bid cycle.

A motion for the acceptance of the following bid will be presented to the Board during this month's Board meeting.

Land Application Re-Bid Tabulation

	Date Received	Cost per Gallon	Annual Contract Amount
Metro-Ag, Inc. 550 N 2nd St #202 Breese, IL 62230	6/12/2024	Year 1 - 3 - \$0.0499 Year 4 - \$0.0499 Year 5 - \$0.0499	Year 1-3 \$3,443,100 Year 1-5 \$5,738,500
Synagro Central, LLC 435 Williams Court Suite 100 Baltimore, MD 21220	6/11/2024	No Bid	
J. Oros Environmental 14933 Moore Cemetery Rd Carlinville, IL 62626	6/12/2024	Year 1 - 3 - \$0.054 Year 4 - \$0.054 Year 5 - \$0.054	Year 1-3 \$3,726,000 Year 1-5 \$6,210,000

Sanitary Sewer Overflow Report:

An air release valve failure on May 29th caused a manhole off Route 36 just West in the line of the Country Club pump station to fill with wastewater and leak out. Upon the call being received the outside maintenance crew took immediate action to get to the site and assess the situation.

The crew started sucking out the manhole and then turned the pumps off at the Country Club pump station to prevent more flow from leaking out onto the ground. The manhole was pumped down with the assistance of the City of Decatur’s vactor truck that happened to be driving by. Once the valve to the air release was closed the pump station was turned back on and a replacement air release valve was installed.

The overflow was limited, and all material was contained in a nearby ditch. Nothing reached the lake before the overflow was cleaned up by the crew. The occurrence was reported to the IEPA as a Sanitary Sewer Overflow (SSO) within an hour of the incident.

USEPA Region 5 Pretreatment Compliance Inspection Findings:

Austin Gruber, the Pretreatment Administrator, received the USEPA Pretreatment Compliance Inspection findings report on the May 7th from the USEPA Region 5 Pretreatment Compliance Inspection that took place March 11th-14th. All findings were minor findings, including missing permit language, unclear permit limit calculation, missing enforcement actions against nickel violations, and results missing from Significant Non-Compliance calculation. The District was initially given 30 days to respond, however legal counsel and pretreatment personnel requested and was granted an additional 30 days to respond. Responses will be submitted to the agency by July 7th.

Staff Training Activities:

Kent Newton and Ashley Bailey attended the Illinois Association of Wastewater Agencies (IAWA) technical committee meeting on May 10, 2024, at the Starved Rock Lodge in Utica, Illinois. In the meeting the group viewed a presentation on the subject of "water reuse" in Illinois and associations for the subject.

May 14-17, 2024, Austin Gruber attended the 2024 National Pretreatment Workshop in Pittsburgh, Pennsylvania. The first day of the conference he attended an Advanced Local Limits training. The training was extremely valuable for him and will be useful for the District in future local limits evaluations. The rest of the conference programming focused on emerging pollutants of concern like PFAS, microplastics, and others.

Operations, Laboratory, and Pretreatment Activity Reports – May/June 2024

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- We are making some piping changes that will allow sludge to be pumped directly to the secondary digesters then to Wyckles. Currently waiting on parts.
- 2) Operations staff have been monitoring the operation of the Frac Tank.
- 3) Operations staff continue to actively address PMs as time, workload, and staff levels allow.
- 4) Operator Brandi Rosenberger has received the class II EPA Operators license.
- 5) Operations has switched to the East Primary. Staff have made some setpoint adjustments to the grit system to alleviate the plugging issues with the organics valve.
- 6) Disinfection started May 1. We have not experienced any major problems.
- 7) ADM was discharging high ammonia and the blower usage was up.
- 8) Operators are preparing for the 325-building main breaker replacement scheduled for 6/12/24.
- 9) Matt McElroy is retiring in July. Matt's 33 years of service and knowledge will be missed by all. We wish him the best.

Laboratory Activities:

Routine:

A total of 2,113 analyses were performed in the laboratory during the month of May 2024.

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 2024 for the "COVID-19 in Wastewater" study funded by the Illinois Department of Public Health. A Zoom call was held on May 3, 2024, with the study participants and the researchers to discuss the results of the study thus far.
- 2) The quarterly NPDES sampling of the influent, effluent, and sludge was conducted during the second week of May 2024. 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) Lab staff continued to analyze samples weekly from the frac tank pilot study throughout the month of May 2024.

- 4) The SDD laboratory analyzed four stormwater samples during May 2024 for the Lake Decatur Watershed monitoring study. The SDD is providing in-kind laboratory analysis of samples collected at the study's three monitoring sites after significant storm events.
- 5) Keith Richard hosted a Zoom meeting of the IWEA Laboratory Committee on May 9, 2024. The purpose of the meeting was to discuss IWPC 2024 and start planning for a lab-related webinar to be conducted later this year. Keith continues to serve as the chair of the committee.
- 6) The new ICP instrument for metals analysis was installed on May 9, 2024. The previous ICP instrument had been in service for sixteen years, so it was due for a replacement. The new instrument should use less argon gas resulting in a lower operating cost.

Pretreatment Activities:

Pretreatment - General Activities:

- 1) Pretreatment personnel monitored 7 commercial and industrial users (IU) during May 2024. There were 6 industrial site inspections that took place, completing the 1st half announced inspections.
- 2) **Primient** was released from their new penalty structure as a result of continued compliance. They are still under their penalty structure set forth in EO 18-003.
- 3) Austin Gruber attended the National Association of Clean Water Agencies (NACWA) Annual Pretreatment conference in Pittsburgh from May 14th through the 17th. On day one, he attended the Advanced Local Limits training and was trained in the sampling, calculations, and allocation methods associated with local limits. This training was extremely valuable and will be useful in future local limits evaluations. Day two and beyond was spent listening to presentations on various topics, mainly focused on emerging pollutants of concern like PFAS, microplastics, and others. Impactful presentations included a talk given on the difficulty in attaining PFAS limits due to high residential PFAS levels, and an update presentation given by representatives from the USEPA focused on the Nation-wide Influent PFAS Study. There were numerous other presentations given during the week, as well as multiple roundtable discussions and networking opportunities with pretreatment colleagues from around the nation. Austin also attended the NACWA Pretreatment committee meeting, where there were additional questions raised to the USEPA representatives regarding the Influent PFAS Study, and where they announced that next year's conference will be in San Diego.

Pretreatment Ordinance - Verbal Notices:

The SDD issued a total of 3 Verbal Notices to **Primient** and **ADM** in May 2024:

- 5/7/2024 – **ADM** was issued a verbal notice and a \$1,000 fine for violating the instantaneous pH lower limit with a result of 4.3. Any pH results below a 5 result in an instant violation.
- 5/26/2024 – **Primient** was issued a verbal notice and a \$1,000 fine for violating the instantaneous pH lower limit with a result of 4.3. Any pH results below a 5 result in an instant violation.
- 5/27/2024 – **Primient** was issued a verbal notice and a \$1,000 fine for a discharge with a pH below 6 for more than 45 minutes over a 24-hour period. **Primient** discharged low pH water for a total of 3 hours and 45 minutes.

Pretreatment Ordinance - Warning Notices (WN):

There were no Warning Notices issued during May 2024.

Pretreatment Ordinance - Notices of Violation (NOV):

There were no NOV's issued during May 2024.

Pretreatment Ordinance - Executive Orders:

There were no Executive Orders issued during May 2024.

Pretreatment Ordinance - Penalty Assessments:

The following industrial penalties were assessed for May 2024:

- | | |
|--------------------|----------------|
| 1) Primient | \$2,000 |
| 2) ADM | \$1,000 |

Nutrient Program Report:

NARP:

The District's environmental attorneys have been hard at work to schedule a meeting with the new Director of the IEPA to discuss the Integrated Planning approach. The meeting with the agency should take place near the end of June.

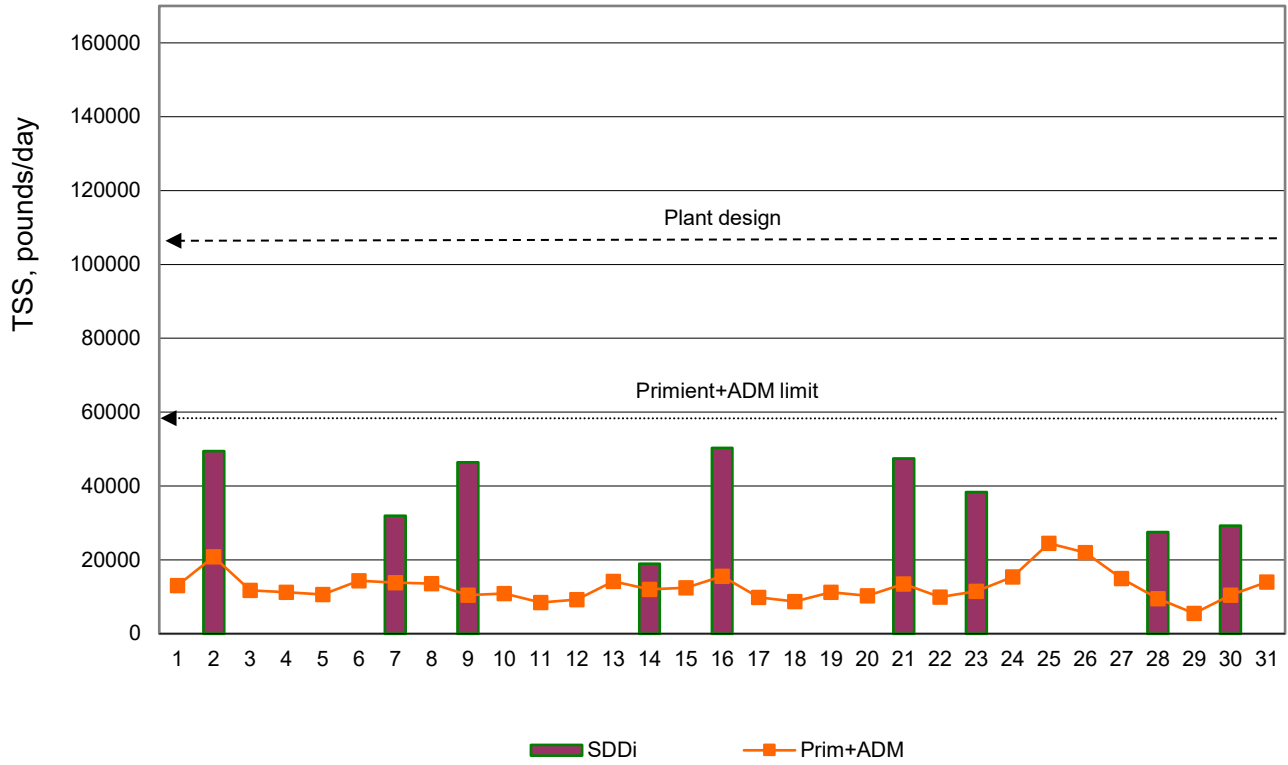
A meeting with the City of Decatur to discuss the Integrated Planning is also scheduled for the end of June.

Watershed:

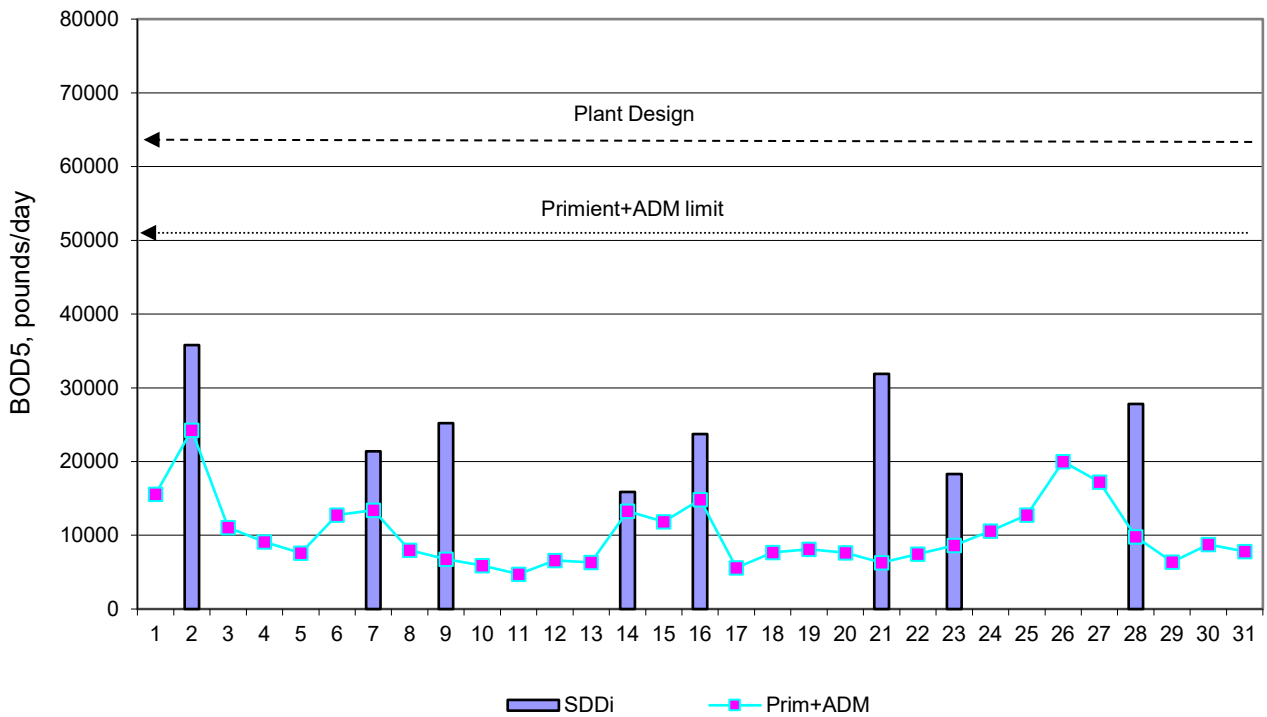
Letters to potential stakeholders were sent out explaining the purpose of the Middle Sangamon Watershed Group. Interest forms have been slowly trickling back into the District from potential members.

Plant Operating Graphs:

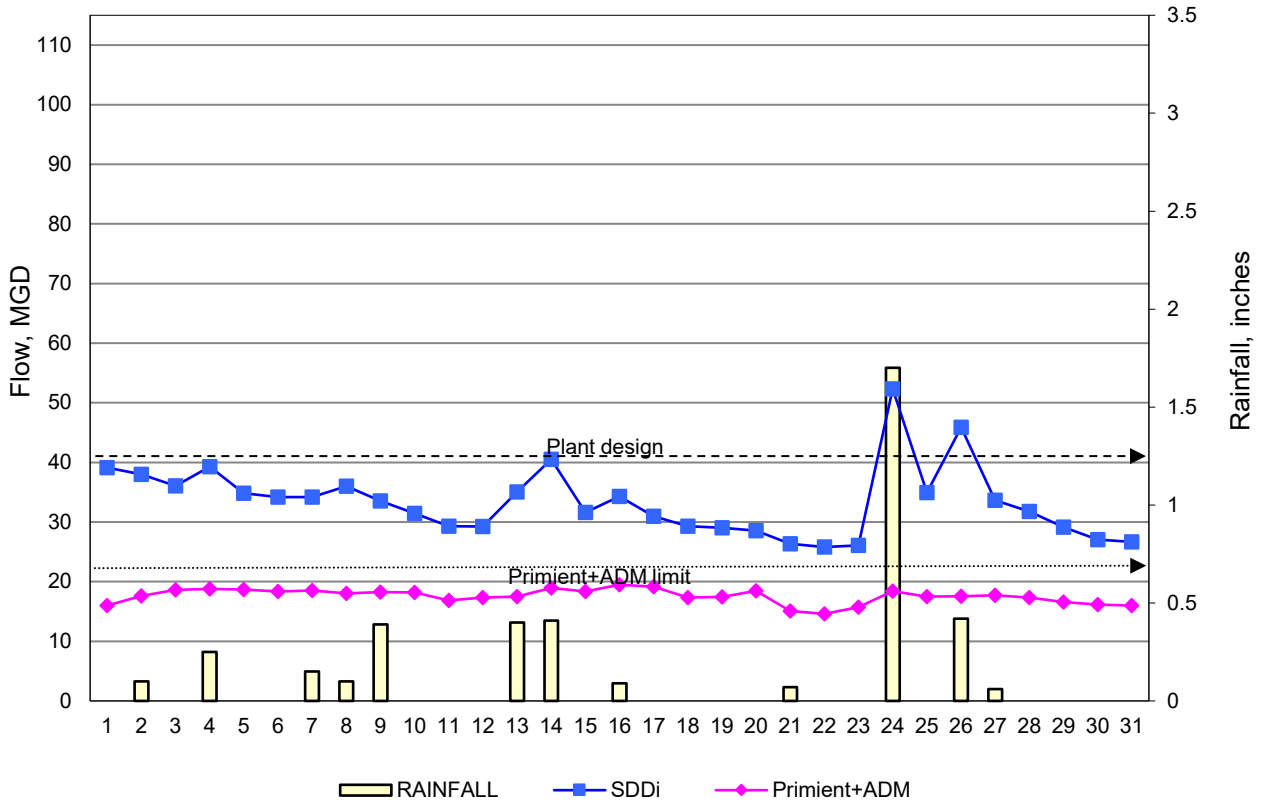
TSS Comparison: SDD Inf Primient+ADM Discharges



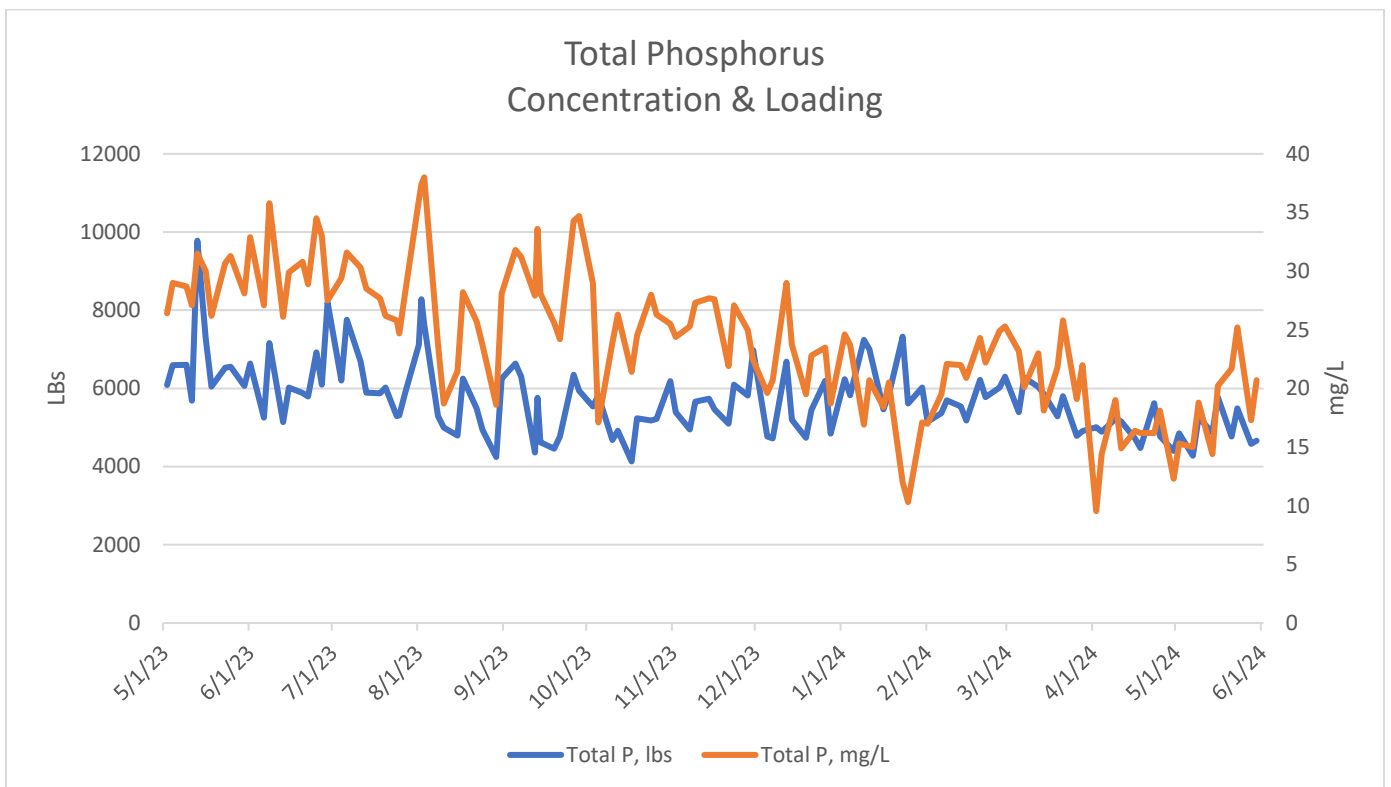
BOD Comparison: BOD Inf vs. Primient + ADM Discharges



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

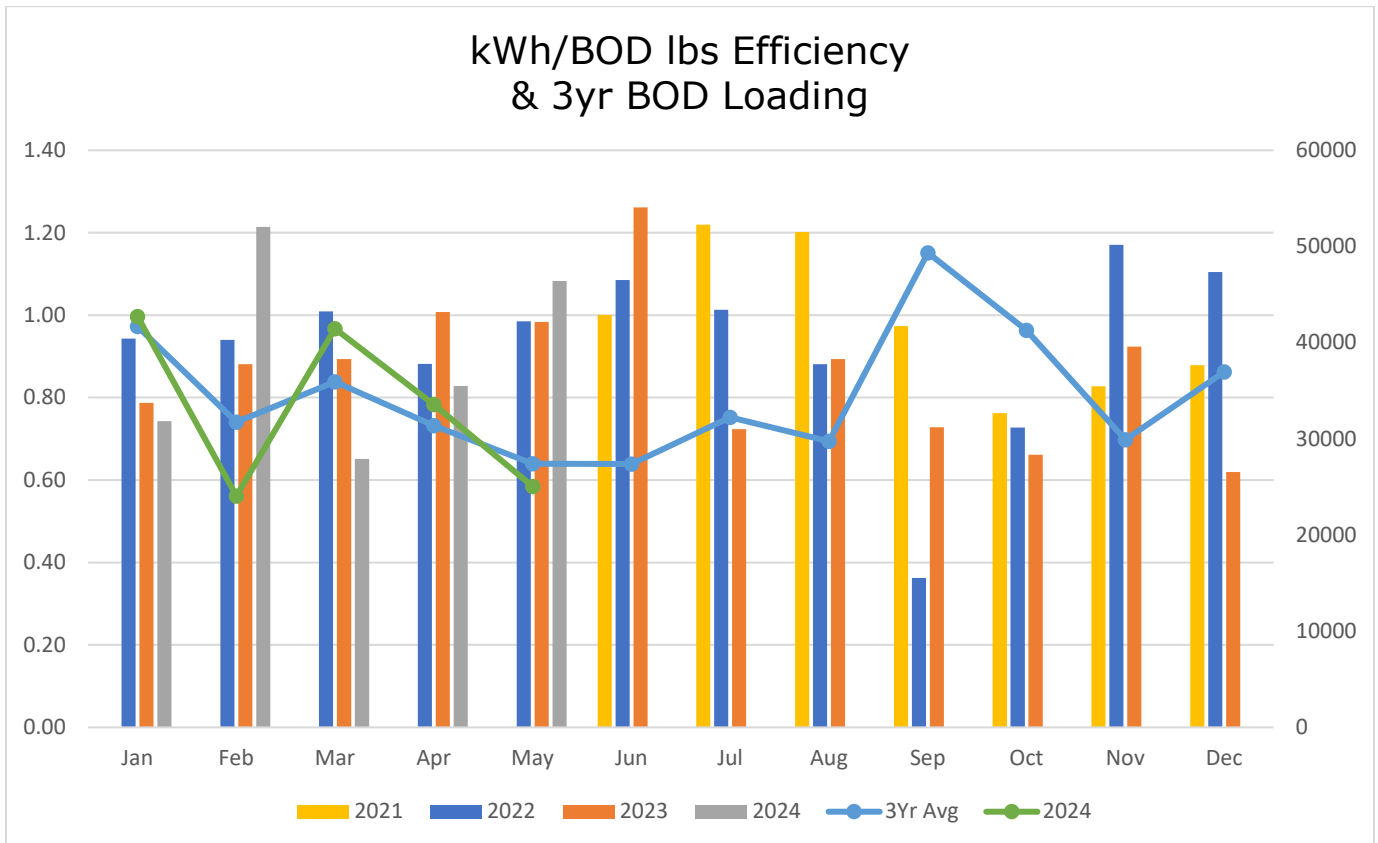
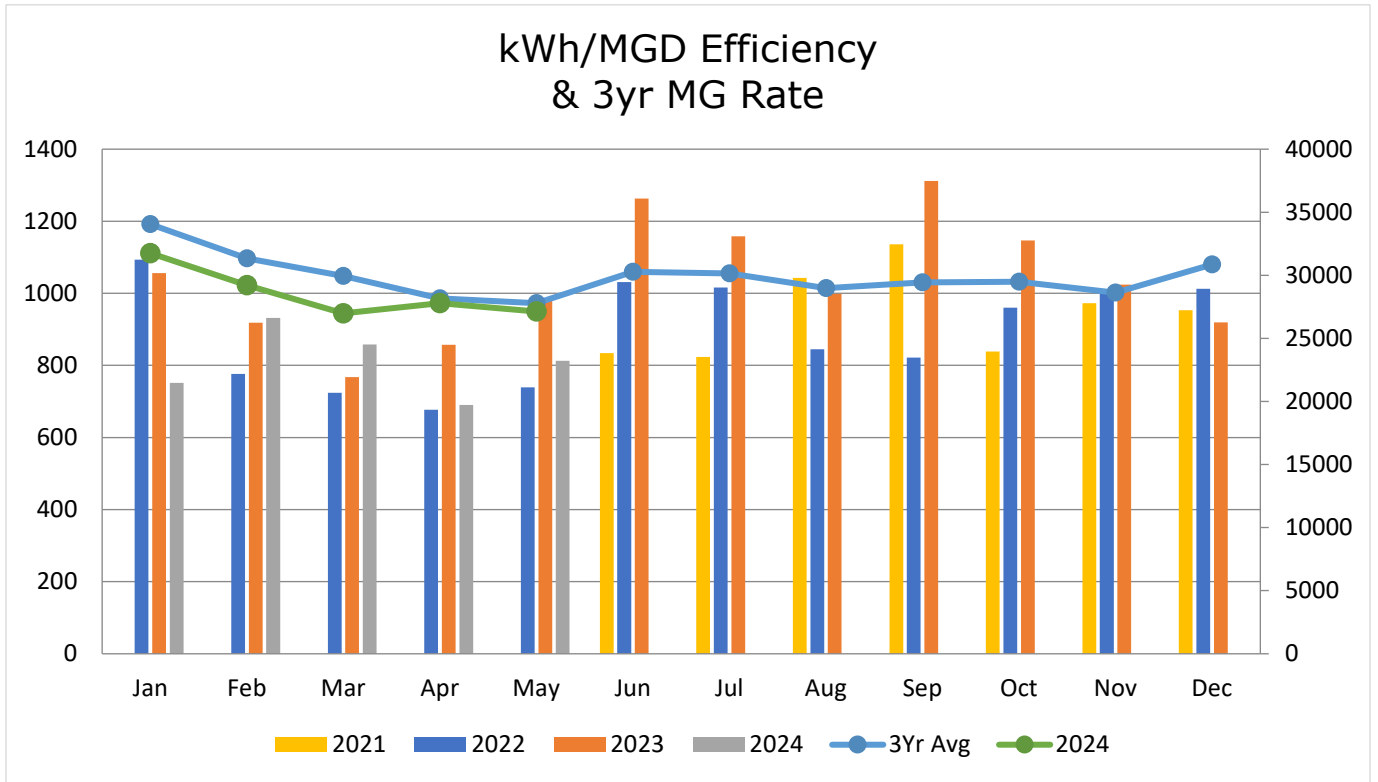


Phosphorus Tracking Graph:



Plant Efficiency Graphs:

May 2024



Sanitary District of Decatur
Nutrient Program Management Report

June 13, 2024

During the period of April 27, 2024 through May 31, 2024 District personnel attended meetings with members of the Black & Veatch (B&V) team to affect progress in nutrient reduction planning and activities.

The District has provided plant performance data to B&V for inclusion in the Power BI dashboards. Additionally, the District has continued to support the Fermentation Pilot to gather performance data on the proposed biological phosphorus removal process.

B&V has continued the development of their full facility model, continued to develop aged infrastructure evaluation, and continued the evaluation of alternatives for upgrades to the Water Resource Recovery Facility (WRRF). In addition, B&V continued its' assistance with operation of the Fermentation Pilot.

The following is a list of meetings conducted. The information provided 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 from April 27, 2024 through May 31, 2024

Subject	Date	Agenda Items
Nutrient Program Management Bi-weekly Meetings	5/8/24, and 5/22/24	<p><i>Objective:</i> Provided Status Update on Program Tasks</p> <ul style="list-style-type: none"> • Frac Tank Pilot • Power BI • Pretreatment Program Update • PDOP/Annual Progress Report • Watershed Services • Aging Infrastructure • WRRF Upgrade Plan
Fermentation Reactor Pilot Operations Review meetings	5/10/2024, 5/23/2024	<p><i>Objective:</i> Review operation of Frac Tank pilot</p> <ul style="list-style-type: none"> • Review previous two weeks <ul style="list-style-type: none"> ○ Alarms/issues ○ Missed/rescheduled samples ○ Odor and scum observations ○ Bench scale results • Review upcoming scenario <ul style="list-style-type: none"> ○ Set points ○ Sampling schedule ○ Odor sampling, if applicable ○ Deep Cycle Mixing Tests • Summarize results from previous weeks

**Sanitary District of Decatur
Watershed Management Report**

June 13, 2024

During the period of April 27, 2024 through May 31, 2024 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.

Activities completed pertained to items necessary to complete the NARP Study. Foremost in these efforts included Geosyntec applying the calibrated instream model to evaluation management scenarios to address impairments in the Sangamon River. This period focused on developing and writing of the NARP report. The NARP outline was provided to the District for their review and comments.

The following is a list of the meetings conducted. The information provided 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 April 27, 2024 through May 31, 2024.

<u>Subject</u>	<u>Date</u>	<u>Agenda Items</u>
Watershed Services Bi-weekly Discussions	5/1/24, 5/15/24 and 5/29/24	<i>Objective:</i> Geosyntec discussed elements of the Nutrient Assessment Reduction Plan, specifically related to the report development. Also discussed steps for initiating an Integrated Planning approach and schedule to nutrient management.

June 13, 2024

Sanitary District of Decatur (SDD)
501 Dipper Lane
Decatur, IL 62522

Nutrient Program Manager
BV Project No. 411502

Attention: Don Miller, P.E., Director of Engineering

Subject: SDD Nutrient Program Management
Progress Update (April 27, 2024 – May 31, 2024)

Dear Mr. Miller:

This letter summarizes the work associated to the SDD Nutrient Program Management project for services from April 27, 2024, through May 31, 2024.

1. Program Management, Administration, and Coordination
 - Conducted bi-weekly program conference calls to update progress and discuss key issues.
 - Provided Monthly Project Update.
 - Provided ongoing management of the project including program management, preparation/monitoring of the program schedule and budget as well as program administrative duties.
 - Updated Power BI dashboard with most recent plant monitoring data.
2. Pretreatment Program Update
 - Coordinated with SDD regarding additional data for possible supplemental carbon sources from ADM.
3. Phosphorus Discharge and Optimization Plan (PDOP)
 - No Services were completed this period.
4. Watershed Support Services
 - Conducted bi-weekly progress update meeting.
 - Continued initial planning efforts for the Watershed Group formation development.
 - Discussed elements of the Nutrient Reduction Assessment Plan, specifically the potential to implement an Integrated Plan approach.
 - Initiated writing of the Nutrient Reduction Assessment Plan.
5. WRRF Upgrade Plan
 - Aged Infrastructure Evaluation
 - i. Continued to evaluate modifications to the RAS pump station, including review with SDD and discussing pump station alternatives with pump vendors. Planning level cost estimates were developed to compare alternatives.
 - ii. Continued development of scope and level of effort for assessment of improvements to Building 210.

- Plant Facility Evaluation
 - i. Continued to develop TM-5a, including performing additional modeling. Costs were updated for evaluated alternatives as well.
- 6. Capital Improvement Plan Development
 - Initiated planning for this task and started to develop a plan outline.
- 7. Pilot and Demonstration Testing
 - Continued to support operation of Frac Tank.
 - Conducted bi-weekly conference calls to update progress and discuss key issues.
 - Attended a call with EnviroMix to discuss and review the system's "deep-cycle" mixing operation which started operation on May 29.

Please feel free to contact me with any questions, comments or if you need additional information.
Sincerely,

Todd Archer, P.E.
Engineering Manager, Black & Veatch

Enclosure(s): SDD Nutrient Program Manager Schedule and Anticipated Cost Forecast