Permit Fact Sheet

General Information

Permit Number	WI-0001031-10-0
Permittee Name and Address	Procter & Gamble Paper Products Co 501 Eastman Ave, Green Bay, WI 54302 Green Bay WI 54302
Permitted Facility Name and Address	Procter & Gamble Paper Products Co 501 Eastman Ave, Green Bay, WI 54302
Permit Term	January 1, 2026 to December 31, 2030
Discharge Location	001: 44.5267° N, 88.0085° W 010: 44.5284° N, 88.0079° W
Receiving Water	The Fox River (East River Watershed, Lower Fox River Basin) in Brown County
Stream Flow ($Q_{7,10}$)	660 ft^3/s
Stream Classification	Warmwater Sport Fishery
Discharge Type	Existing Continuous

Facility Description

The Procter & Gamble Paper Products Company (PG) operates a paper mill at 501 Eastman Avenue in Green Bay, Wisconsin. Operations include non-integrated tissue papermaking, converting, broke deinking and ancillary facilities for the production of toilet tissue, facial tissue and paper towels. The facility has six paper machines (five of which are currently in operation) and produces approximately 791 tons of sanitary tissue per day.

Tissue products are manufactured from purchased bleached kraft pulp and from internal paper trim recycling. On average, PG discharges on average about 2.9 million gallons of wastewater per day to the Fox River. Dissolved air flotation (DAF) clarifiers are used to remove suspended solids (paper fibers) from the tissue machine whitewater. Much of the DAF treated paper machine water is reused in the mill for hydration of purchased pulp bundles and for recycling of the paper trim and broke. Paper machine water that cannot be reused in the mill is treated in DAF units #5 and #11 to remove BOD and Total Suspended Solids (TSS) prior to discharge to the Fox River. Less than 1 million gallons/day of boiler non-contact cooling water is also included in the discharge to the Fox River.

Outfalls:
Four different sampling points are identified for the permit. Wastewater is discharged either to the NEW Water (formerly Green Bay Metropolitan Sewer District) wastewater treatment facility or the Fox River. Discharge to the NEW Water is identified as outfall 009. The other three sampling points are associated with the discharge to the Fox River. Prior to discharge, water is sampled at 099 located upstream of a sump (wet well). The permittee has two separate lines from the sump to the river. These are a force main and a gravity line. The actual discharge to the river is then from either 001 (force main) or 010 (gravity line). This outfall has not been used during the current permit term.

For the discharge to NEW Water, permit mass limits must account for the fact that some of the mass from paper machines is diverted to NEW Water rather than the river. The mass limits in the permit are based on discharge of all wastewater to the river. Section 40 CFR 122.50 specifies that if some wastewater is diverted to the NEW Water, the mass limit for discharge to the river is proportionately reduced. As an alternative to this, the permit requires the permittee to determine

compliance by showing that the sum of mass diverted to NEW Water and discharged to the river is in compliance with the unreduced limit. The permit does this by calculating a surrogate discharge to the river. The surrogate represents the total mass discharged both to the river and diverted to the NEW Water. Therefore, compliance for mass limits for discharge to the river from paper machines is based on the mass reported under sample point 099; but this is a surrogate mass that is not actually discharged to the river; the mass reported under 099 is typically higher than the actual discharge to the river in proportion to the amount of water that is actually discharged to the NEW Water.

Approximately 4 million gallons per day of paper mill wastewater is discharged to the NEW Water wastewater treatment facility. During normal operations, all other mill wastewater except for the paper machine whitewater is discharged to NEW Water. These wastewaters include paper machine cleaning and boil out wastewater, broke pulp recycling wastewater, and DAF sludge/boiler ash thickening wastewater from the screw press. The daily blowdown from the boiler, the boiler scrubber wastewater, the boiler deionizer regeneration wastewater, the boiler ash sluicing wastewater and the factory floor drain wastewater are also discharged to NEW Water. These paper mill wastewaters are pretreated in Dissolved Air Flotation Unit #3 prior to discharge through outfall 009 to NEW Water. The wastewater from the factory bathrooms and sinks is sent to NEW Water through separate sanitary sewers. Substantial Compliance Determination

Substantial Compliance Determination

After a desk top review of discharge monitoring reports and compliance schedule items, and a site visit on August 1, 2024, this facility has been found to be in substantial compliance with their current permit.

Compliance determination made by Trevor Moen, Wastewater Compliance Engineer, on July 7, 2025.

Sample Point Descriptions

Sample Point Designation		
Sample Point Number	**Discharge Flow, Units, and Averaging Period**	**Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)**
701	6.5 MGD (1/2020 – 12/2024)	Intake - Lower Fox River water intake structure for process and non-contact cooling water located on the east bank of the Lower Fox River. At Sampling Point 701, the permittee shall measure the intake flow rate with a continuous flow recording device prior to use in the facility. The permittee shall collect representative grab samples of the intake water for total recoverable mercury from a sampling location prior to use in the facility. The permittee shall calculate the percentage of intake water used exclusively for cooling purposes.
001	2.9 MGD (1/2020 – 12/2024)	Forcemain Effluent Discharge Pipe - Forcemain effluent pipe for discharge of the process wastewater to the Fox River. At Sampling Point 001, the permittee shall measure the effluent flow rate using a continuous flow recording device prior to discharging the treated process wastewater via the forcemain effluent discharge pipe to the Lower Fox River via Outfall 001.
009	4.8 MGD (1/2020 – 12/2024)	New Water Discharge - Process wastewater diverted to the 'process' sewer conveyed to New Water (Green Bay Metropolitan Sewerage District Wastewater Treatment Facility). At Sampling Point 009, the permittee shall measure the diverted process wastewater flow rate using a continuous flow recording device

Sample Point Designation		
Sample Point Number	**Discharge Flow, Units, and Averaging Period**	**Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)**
		measured prior to discharge to NEW Water. This is not an outfall to surface water.
010	Not used during previous permit term.	Alternative Gravity Effluent Discharge Pipe - Alternative Gravity effluent pipe for the discharge of treated process wastewater to the Fox River. At Sampling Point 010, the permittee shall calculate the effluent flow rate using the pump curve prior to discharging the treated process wastewater via the gravity effluent discharge pipe to the Lower Fox River via Outfall 010.
088	N/A	Effluent Sampling – Combined treated process wastewater and noncontact cooling water sampling location prior to being discharged to the Lower Fox River via Outfall 001 or Outfall 010. At Sampling Point 099, the permittee shall collect representative samples of the effluent from the effluent automatic composite sampler drawing 24-hour flow proportional composite samples from the open channel prior to the wet well except that the permittee shall collect representative grab samples for total residual chlorine, total recoverable mercury, PFOA, and PFOS prior to being discharged to the Lower Fox River via Outfall 001 or Outfall 010. The permittee shall calculate the effluent flow rate proportional discharged via either Outfall 001, Outfall 009, or Outfall 010. The permittee shall calculate mass-based limits from concentrations measured by the 24-hr flow proportional composite sampler. This is a compliance evaluation sample point; it is NOT an actual discharge pipe to the Fox River.
099	N/A	BOD WLA Sampling - Discharge testing and river characteristic reporting needed to calculate compliance with BOD wasteload allocation limits for the Fox River at river mile 0.8. The permittee shall collect Lower Fox River data at the Rapide Croche Dam as reported by the Lower Fox River Discharger's Association to be used in the determination of the daily BOD5 wasteload allocation. The permittee shall calculate and report the BOD wasteload values as specified based on daily effluent BOD mass discharged from Sampling Point 099 to determinate compliance with the daily maximum variable BOD5 wasteload allocations. These requirements are applicable from May 1 through October 31, each year. This is a compliance evaluation sample point; it is NOT an actual discharge pipe to the Fox River.
101	N/A	Field blank - At Sampling Point 101, the permittee shall collect a field blank for each day a mercury sample is collected at Sampling Points 701 or 099. The permittee shall report the field blank concentrations when reporting mercury sample results.

Permit Requirements

1 Influent

1.1 Sampling Point(s)

Sample Point Number	Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
701	Intake - Lower Fox River water intake structure for process and non-contact cooling water located on the east bank of the Lower Fox River. At Sampling Point 701, the permittee shall measure the intake flow rate with a continuous flow recording device prior to use in the facility. The permittee shall collect representative grab samples of the intake water for total recoverable mercury from a sampling location prior to use in the facility. The permittee shall calculate the percentage of intake water used exclusively for cooling purposes.

1.2 Monitoring Requirements

1.2.1 Sample Point Number: 701- FOX RIVER INTAKE

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Continuous	
Intake Water Used Exclusively For Cooling		% Flow	Annual	Calculated	
Mercury, Total Recoverable		ng/L	Quarterly	Grab	

Changes from Previous Permit

Total phosphorus monitoring was removed.

Explanation of Limits and Monitoring Requirements

Water Intake Structure (WIS)- The Influent section includes the WIS description, authorization for use, and BTA (Best Technology Available) determination. The permittee is authorized to use the cooling water intake structure which consists of the following:

- Location: 44.5246° N, 88.0103° W
- Source Waterbody Information:
  - $Q_{7,10}$: 660 ft^3/s = 426 MGD
  - Mean Harmonic Flow: 2050 ft^3/s = 1,325 MGD
- General Description: The intake structure consists of a box with a screen on the top face. This screen has dimensions of 9’10” x 9’10” (area 96.6 ft^2), and the mesh is 2” on center with ¼” stainless steel wiring. Water

withdrawn through this screen and box travels to the mill via 190 feet of 36" pipe. There are no fish detraction technologies at the intake.

  - Location: The intake structure is located on the bed of the Lower Fox River at an elevation of 550 feet above sea level, 175 feet from the eastern riverbank and near the railroad bridge just south of the facility.

- Maximum Design Intake Flow (DIF): The maximum design intake flow (DIF) is 14.4 MGD which is equivalent to 3.3% of the $Q_{7,10}$. This is based upon the intake's pump capacity, not counting redundant or emergency pumps.
- Maximum Design Intake Velocity: The design intake velocity at the point of withdrawal is 3.2 ft/s (at the mouth of the 36" intake pipe). The design intake velocity at the grate on top of the intake box is 0.3 ft/s.

$$V_{Screen} = \frac{14{,}400{,}000\,\frac{gallons}{day} * \frac{1ft^3}{7.48\,gallons} * \frac{1\,day}{86{,}400\,seconds}}{(9.83\,ft)^2 * \left(\frac{2" - 0.25"}{2"}\right)^2} = 0.3\frac{ft}{s}$$

$$V_{Pipe} = \frac{14{,}400{,}000\,\frac{gallons}{day} * \frac{1ft^3}{7.48\,gallons} * \frac{1\,day}{86{,}400\,seconds}}{\pi * \left(\frac{18\,in}{12\frac{in}{ft}}\right)^2} = 3.2\frac{ft}{s}$$

- Actual Intake Flow: The actual intake velocity is 6.5 MGD, which is equivalent to 1.5 % of the $Q_{7,10}$.
- Actual Intake Velocity: The through-screen actual intake velocity at the screen is 0.1 feet/second, while the actual intake velocity at the mouth of the 36" intake pipe is 1.4 ft/s. These figures are based on the annual average withdrawal rate 2020 - 2024.

$$V_{Screen} = \frac{6{,}500{,}000\,\frac{gallons}{day} * \frac{1ft^3}{7.48\,gallons} * \frac{1\,day}{86{,}400\,seconds}}{(9.83\,ft)^2 * \left(\frac{2" - 0.25"}{2"}\right)^2} = 0.1\,\frac{ft}{s}$$

$$V_{Pipe} = \frac{6{,}500{,}000\,\frac{gallons}{day} * \frac{1ft^3}{7.48\,gallons} * \frac{1\,day}{86{,}400\,seconds}}{\pi * \left(\frac{18\,in}{12\frac{in}{ft}}\right)^2} = 1.4\frac{ft}{s}$$

- Percent Used for Cooling: None of the water withdrawn is used exclusively for cooling purposes.
- Nearby Intakes: Provide the name, location, and AIF of nearby intakes (all within a 5 mile radius on the same waterbody, or the nearest intake outside that range).

Best professional judgment BTA determinations are made using the Department's 2020 Guidance for Evaluating Intake Structures Using Best Professional Judgment. For existing intake structures, the guidance advises that intakes deemed BTA should fulfill at least one of the following eight criteria:

☐ Each water intake structure has a maximum design intake velocity of 0.5 feet per second (fps) OR a maximum actual intake velocity of 0.5 fps, demonstrated via measured or calculated values which show the maximum intake velocity as water passes through the intake system, measured perpendicular to the opening, does not exceed 0.5 fps at any point up until the first screen of mesh size 3/8" (or equivalent) or less.

Both the facility's design intake velocity and their actual intake velocity exceed 0.5 ft/s, as the spacing of the screen on top of the intake structure is greater than 3/8". Therefore, impingeable organisms could make their way into the box then be unable to escape at both the design and actual intake velocities. See calculations above.

☐ The facility operates a closed-cycle recirculating system that only requires make-up water with > 3 cycles of concentration on at least a daily basis. Cycles of concentration can be measured as the ratio of chloride levels in the recirculated water or blowdown relative to the chloride levels in the source water, or makeup water; or the make-up water volume divided by the blowdown volume (provided there aren't other water losses); or the blowdown water conductivity divided by the make-up water conductivity.

The facility does not operate a closed-cycle recirculating system.

☐ The facility operates an intake structure that minimizes impingement rates by nature of its location (e.g. offshore velocity cap).

The facility does not operate an intake structure that minimizes impingement rates by nature of its location.

☐ The facility employs a system of technologies (e.g. wedge-wire screens, barrier nets; acoustic, light, or pH deterrent systems; variable speed pumps, etc.) that minimize impingement mortality rates.

The facility does not employ such a system.

☐ The facility operates a modified traveling screen in an optimal manner that does not promote re-impingement or predation of returned organisms.

The facility does not operate a modified traveling screen.

☐ The facility's intake withdraws water at > 0.25 ft/s less than or equal to 16% of the time.

Technically, if velocity is measured at the screen, the facility's intake withdraws water at > 0.25 ft/s none of the time, but since velocity is evaluating.

☐ There is data indicating that the impingement mortality rate has been/will be reduced 80-95% compared to a once-through cooling system with 3/8" traveling screens; (There is not data that indicates this)

✓ There is biological data that affirmatively demonstrates that: 1) the source water body does not include threatened or endangered species in the vicinity of the intake, and 2) there are no aquatic life and water quality problems partly or solely due to the presence or operation of the intake structure.

Biological data taken from nearby Wisconsin Public Service Corp Pulliam Power Plant's report (now shut down, see below) indicates that there are no threatened or endangered species in the vicinity of the intake. Additionally, it is reasonable to assume that, based on the relatively low intake flows, there are no aquatic life and water quality problems as a result of the operation of this intake structure.

There have been no impingement or entrainment studies completed at this facility. However, with the velocity at the screen being around 0.1 ft/s most of the time, it's important to note that only small impingeable organisms (<1.75" in length), would be potentially caught in the intake box, so impingement mortality rates are expected to be minimal. This fact, combined with the density of organisms in the Fox River provided by nearby Wisconsin Public Service Corp Pulliam Power Plant's December 2017 40 CFR 122.21(r)(9) Entrainment Characterization Study, the estimated number of organisms entrained can be extrapolated. The data is summarized below.

Based on the data, it is estimated that, during spawning months, a maximum of 3.4% of entrainable organisms would be entrained at design intake flow. However, realistically only about 1.5% of entrainable organisms will be

entrained if the actual intake flow is assumed. Furthermore, with the offshore intake location, entrainment rates are likely much lower, given that entrainable organisms are denser on the shoreline.

	APR	MAY	JUN	JUL	AUG	SEP
Fox River Total Density (No./100 m^3)	0.4	17.6	742.9	26.1	4	1
Number of Organisms in Fox River (based on 426 MGD, the $Q_{7,10}$ of Fox River)	192,300	8,798,100	359,396,100	13,046,300	1,999,800	485,200
Number of Entrained Organisms (based on DIF of 14.40 MGD)	6,500	297,400	12,148,600	441,000	67,600	16,400
Number of Entrained Organisms (based on AIF of 6.5 MGD)	2,950	134,250	5,483,750	199,063	29,700	7,200

And at least one of the following five criteria:

- ✓ The total water withdrawn (actual intake flow) is < 5% of the mean annual flow of the river on which the intake is located (if on a river or stream) OR the total quantity of the water withdrawn is restricted to a level necessary to maintain the natural thermal stratification or turnover patterns (where present) except in cases where the disruption is beneficial (if on a lake or reservoir).

  The actual intake flow is 0.5% of the mean annual flow.

- ☐ The facility operates at < 8% capacity utilization rate (with pumps turned off or, if variable frequency drives exist, down substantially during periods of non-operation) or at full capacity only for portions of days during a few months or less on an annual basis. If located in a spawning area, the period of water intake operation should not correspond with times when spawning, peak egg/larval abundance, or larval recruitment is occurring (depending on species present, usually between April – October).

  The facility does not operate at < 8% capacity utilization rate or at full capacity only for portions of days during a few months or less on an annual basis.

- ☐ The facility operates a closed-cycle recirculating system that only requires make-up water with > 3 cycles of concentration on at least a daily basis. Cycles of concentration can be measured as the ratio of chloride levels in the recirculated water or blowdown relative to the chloride levels in the source water, or makeup water; or the make-up water volume divided by the blowdown volume (provided there aren't other water loses); or the blowdown water conductivity divided by the make-up water conductivity.

  The facility does not operate a closed-cycle recirculating system.

- ☐ The facility utilizes other means such as variable speed pumps, unit retirements, etc. to decrease entrainment rates by greater than or equal to 60% compared to a once-through cooling system with 3/8" traveling screens. Flow rate may be used as a surrogate for entrainment rates when determining percent reduction.

  The facility minimizes water usage by reusing all spent cooling water.

- ☐ There is biological data that affirmatively demonstrates that: 1) the source water body does not include threatened or endangered species in the vicinity of the intake, 2) there are no aquatic life and water quality problems partly or solely due to the presence or operation of the intake structure, and 3) the department biologist concurs that operation of the intake during periods of spawning, peak egg/larval abundance, and larval recruitment will not substantially impact populations or prey bases for the fishery.

  The facility potentially satisfies this criterion, however it was not fully evaluated as the first entrainment criterion was satisfied.

And the following criterion:

- ✓ The facility-wide design intake flow (DIF) for all water intake structures is < 2 MGD (all intake water, cooling and non-cooling, is included in the determination of whether this DIF threshold is met) OR < 25% of the total water withdrawn is used exclusively for cooling purposes (water from a public water system, treated effluents, process water, gray water, wastewater, reclaimed water, or water used in a manufacturing process before or after it is used for cooling is not considered cooling water for the purposes of this determination). *The facility uses less than 25% of the water withdrawn exclusively for cooling purposes.*

The facility meets the checked criteria above. The Department therefore believes that the Procter & Gamble intake structure does represent BTA for minimizing adverse environmental impact in accordance with the requirements in section 283.31 (6), Wis. Stats. and section 316 (b) of the Clean Water Act.

Intake Screen Discharges and Removed Substances- Floating debris and accumulated trash collected on the water intake trash rack shall be removed and disposed of in a manner to prevent any pollutant from the material from entering the waters of the State pursuant to s. NR 205.07 (3) (a), Wis. Adm. Code.

Endangered Species Act- This permit does not authorize take of threatened or endangered species. Contact the state Natural Heritage Inventory (NHI) staff with inquiries regarding incidental take of state-listed threatened and endangered species and the US Fish and Wildlife Service with inquiries regarding incidental take of federally-listed threatened and endangered species.

Future BTA Determination

The department recommends installing a screen with <3/8" openings, so future BTA determinations can evaluate the velocity impingement criterion at the screen. While this is not a requirement for the next permit term, it will ensure that impingeable organisms won't be able to make their way into the intake structure. This is also important for the next permit reissuance in ~2030 as the Pulliam data the department currently relies on for this determination will be >10 years old.

2 Inplant - Monitoring and Limitations

2.1 Sampling Point(s)

Sample Point Number	Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
101	Field blank - At Sampling Point 101, the permittee shall collect a field blank for each day a mercury sample is collected at Sampling Points 701 or 099. The permittee shall report the field blank concentrations when reporting mercury sample results.

2.2 Monitoring Requirements

2.2.1 Sample Point Number: 101- FIELD BLANK SAMPLE

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Mercury, Total Recoverable		ng/L	Quarterly	Blank	

Changes from Previous Permit:

In-plant limitations and monitoring requirements were evaluated for this permit term and no changes were required in this permit section.

Explanation of Limits and Monitoring Requirements

Mercury Field Blank- Monitoring is included in the permit pursuant to s. NR 106.145, Wis. Adm. Code. Field blanks must meet the requirements under s. NR 106.145(9) and (10), Wis. Adm. Code. The permittee shall collect a mercury field blank for each set of mercury samples (a set of samples may include a combination of influent, effluent or other samples all collected on the same day). Field blanks are required to verify a sample has not been contaminated during collection, transportation or analysis.

3 Surface Water

3.1 Sampling Point(s)

Sample Point Number	Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
001	New Water Discharge - Process wastewater diverted to the sanitary sewer conveyed to New Water (Green Bay Metropolitan Sewerage District Wastewater Treatment Facility). At Sampling Point 009, the permittee shall measure the diverted process wastewater flow rate using a continuous flow recording device to be measured prior to discharge to NEW Water. This is not an outfall to surface water.
009	Alternative Gravity Effluent Discharge Pipe – Alternative Gravity effluent pipe for the discharge of treated process wastewater to the Fox River. At Sampling Point 010, the permittee shall measure the effluent flow rate using a continuous flow recording device prior to discharging the treated process wastewater via the gravity effluent discharge pipe to the Lower Fox River via Outfall 010.
010	Forcemain Effluent Discharge Pipe - Forcemain effluent pipe for discharge of the process wastewater to the Fox River. At Sampling Point 001, the permittee shall measure the effluent flow rate using a continuous flow recording device prior to the treated process wastewater via the forcemain effluent discharge pipe to the Lower Fox River via Outfall 001.
099	Effluent Sampling – Combined treated process wastewater and noncontact cooling water sampling location prior to being discharged to the Lower Fox River via Outfall 001 or Outfall 010. At Sampling Point 099, the permittee shall collect representative samples of the effluent from the effluent automatic composite sampler drawing 24-hour flow proportional composite samples from the open channel prior to the wet well except that the permittee shall collect representative grab samples for total residual chlorine, total recoverable mercury, PFOA, and PFOS prior to being discharged to the Lower Fox River via Outfall 001 or Outfall 010. The permittee shall calculate the effluent flow rate proportional discharged via either Outfall 001, Outfall 009, or Outfall 010. The permittee shall calculate mass-based limits from concentrations measured by the 24-hr flow proportional composite sampler. This is a compliance evaluation sample point; it is NOT an actual discharge pipe to the Fox River.
088	BOD WLA Sampling - Discharge testing and river characteristic reporting needed to calculate compliance with BOD wasteload allocation limits for the Fox River at river mile 0.8. The permittee shall collect Lower Fox River data at the Rapide Croche Dam as reported by the Lower Fox River Discharger's Association to be used in the determination of the daily BOD5 wasteload allocation. The permittee shall calculate and report the BOD wasteload values as specified based on daily effluent BOD mass discharged from Sampling Point 099 to determinate compliance with the daily maximum variable BOD5 wasteload allocations. These requirements are applicable from May 1 through October 31, each year. This is a compliance evaluation sample point; it is NOT an actual discharge pipe to the Fox River.

3.2 Monitoring Requirements

3.2.1 Sample Point Number: 001- FORCEMAIN OUTFALL PIPE

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Continuous	

Changes from Previous Permit

No changes.

Explanation of Limits and Monitoring Requirements

The permittee has a continuous flow meter for the process wastewater being discharged from this outfall. This is the primary outfall the permittee uses to discharge effluent from its treatment facility.

3.2.2 Sample Point Number: 009- DISCHARGE TO NEW WATER

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Continuous	

Changes from Previous Permit

'Sample Type' changed from 'Total Daily' to 'Continuous'.

Explanation of Limits and Monitoring Requirements

The permittee has a continuous flow meter for the process wastewater being discharged from this outfall to NEW Water.

3.2.3 Sample Point Number: 010- ALTERNATE GRAVITY DSCHRG PIPE

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Calculated	

Changes from Previous Permit

'Sample Type' changed from 'Continuous' to 'Calculated' to reflect how flow is estimated for reporting through this infrequently-used outfall.

Explanation of Limits and Monitoring Requirements

This outfall is an alternative discharge point of treated process wastewater to the Lower Fox River.

3.2.4 Sample Point Number: 099- PROCESS WASTEWATER

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Proportion Multiplier		MGD/MGD	Daily	Calculated	
BOD5, Total		mg/L	Daily	24-Hr Flow Prop Comp	
BOD5, Total		lbs/day	Daily	Calculated	
BOD5, Computed Compliance	Daily Max	14,642 lbs/day	Daily	Calculated	
BOD5, Computed Compliance	Monthly Avg	7,803 lbs/day	Daily	Calculated	
Suspended Solids, Total		mg/L	Daily	24-Hr Flow Prop Comp	
Suspended Solids, Total	Daily Max	1,323 lbs/day	Daily	Calculated	
Suspended Solids, Total	Monthly Avg	545 lbs/day	Daily	Calculated	
Suspended Solids, Total		lbs/month	Monthly	Calculated	
Suspended Solids, Total		lbs/yr	Monthly	Calculated	
Temperature Maximum		deg F	Daily	Continuous	
Chlorine, Total Residual	Daily Max	38 ug/L	5/Week	Grab	
Chlorine, Total Residual	Monthly Avg	38 ug/L	5/Week	Grab	
Mercury, Total Recoverable	Daily Max	12 ng/L	Quarterly	Grab	
Phosphorus, Total	Monthly Avg	0.1 mg/L	Weekly	24-Hr Flow Prop Comp	
Phosphorus, Total	6-Month Avg	0.85 lbs/day	Weekly	Calculated	
Phosphorus, Total	Monthly Avg	2.5 lbs/day	Weekly	Calculated	
Phosphorus, Total		lbs/month	Monthly	Calculated	
Phosphorus, Total		lbs/yr	Monthly	Calculated	
PFOS		ng/L	Monthly	Grab	
PFOA		ng/L	Monthly	Grab	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Acute WET	Daily Max	1.0 TUa	See Listed Qtr(s)	24-Hr Flow Prop Comp	
Chronic WET		TUc	See Listed Qtr(s)	24-Hr Flow Prop Comp	
pH (Continuous)			Daily	Continuous	See "Continuous pH Monitoring" for pH limits and allowed excursions

Changes from Previous Permit

Effluent limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit. See additional explanation of limits under "Explanation of Limits and Monitoring Requirements" below.

- Reporting of the mg/L result for BOD5 and TSS is now required.
- Monitoring for copper has been removed.
- Alternative mercury effluent limit has been reduced from 14.44 ng/L to 12 ng/L.
- Monthly reporting of the monthly and annual total TSS from the facility has been added.
- Total residual chlorine monitoring has been increased from Weekly to 5/Week
- Reporting of the annual total phosphorus loading from the facility has been increased from Annual to Monthly.
- Monthly PFOA and PFOS grab samples are now required.
- There is now an Acute WET limitation.
- While this isn't a change in the reporting requirements, the pH limits and allowed excursions have been condensed in the monitoring table to simply be pH (Continuous).

Explanation of Limits and Monitoring Requirements

Detailed discussions of limits and monitoring requirements can be found in the attached water quality-based effluent limits (WQBEL) memo (See Appendix C). For the derivation of the BOD5 effluent limitations, see Appendix B.

Monitoring Frequencies- The Monitoring Frequencies for Individual Wastewater Permits guidance (April 12, 2021) recommends that standard monitoring frequencies be included in individual wastewater permits based on the size and type of the facility, in order to characterize effluent quality and variability, to detect events of noncompliance, and to ensure consistency in permits issued across the state. Guidance and requirements in administrative code were considered when determining the appropriate monitoring frequencies for pollutants that have final effluent limits in effect during this permit term. Total Residual Chlorine, for example, has been increased to be set in accordance with this guidance.

Total Suspended Solids (TSS)
Total Suspended Solids (TSS) TMDL-derived monthly average and daily maximum limits are active for this entire permit term. The flow proportion multiplier is only used for compliance with the BOD5 categorically-derived limits. The TSS wasteload allocation for this facility is 155,432 lbs/year.

Phosphorus

Phosphorus rules became effective December 1, 2010 per ch. NR 217, Wis. Adm. Code, which required the facility comply with water quality-based effluent limits for total phosphorus. The final phosphorus WQBELs are 0.847 lbs/day as a 6-month average, and 2.54 lb/day as a monthly average, and are now effective upon permit reissuance. These effluent limitations are based on the Lower Fox River TMDL, which specifies that the permittee's total phosphorus wasteload allocation is 238 lbs/year.

Reporting of the annual discharge of phosphorus has been increased from annual to monthly to ensure that the wasteload allocation is met on a 12-month rolling basis, not just on an annual basis. The permittee submitted an application to continue to participate in the phosphorus multi-discharger variance (MDV), but the department did not approve that, as phosphorus data from the previous permit term shows that the permittee can comply with the applicable wasteload allocation and effluent limitations.

Mercury
Section NR 106.145(4), Wis. Adm. Code, allows for eligibility for an alternative mercury effluent limitation if the permittee applies for an alternative mercury limit, which includes the submittal of a pollutant minimization plan. The permittee has submitted this application. Section NR 106.145(5), Wis. Adm. Code, specifies that an alternative limitation shall equal the 1-day P99 of the effluent data and shall be expressed as a daily maximum concentration. Therefore, if a variance is granted and approved by US Environmental Protection Agency, then **an alternative mercury limitation of 12 ng/L as a daily maximum is required for Procter & Gamble**. The previous permit included an alternative effluent limit, (or "variance"), from the calculated WQBEL for Mercury, of 14.44 ng/L as a daily maximum.

PFOS and PFOA
Permit Requirements for PFOS and PFOA Dischargers became effective on August 1, 2022. At the first reissuance of a WPDES permit after August 1, 2022, the new rule requires WPDES permits for industrial dischargers to be evaluated on a case-by-case basis to determine if monitoring is required pursuant to s. NR 106.98(2)(d), Wis. Adm. Code. The department evaluated the need for PFOS and PFOA monitoring taking into consideration industry type and other potential sources of PFOS or PFOA. Based on information available at the time the proposed permit was drafted, it was identified that the industrial discharger category may be a potential source of PFOS/PFOA.

WET Testing
Due to two failed Acute WET tests in 2021, an Acute WET limit of 1.0 TU_a is added for this permit term.

WET testing is used to measure, predict, and control the discharge of toxic materials that may be harmful to aquatic life. In WET tests, organisms are exposed to a series of effluent concentrations for a given time and effects are recorded. Decisions below related to the selection of representative data and the need for WET limits were made according to ss. NR 106.08 and 106.09, Wis. Adm. Code. WET monitoring frequency and toxicity reduction evaluation (TRE) recommendations were made using the best professional judgment after consideration of the guidance in the *Whole Effluent Toxicity (WET) Program Guidance Document (2022).*

Acute tests predict the concentration that causes lethality of aquatic organisms during a 48 to 96-hour exposure. To assure that a discharge is not acutely toxic to organisms in the receiving water, WET tests must produce a statistically valid LC50 (Lethal Concentration to 50% of the test organisms) greater than 100% effluent, according to s. NR 106.09(2)(b), Wis. Adm Code.

3.2.5 Sample Point Number: 088- WATER QUALITY INFO FOR WLA

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
WLA Previous 4 Day Avg River Flow		cfs	Daily	Continuous	Reporting required May - October
WLA Previous Day River Temp		deg F	Daily	Continuous	
WLA BOD5 Discharged	Daily Max - Variable	lbs/day	Daily	Calculated	
WLA Value		lbs/day	Daily	Calculated	
WLA Adjusted Value		lbs/day	Daily	Calculated	
WLA 7 Day Sum Of WLA Values		lbs	Daily	Calculated	
WLA 7 Day Sum Of BOD5 Discharged	Daily Max - Variable	lbs	Daily	Calculated	

Changes from Previous Permit

No changes.

Explanation of Limits and Monitoring Requirements

The intent of Sampling Point 088 is to separate out BOD5 Wasteload Allocation reporting requirements from the main outfall. Reporting of the above parameters is required daily from May through October. Outside of these months, reporting is not required. These requirements are set in accordance with ch. NR 212, Wis. Adm. Code.

4 Schedules

4.1 Chlorophenolic-Containing Biocide Use

Required Action	Due Date
The certification of nonuse of chlorophenolic-containing biocides must be in the form of a notarized affidavit signed by the authorized representative and must state that chlorophenolic-containing biocides are not in use at the facility. The signature block shall include the following statement: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	03/31/2030

4.2 Mercury Pollutant Minimization Program

As a condition of the variance to the water quality based effluent limitation(s) for mercury granted in accordance with s. NR 106.145(6), Wis. Adm. Code, the permittee shall perform the following actions.

Required Action	Due Date
Annual Mercury Progress Reports: Submit an annual mercury progress report related to the pollutant minimization activities for the previous year. The annual mercury progress report shall: Indicate which mercury pollutant minimization activities or activities outlined in the Pollutant Minimization Program Plan have been implemented and state which, if any, activities from the Pollutant Minimization Program Plan were not pursued and why; Include an assessment of whether each implemented pollutant minimization activity appears to be effective or ineffective at reducing pollutant discharge concentrations and identify actions planned for the upcoming year; Identification of barriers that have limited program effectiveness and adjustments to the program that will be implemented during the next year to help address these barriers; Include an analysis of trends in total effluent mercury concentrations based on mercury sampling; and Include an analysis of how influent and effluent mercury varies with time and with significant loading of mercury. The first annual mercury progress report is to be submitted by the Due Date.	01/31/2026
Annual Mercury Progress Report #2: Submit a mercury progress report, related to the pollutant minimization activities for the previous year, as defined above.	01/31/2027
Annual Mercury Progress Report #3: Submit a mercury progress report, related to the pollutant minimization activities for the previous year, as defined above.	01/31/2028

Annual Mercury Progress Report #4: Submit a mercury progress report, related to the pollutant minimization activities for the previous year, as defined above.	01/31/2029
Final Mercury Report: Submit a final report documenting the success in reducing mercury concentrations in the effluent, as well as the anticipated future reduction in mercury sources and mercury effluent concentrations. The report shall: Summarize mercury pollutant minimization activities that have been implemented during the current permit term and state which, if any, activities from the Pollutant Minimization Program Plan were not pursued and why; Include an assessment of which pollutant minimization activities appear to have been effective or ineffective. Evaluate any needed changes to the pollutant reduction strategy accordingly; Identification of barriers that have limited program effectiveness and adjustments to the program that will be implemented during the next variance term (if applicable) to help address these barriers; Include an analysis of trends in mercury concentrations based on sampling and data during the current permit term; and Include an analysis of how influent and effluent mercury varies with time and with significant loadings of mercury. If the permittee intends to reapply for a mercury variance per s. NR 106.145, Wis. Adm. Code, for the reissued permit, a detailed Pollutant Minimization Program Plan outlining the pollutant minimization activities proposed for the upcoming permit term shall be submitted along with the final report. An updated pollutant minimization plan shall: Include an explanation of why or how each pollutant minimization activity will result in reduced discharge of the target pollutant; Evaluate any new available information on pollutant sources, timing, and concentration to update the mass balance assumptions and expected sources of the pollutant, and Identify any information needs that would help to better determine pollutant sources and make plans to collect that information.	01/31/2030
Annual Mercury Reports After Permit Expiration: In the event that this permit is not reissued by the date the permit expires, the permittee shall continue to submit annual mercury reports for the previous year following the due date of Annual Mercury Progress Reports listed above. Annual Mercury Progress reports shall include the information as defined above.	

4.3 PFOS/PFOA Minimization Plan Determination of Need

Required Action	Due Date
Report on Effluent Discharge: Submit a report on effluent PFOS and PFOA concentrations and include an analysis of trends in monthly and annual average PFOS and PFOA concentrations. This analysis should also include a comparison to the applicable narrative standard in s. NR 102.04(8)(d), Wis. Adm. Code. This report shall include all additional PFOS and PFOA data that may be collected including any	12/31/2026

influent, intake, in-plant, collection system sampling, and blank sample results.	
Report on Effluent Discharge and Evaluation of Need: Submit a final report on effluent PFOS and PFOA concentrations and include an analysis of trends in monthly and annual average PFOS and PFOA concentrations of data collected over the last 24 months. The report shall also provide a comparison on the likelihood of the facility needing to develop a PFOS/PFOA minimization plan. This report shall include all additional PFOS and PFOA data that may be collected including any influent, intake, in-plant, collection system sampling, and blank sample results. The permittee shall also submit a request to the department to evaluate the need for a PFOS/PFOA minimization plan. If the Department determines a PFOS/PFOA minimization plan is needed based on a reasonable potential evaluation, the permittee will be required to develop a minimization plan for Department approval no later than 90 days after written notification was sent from the Department. The Department will modify or revoke and reissue the permit to include PFOS/PFOA minimization plan reporting requirements along with a schedule of compliance to meet WQBELs. Effluent monitoring of PFOS and PFOA shall continue as specified in the permit until the modified permit is issued. If, however, the Department determines there is no reasonable potential for the facility to discharge PFOS or PFOA above the narrative standard in s. NR 102.04(8)(d), Wis. Adm. Code, no further action is required and effluent monitoring of PFOS and PFOA shall continue as specified in the permit.	12/31/2027

Explanation of Schedules

Chlorophenolic-Containing Biocide Use
Pursuant to s. NR 284.13(3)(b), Wis. Adm. Code, the permittee is required to certify that chlorophenolic-containing biocides are not used in the facility's operations. In order to ensure compliance throughout the permit term, the permittee is required to certify this once per permit term. If at any point during the permit term the status of non-use changes, the permittee is required to notify the department.

Mercury Pollutant Minimization Program
The permittee has applied for a variance from the mercury water quality criterion for the protection of wildlife (1.3 ng/L). As a condition of receiving a mercury variance, s. NR 106.145(7), Wis. Adm. Code, requires the permittee to develop and implement a Mercury Pollutant Minimization Program (PMP). The compliance schedule requires the permittee to implement the Mercury PMP and submit annual status reports on PMP activities. Annual status reports are required to be submitted regardless of whether or not the permit is reissued prior the expiration date.

PFOS/PFOA Minimization Plan Determination of Need
PFOS/PFOA Minimization Plan Determination of Need- As stated above, ch. NR 106 Subchapter VIII – Permit Requirements for PFOS and PFOA Dischargers became effective on August 1, 2022. Section NR 106.98, Wis. Adm. Code, specifies steps to generate data in order to determine the need for reducing PFOS and PFOA in the discharge. Data generated per the effluent monitoring requirements will be used to determine the need for developing a PFOS/PFOA minimization plan. As part of the schedule, the permittee is required to submit two annual Reports on Effluent Discharge. If the Department determines that a minimization plan is needed, the permit will be modified or revoked/reissued to include additional requirements.

Attachments

Appendix A – eDMR Data 1/2018 – 2/2025
Appendix B – Categorical Limit Derivation
Appendix C – Water Quality-Based Effluent Limit Memo

Permit Expiration Date

12/31/2030

Prepared By:

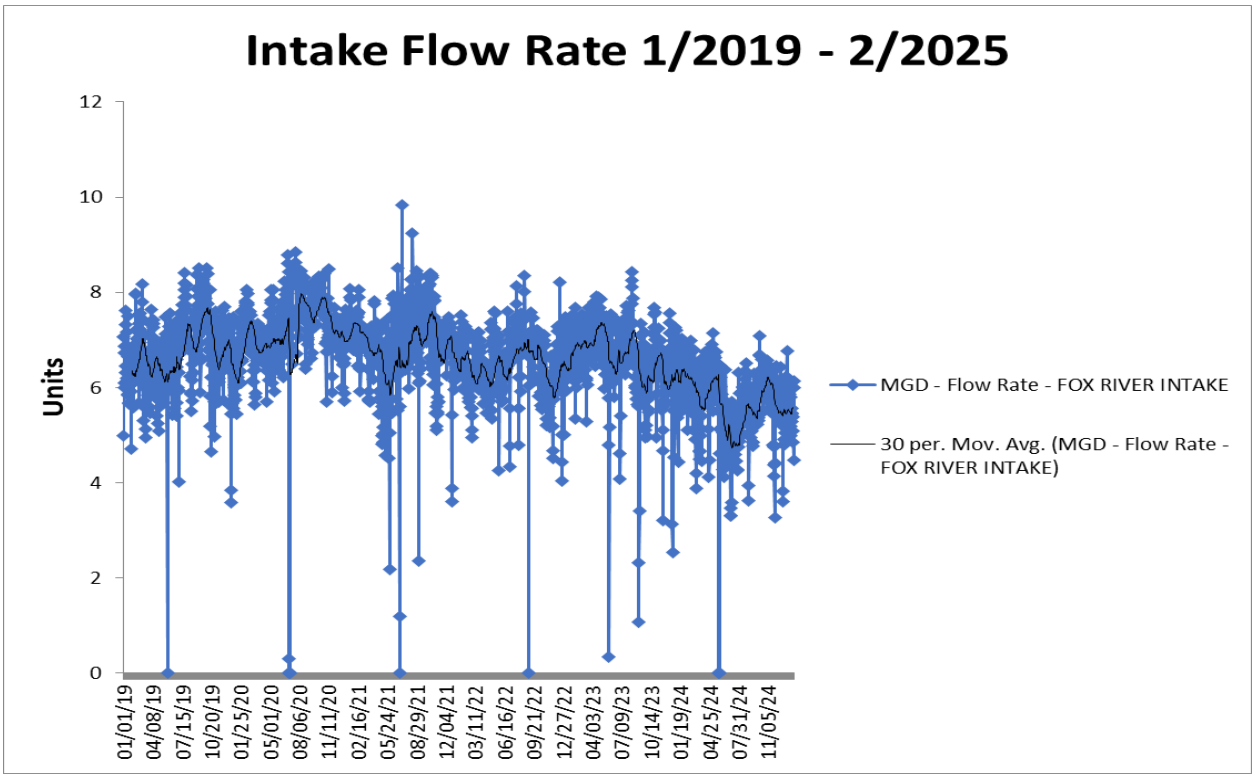
Nate Willis, P.E.
Wastewater Section Manager
Bureau of Water Quality

Date: 07/11/2025

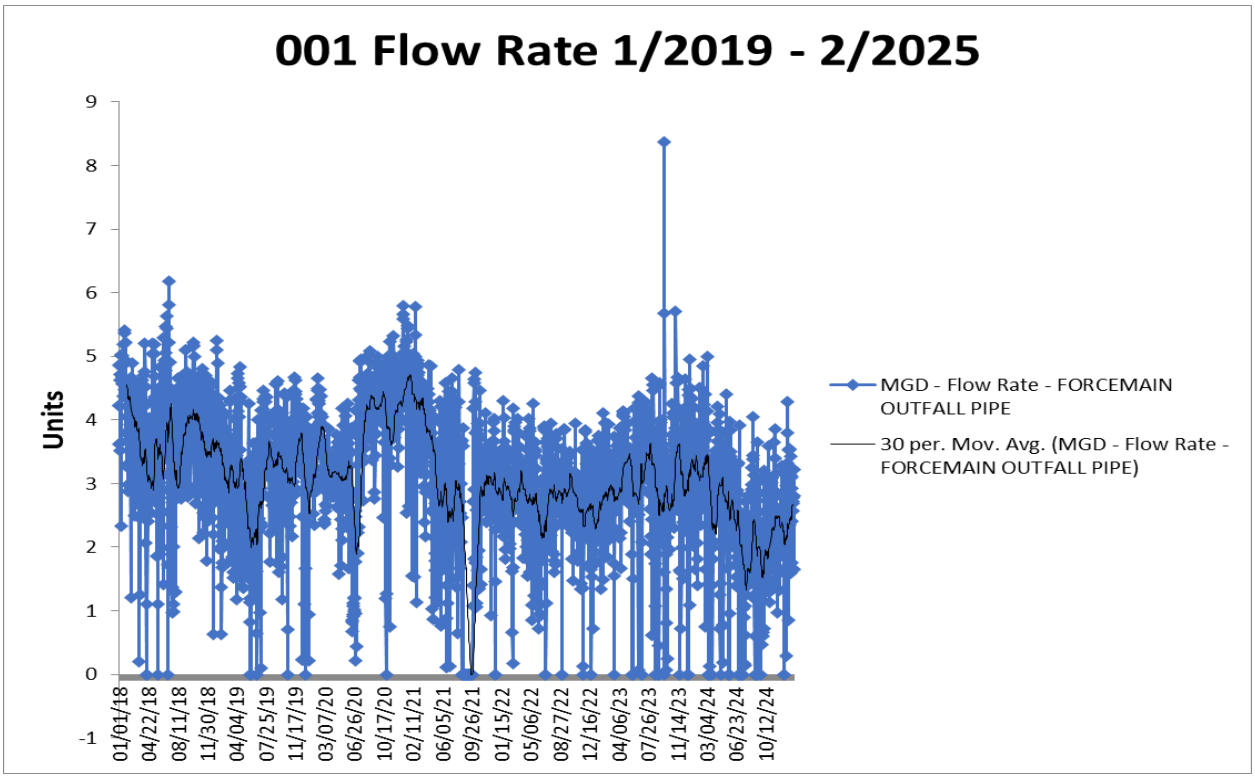
Appendix A

eDMR Data 1/2018 – 2/2025

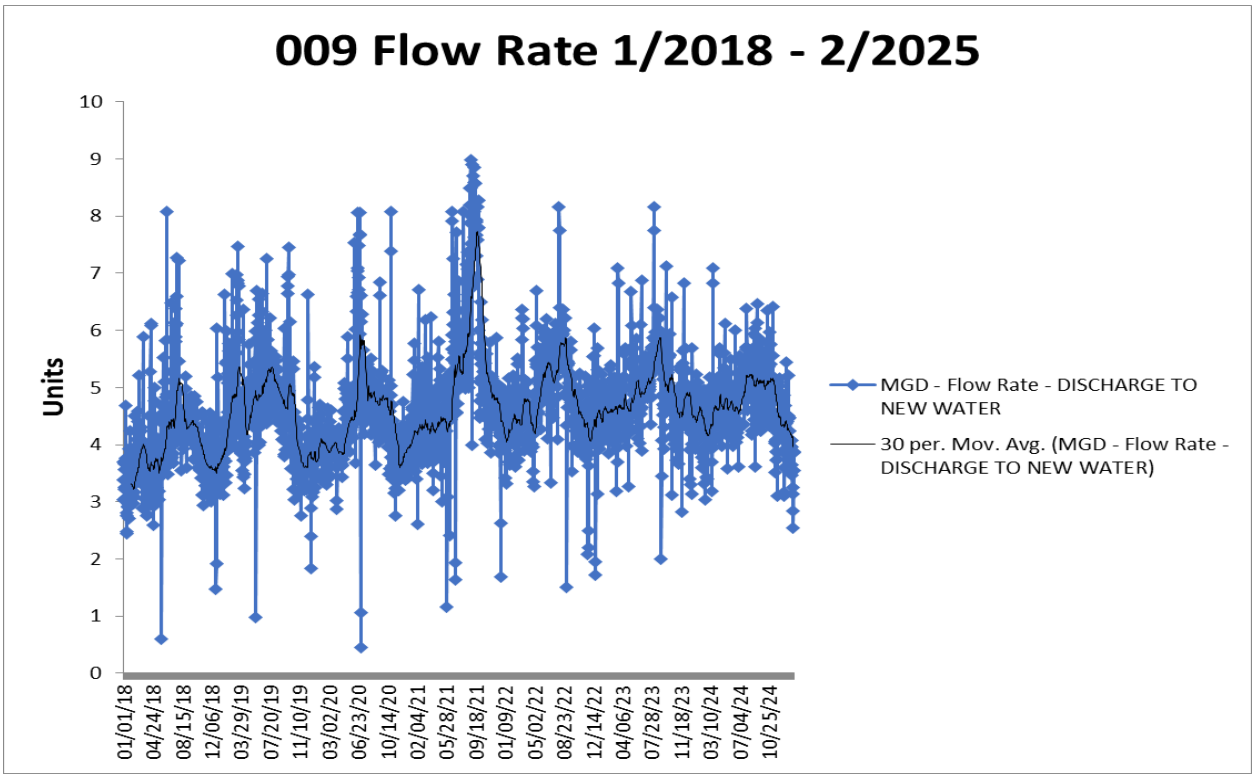
701 – FOX RIVER INTAKE:



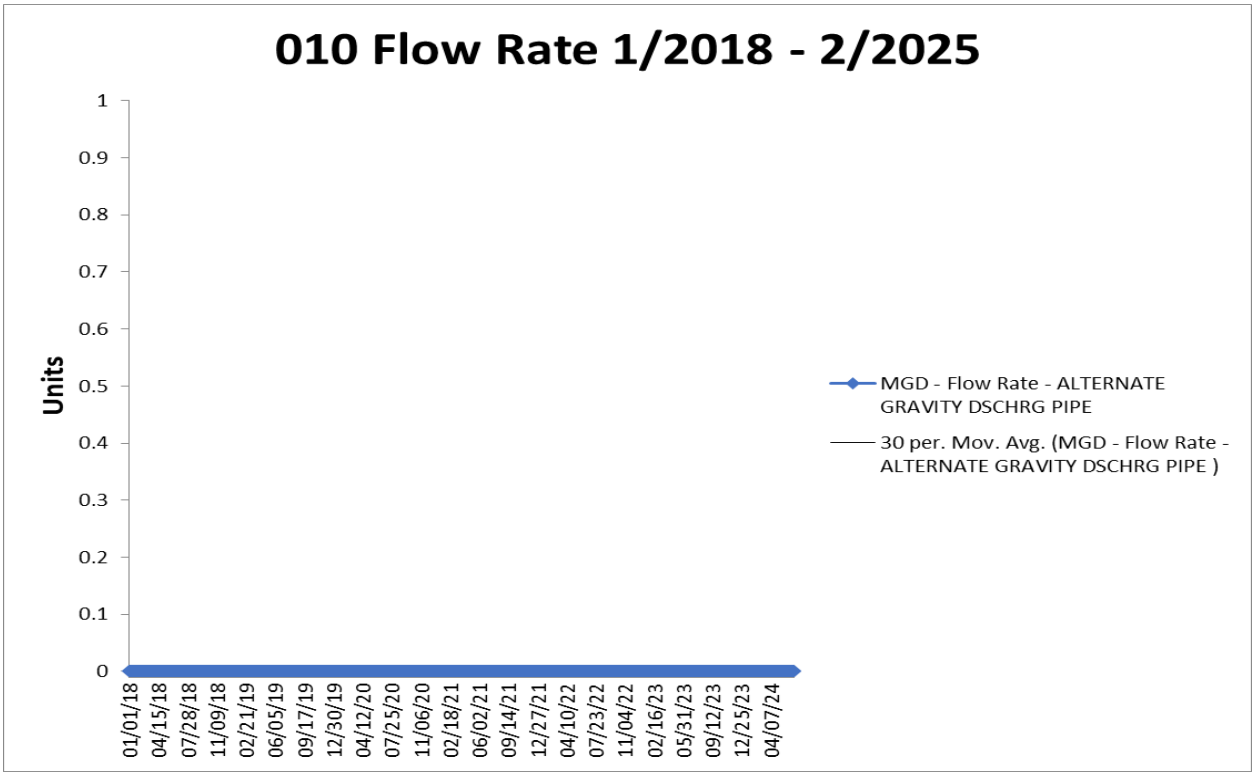
001 – FORCEMAIN OUTFALL PIPE:



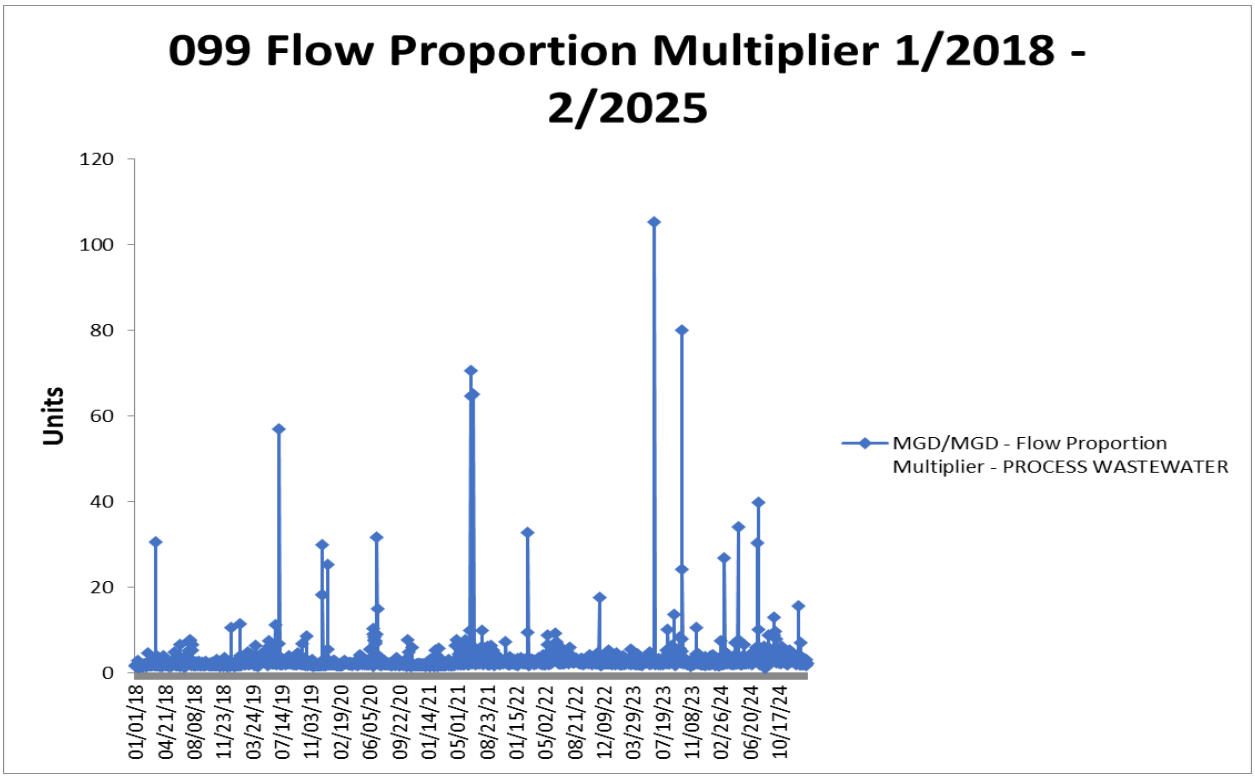
009 – DISCHARGE TO NEW WATER:

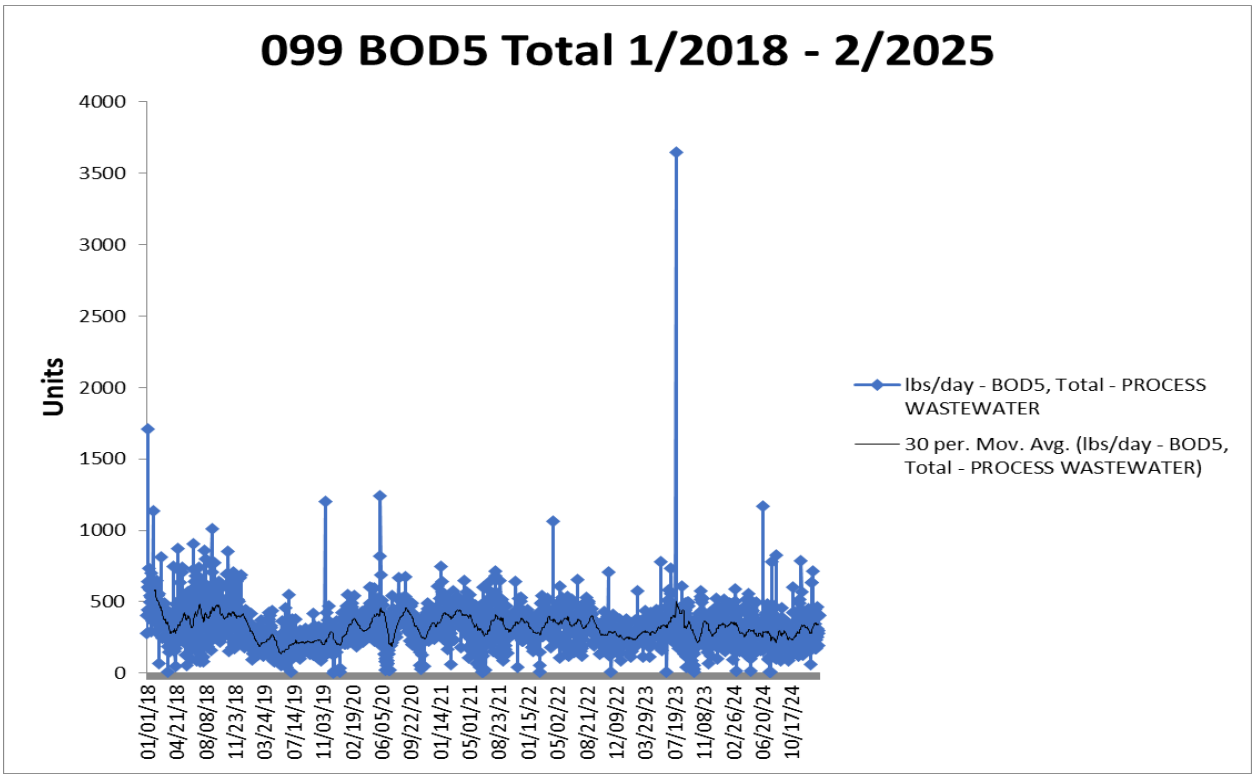


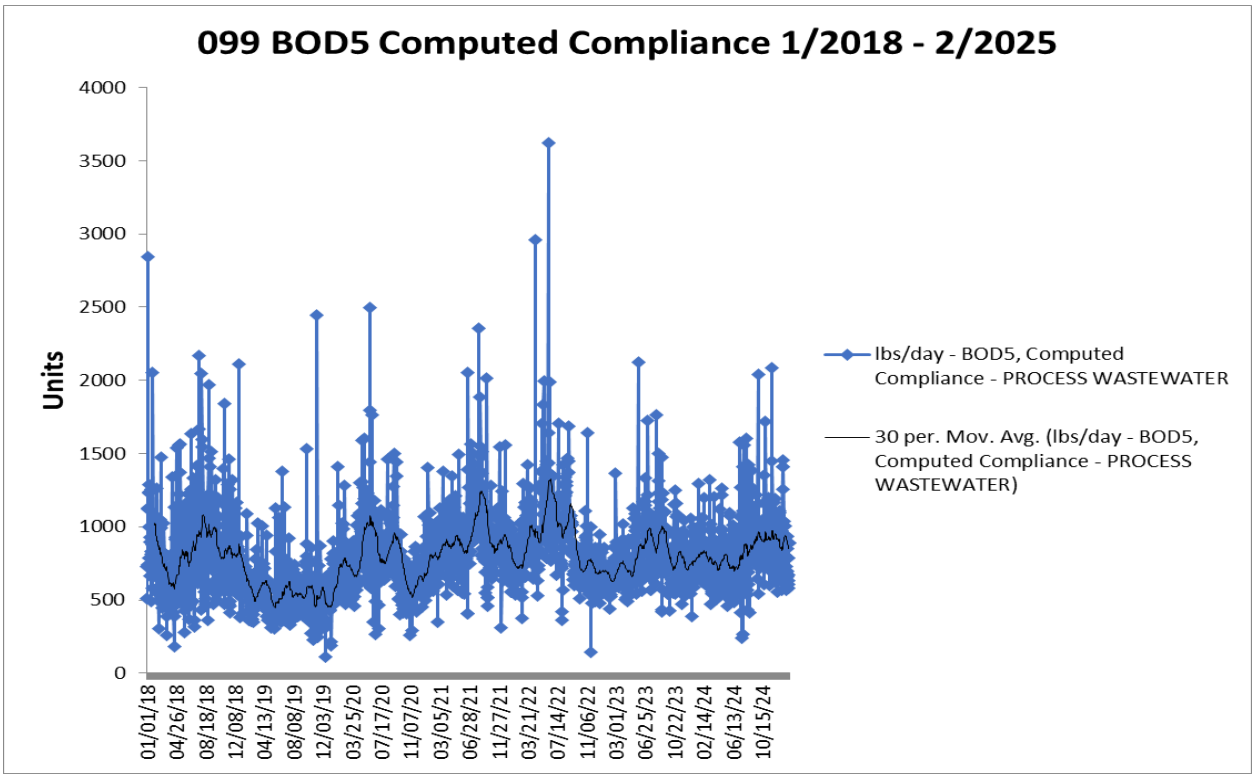
010 - ALTERNATE GRAVITY DISCHARGE PIPE:

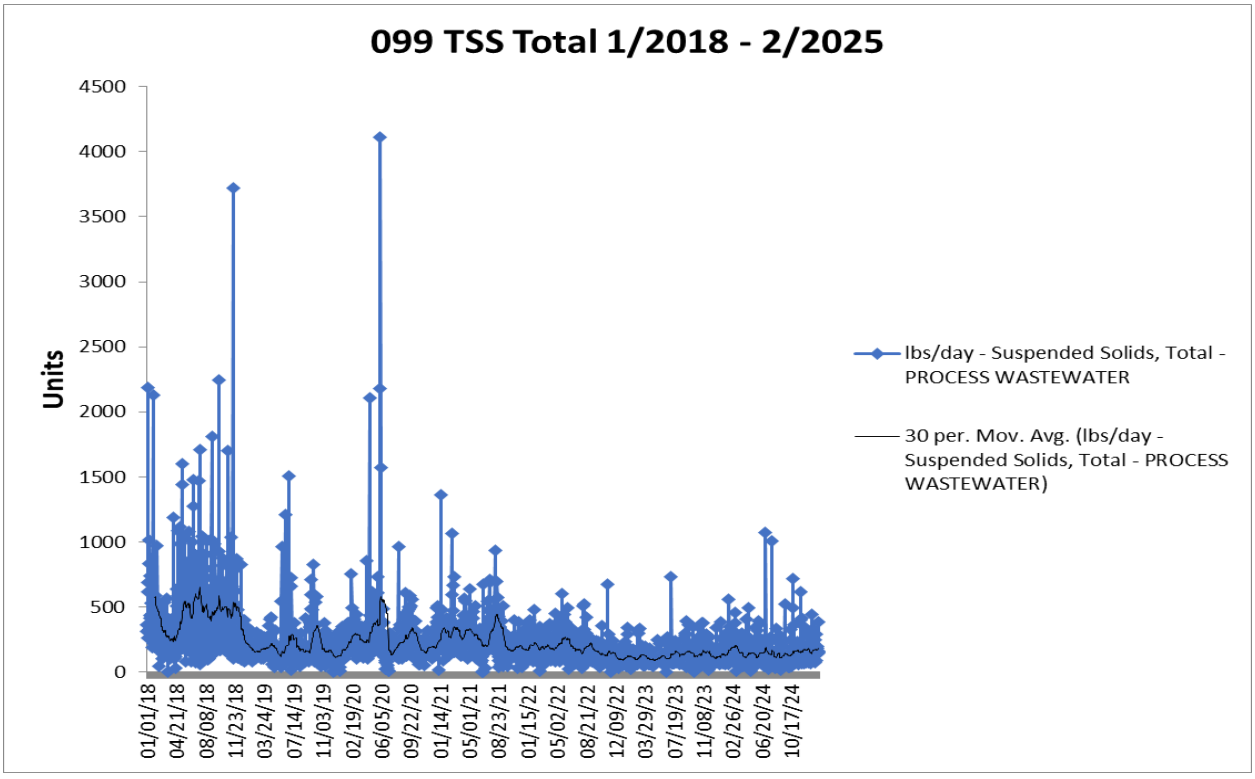


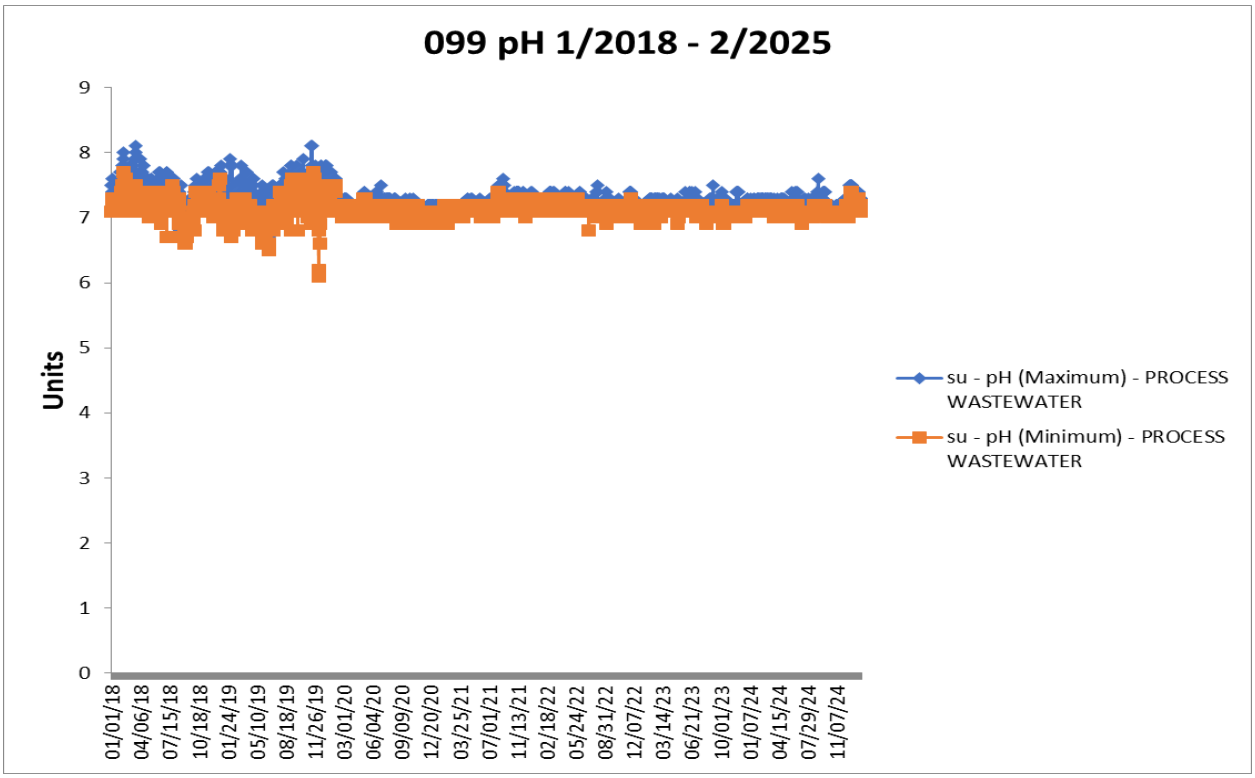
099 – PROCESS WASTEWATER:

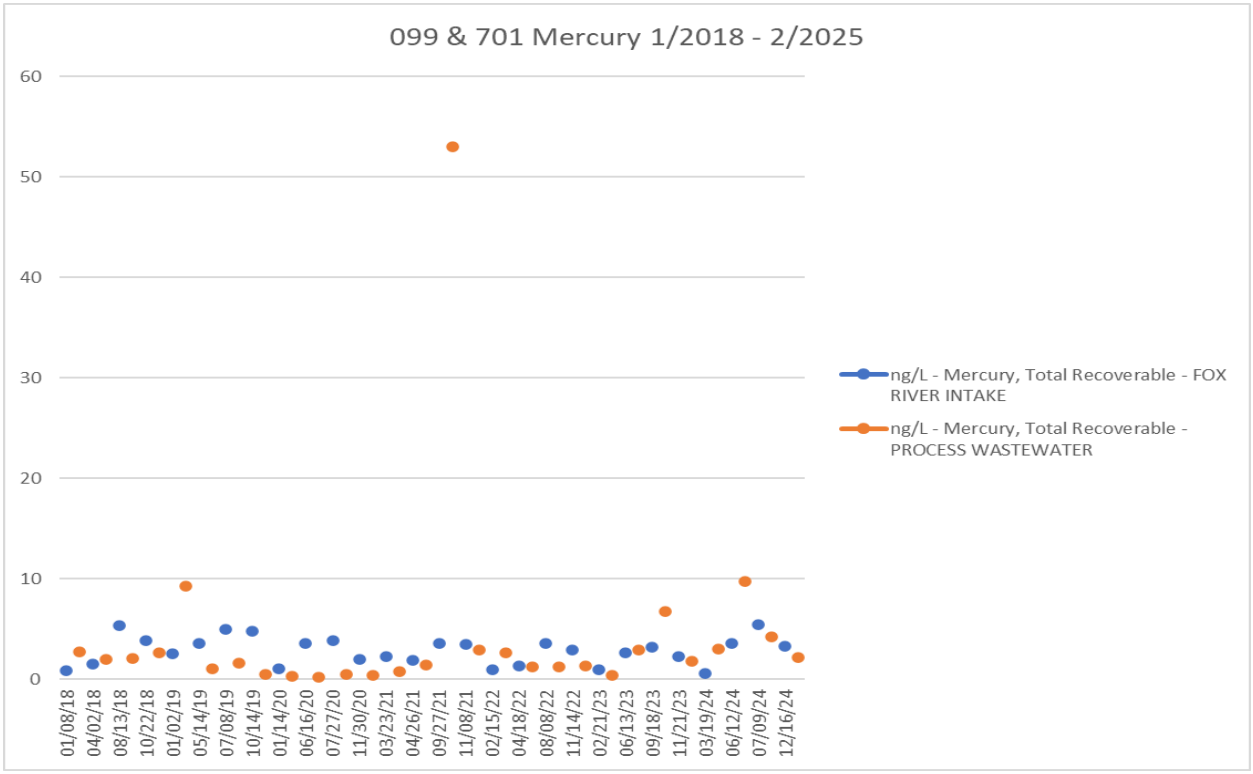


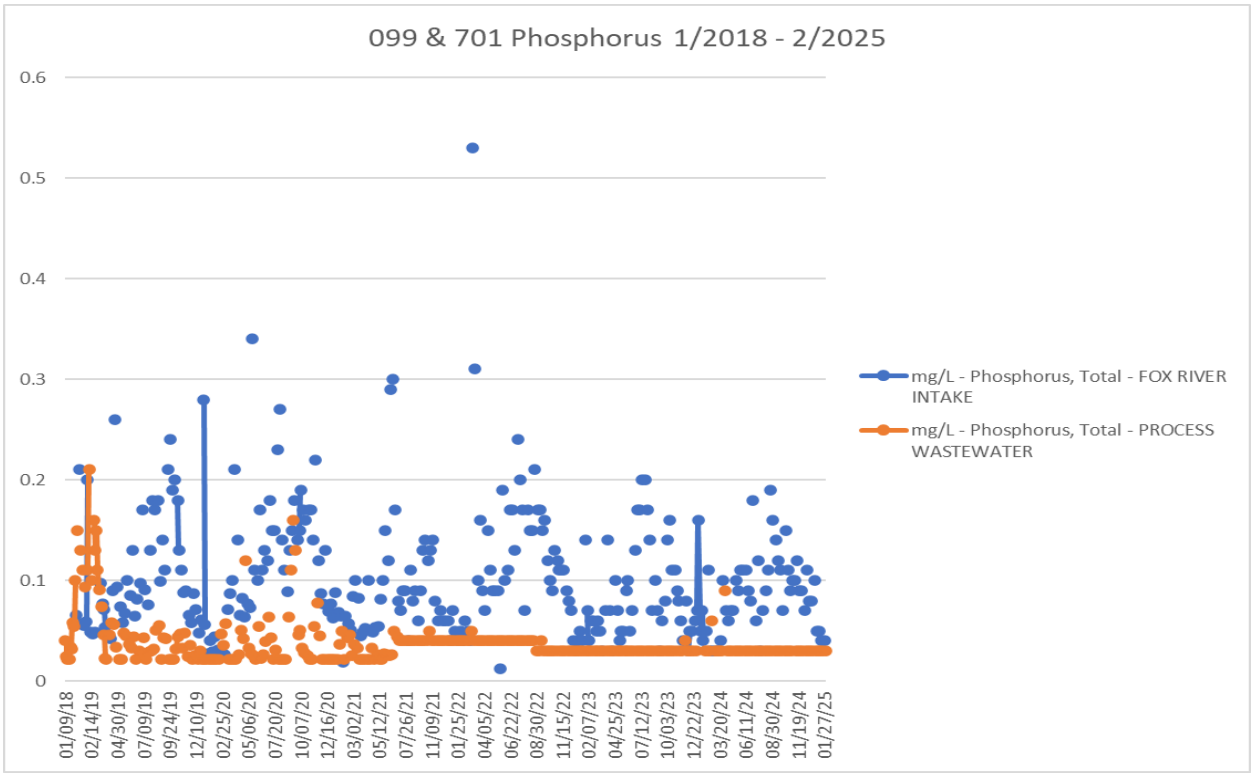



099 BOD5 Computed Compliance 1/2018 - 2/2025
Units
4000
3500
3000
2500
2000
1500
1000
500
0
01/01/18
04/26/18
08/18/18
12/08/18
04/13/19
08/08/19
12/03/19
03/25/20
07/17/20
11/07/20
03/05/21
06/28/21
11/27/21
03/21/22
07/14/22
11/06/22
03/01/23
06/25/23
10/22/23
02/14/24
06/13/24
10/15/24
lbs/day - BOD5, Computed Compliance - PROCESS WASTEWATER
30 per. Mov. Avg. (lbs/day - BOD5, Computed Compliance - PROCESS WASTEWATER)


099 TSS Total 1/2018 - 2/2025
Units
4500
4000
3500
3000
2500
2000
1500
1000
500
0
01/01/18
04/21/18
08/08/18
11/23/18
03/24/19
07/14/19
11/03/19
02/19/20
06/05/20
09/22/20
01/14/21
05/01/21
08/23/21
01/15/22
05/02/22
08/21/22
12/09/22
03/29/23
07/19/23
11/08/23
02/26/24
06/20/24
10/17/24
lbs/day - Suspended Solids, Total - PROCESS WASTEWATER
30 per. Mov. Avg. (lbs/day - Suspended Solids, Total - PROCESS WASTEWATER)


099 pH 1/2018 - 2/2025
Units
9
8
7
6
5
4
3
2
1
0
01/01/18
04/06/18
07/15/18
10/18/18
01/24/19
05/10/19
08/18/19
11/26/19
03/01/20
06/04/20
09/09/20
12/20/20
03/25/21
07/01/21
11/13/21
02/18/22
05/24/22
08/31/22
12/07/22
03/14/23
06/21/23
10/01/23
01/07/24
04/15/24
07/29/24
11/07/24
su - pH (Maximum) - PROCESS WASTEWATER
su - pH (Minimum) - PROCESS WASTEWATER


099 & 701 Mercury 1/2018 - 2/2025
60
50
40
30
20
10
0
01/08/18
04/02/18
08/13/18
10/22/18
01/02/19
05/14/19
07/08/19
10/14/19
01/14/20
06/16/20
07/27/20
11/30/20
03/23/21
04/26/21
09/27/21
11/08/21
02/15/22
04/18/22
08/08/22
11/14/22
02/21/23
06/13/23
09/18/23
11/21/23
03/19/24
06/12/24
07/09/24
12/16/24
ng/L - Mercury, Total Recoverable - FOX RIVER INTAKE
ng/L - Mercury, Total Recoverable - PROCESS WASTEWATER


099 & 701 Phosphorus 1/2018 - 2/2025
0.6
0.5
0.4
0.3
0.2
0.1
0
01/09/18
02/14/19
04/30/19
07/09/19
09/24/19
12/10/19
02/25/20
05/06/20
07/20/20
10/07/20
12/16/20
03/02/21
05/12/21
07/26/21
11/09/21
01/25/22
04/05/22
06/22/22
08/30/22
11/15/22
02/07/23
04/25/23
07/12/23
10/03/23
12/22/23
03/20/24
06/11/24
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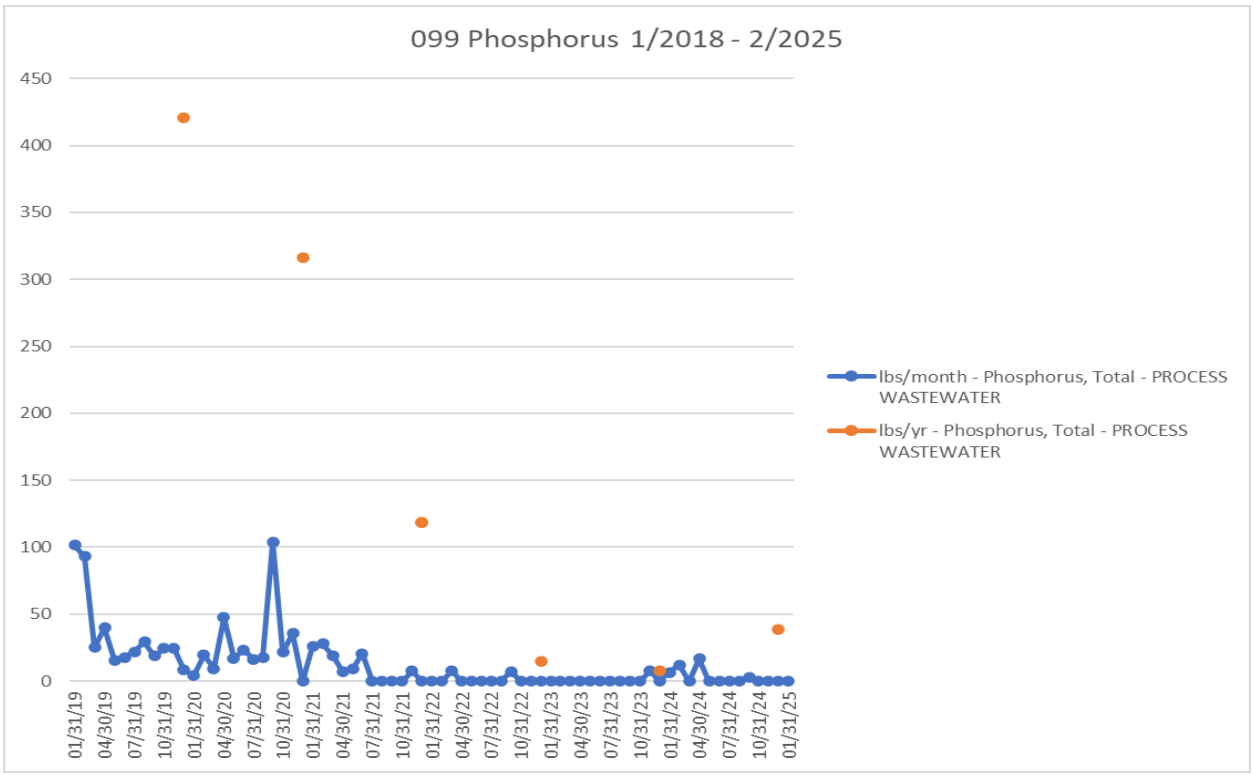
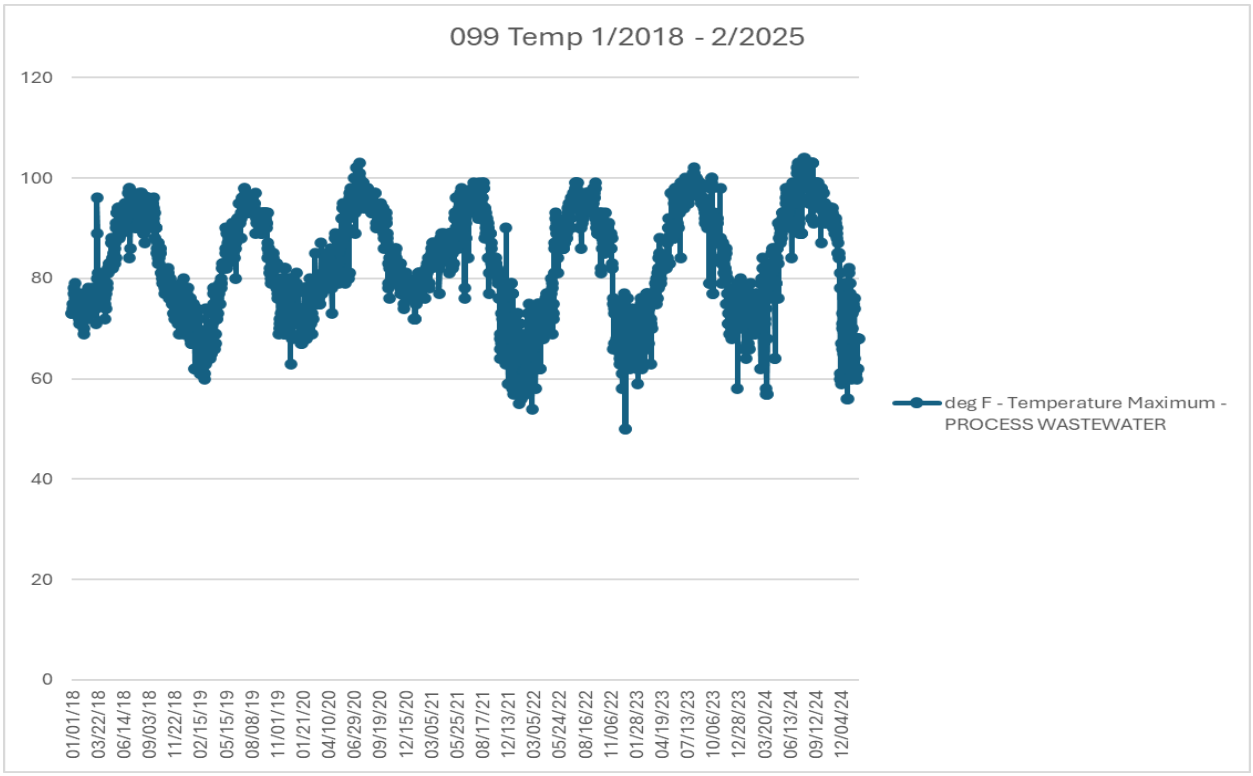
11/19/24
01/27/25
mg/L - Phosphorus, Total - FOX RIVER INTAKE
mg/L - Phosphorus, Total - PROCESS WASTEWATER


099 Phosphorus 1/2018 - 2/2025
450
400
350
300
250
200
150
100
50
0
01/31/19
04/30/19
07/31/19
10/31/19
01/31/20
04/30/20
07/31/20
10/31/20
01/31/21
04/30/21
07/31/21
10/31/21
01/31/22
04/30/22
07/31/22
10/31/22
01/31/23
04/30/23
07/31/23
10/31/23
01/31/24
04/30/24
07/31/24
10/31/24
01/31/25
lbs/month - Phosphorus, Total - PROCESS WASTEWATER
lbs/yr - Phosphorus, Total - PROCESS WASTEWATER


099 Temp 1/2018 - 2/2025
120
100
80
60
40
20
0
01/01/18
03/22/18
06/14/18
09/03/18
11/22/18
02/15/19
05/15/19
08/08/19
11/01/19
01/21/20
04/10/20
06/29/20
09/19/20
12/15/20
03/05/21
05/25/21
08/17/21
12/13/21
03/05/22
05/24/22
08/16/22
11/06/22
01/28/23
04/19/23
07/13/23
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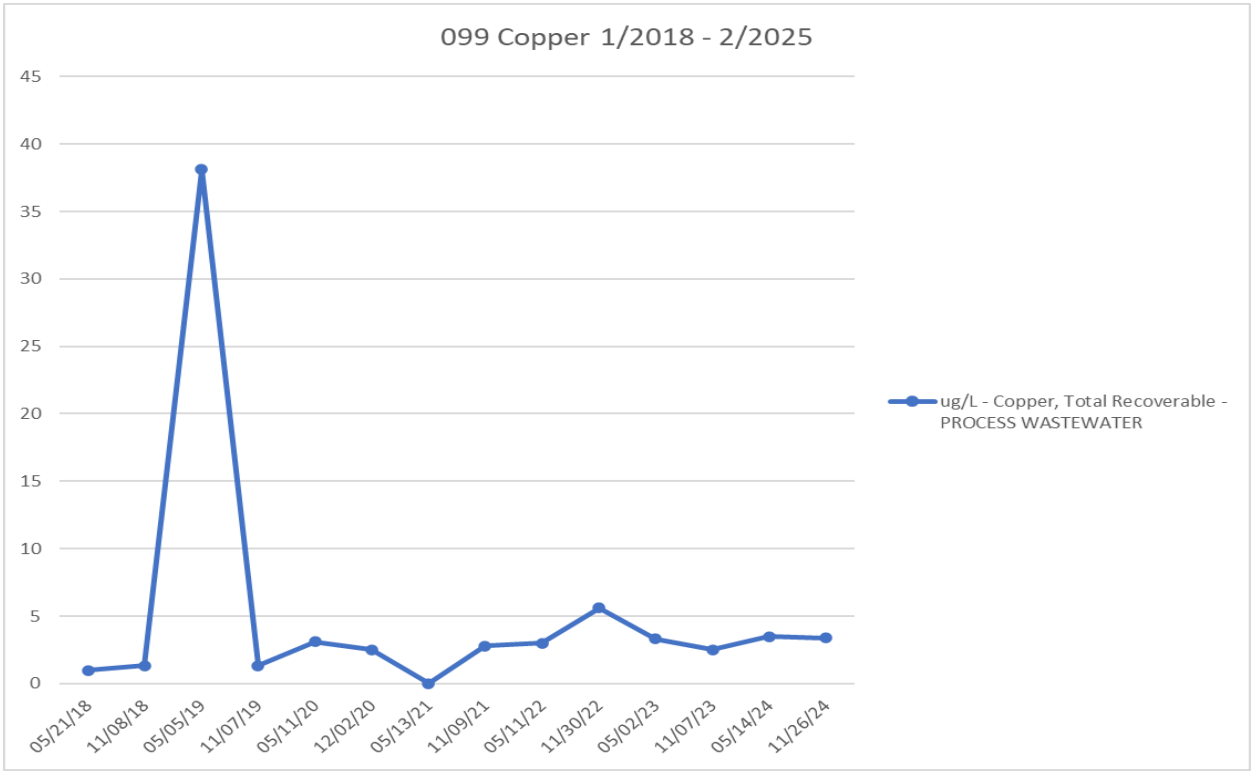
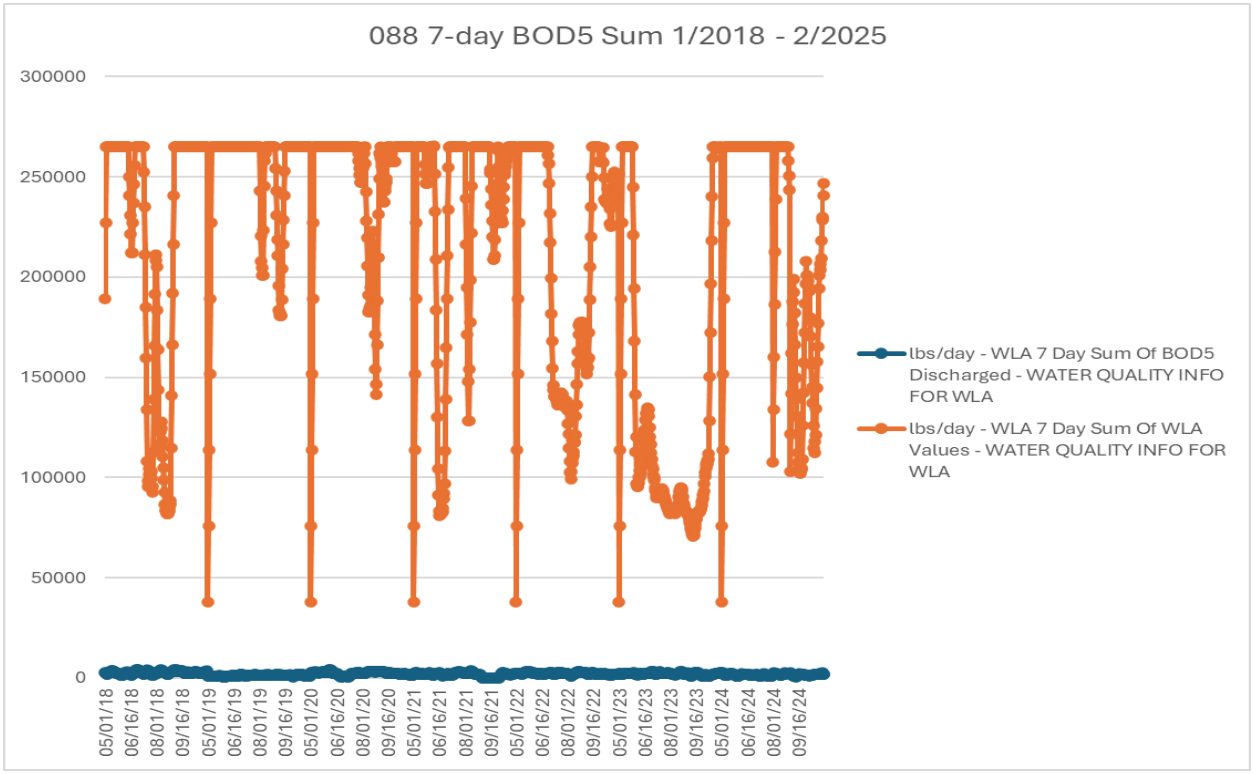
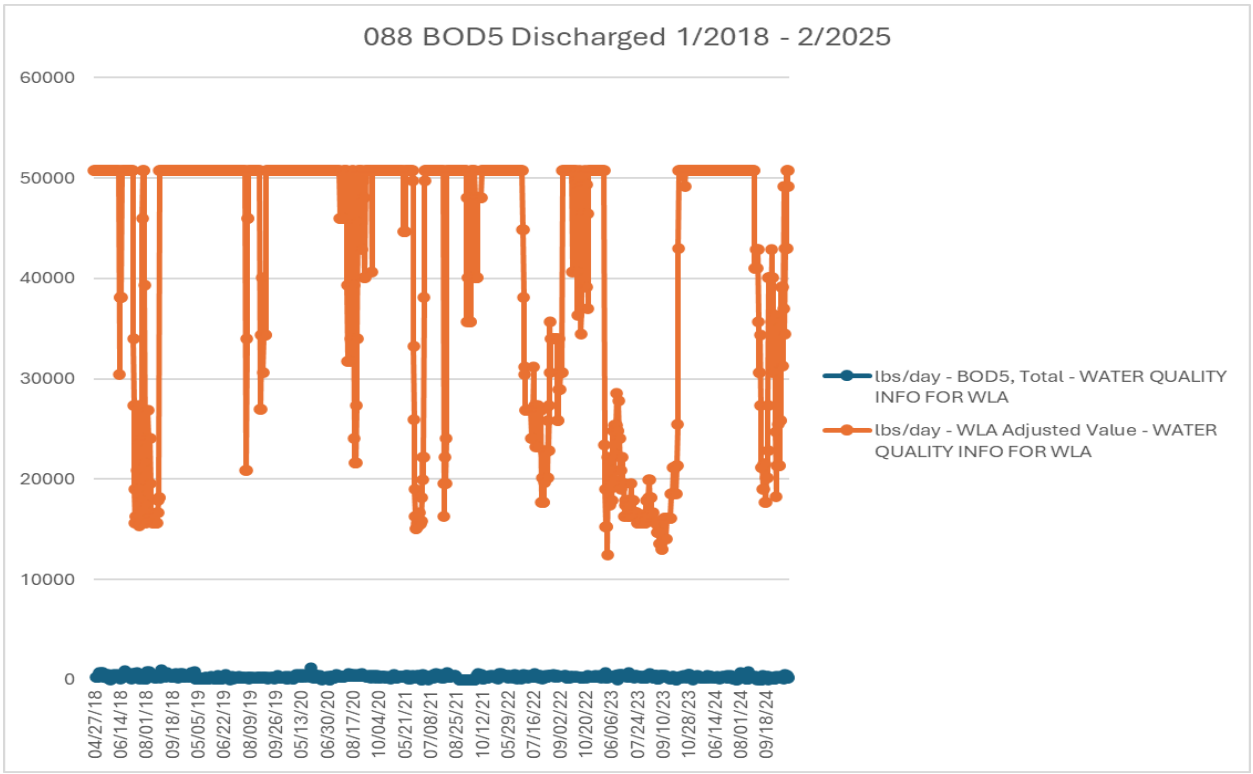
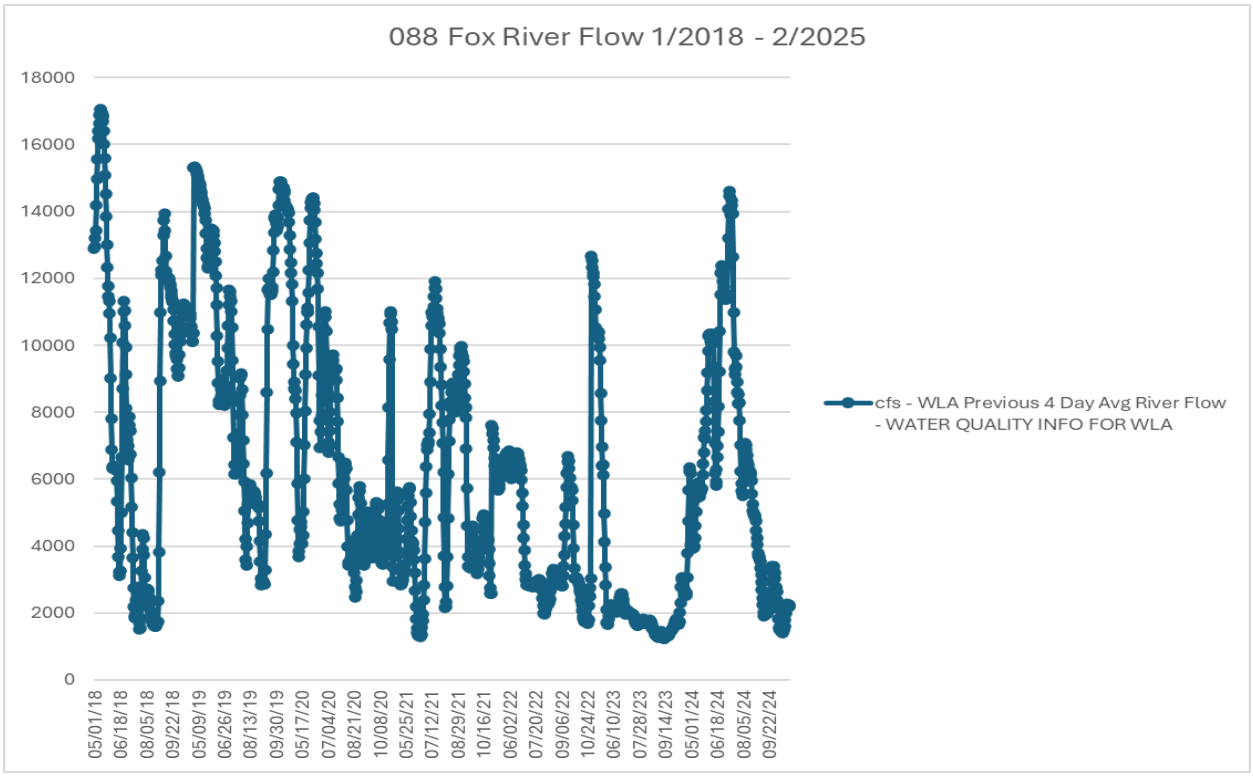
12/04/24
deg F - Temperature Maximum - PROCESS WASTEWATER

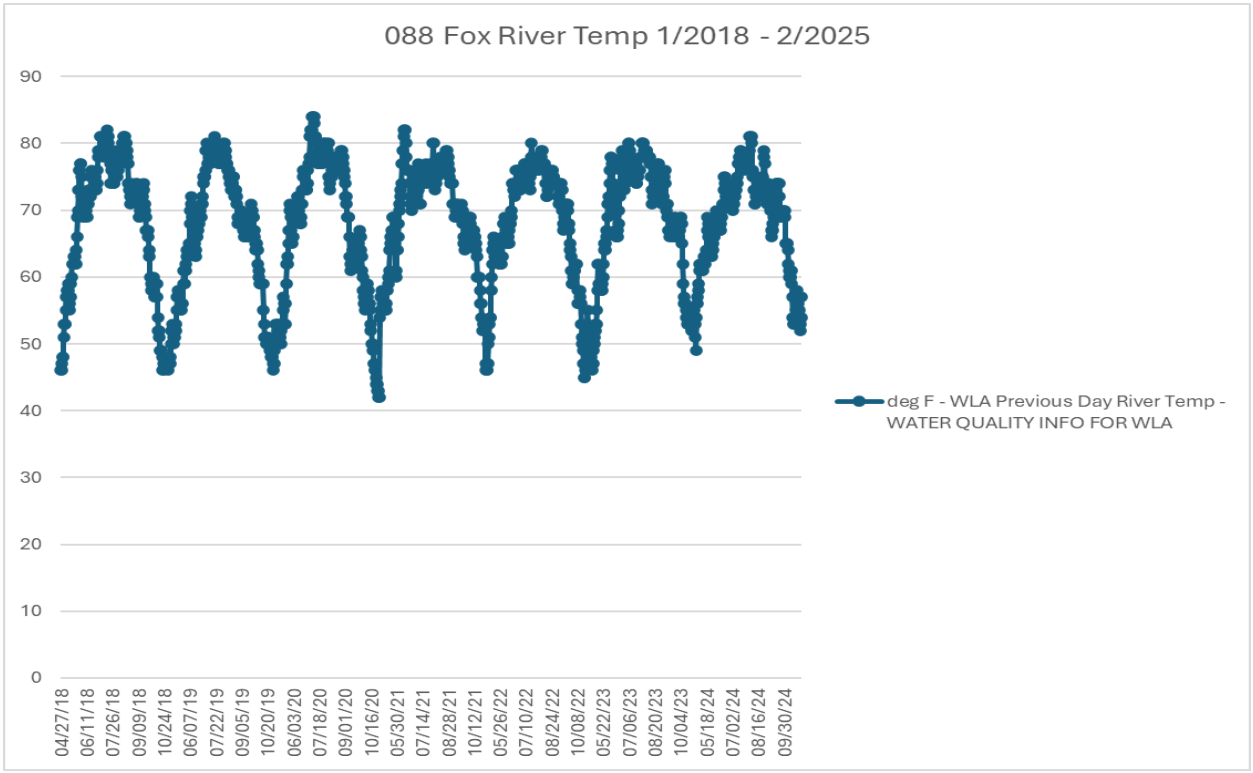

099 Copper 1/2018 - 2/2025
45
40
35
30
25
20
15
10
5
0
05/21/18
11/08/18
05/05/19
11/07/19
05/11/20
12/02/20
05/13/21
11/09/21
05/11/22
11/30/22
05/02/23
11/07/23
05/14/24
11/26/24
ug/L - Copper, Total Recoverable - PROCESS WASTEWATER

088 – WATER QUALITY INFO FOR WLA:






088 Fox River Flow 1/2018 - 2/2025
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
05/01/18
06/18/18
08/05/18
09/22/18
05/09/19
06/26/19
08/13/19
09/30/19
05/17/20
07/04/20
08/21/20
10/08/20
05/25/21
07/12/21
08/29/21
10/16/21
06/02/22
07/20/22
09/06/22
10/24/22
06/10/23
07/28/23
09/14/23
05/01/24
06/18/24
08/05/24
09/22/24
cfs - WLA Previous 4 Day Avg River Flow - WATER QUALITY INFO FOR WLA


088 Fox River Temp 1/2018 - 2/2025
90
80
70
60
50
40
30
20
10
0
04/27/18
06/11/18
07/26/18
09/09/18
10/24/18
06/07/19
07/22/19
09/05/19
10/20/19
06/03/20
07/18/20
09/01/20
10/16/20
05/30/21
07/14/21
08/28/21
10/12/21
05/26/22
07/10/22
08/24/22
10/08/22
05/22/23
07/06/23
08/20/23
10/04/23
05/18/24
07/02/24
08/16/24
09/30/24
deg F - WLA Previous Day River Temp - WATER QUALITY INFO FOR WLA

APPENDIX B
BOD5 & TSS CATEGORICAL LIMIT DERIVATION

2018 Permit Limits Production:

452 TPD	Non-integrated Tissue (old sources)
208 TPD	Non-integrated Tissue (new sources)
52 TPD	"Broke" Tissue from wastepaper
712 TPD	Total

2021 - 2024 Production:

541 TPD	Non-integrated Tissue (old sources)
198 TPD	Non-integrated Tissue (new sources)
52 TPD	"Broke" Tissue from wastepaper
791 TPD	Total

BPT and NSPS Effluent Limitations (#/ton produced or processed) - NR 284:

	BOD_5 Monthly Average (lbs/ton)	**BOD_5 Daily Max (lbs/ton)**	**TSS Monthly Average (lbs/ton)**	**TSS Daily Max (lbs/ton)**
Non-integrated Tissue (old) (BPT subd. 18. Non-integrated tissue)	12.5	22.8	10.0	20.5
Non-integrated Tissue (new) (NSPS subd. 18. Non-integrated tissue)	6.8	14.0	5.2	12.0
Tissue Papers from deinked waste paper (BPT subd 22. Tissue FWP)	14.2	27.4	18.4	34.1

Categorical Limitations Calculations (based on 2018 reissuance production numbers):

BOD_5:

452 TPD (12.5 lbs/Ton) + 208 TPD (6.8 lbs/Ton) + 52 TPD (14.2 lbs/Ton) = 7,803 lbs/day avg.
452 TPD (22.8 lbs/Ton) + 208 TPD (14.0 lbs/Ton) + 52 TPD (27.4 lbs/Ton) = 14,642 lbs/day max.

TSS:

452 TPD (10.0 lbs/Ton) + 208 TPD (5.2 lbs/Ton) + 52 TPD (18.4 lbs/Ton) = 6,558 lbs/day avg.
452 TPD (20.5 lbs/Ton) + 208 TPD (12.0 lbs/Ton) + 52 TPD (34.1 lbs/Ton) = 13,535 lbs/day max.

Categorical Limitations Calculations (based on current production numbers):
BOD_5:

541 TPD (12.5 lbs/Ton) + 198 TPD (6.8 lbs/Ton) + 52 TPD (14.2 lbs/Ton) = 8,788 lbs/day avg.
541 TPD (22.8 lbs/Ton) + 198 TPD (14.0 lbs/Ton) + 52 TPD (27.4 lbs/Ton) = 16,532 lbs/day max.

Since these BOD5 effluent limitations are less stringent than the previously calculated limitations, and the permittee has not made a demonstration of need in accordance with the requirements of ch. NR 207, Wis. Adm. Code to increase these limits, they will be maintained for the duration of the next permit term.

TSS:

541 TPD (10.0 lbs/Ton) + 198 TPD (5.2 lbs/Ton) + 52 TPD (18.4 lbs/Ton) = 7,396 lbs/day avg.
541 TPD (20.5 lbs/Ton) + 198 TPD (12.0 lbs/Ton) + 52 TPD (34.1 lbs/Ton) = 15,240 lbs/day max.

The more-stringent TMDL TSS daily maximum limitation of 1,323 lbs/day and monthly average limitation of 545 lbs/day will continue to replace the above-calculated categorical limitations.

Compliance with the categorical BOD5 and TSS mass limits is complicated by the diversion of some of the process wastewater to NEW Water. The permit requires calculation of a surrogate discharge to the river. Procter & Gamble's daily (lbs/day) discharge amount for BOD5 must be adjusted based on the split of process wastewater discharge between the Fox River and NEW Water, and then compared to the categorical limitations. This adjustment is calculated daily by multiplying the actual effluent BOD5 mass value of discharge to the river by a flow proportion multiplier. The multiplier is calculated by finding the total process wastewater flow (Outfalls 009+001+010) and then dividing by the effluent flow to the river (Outfalls 001+010). As noted above, this calculation results in a surrogate value that represents what would be discharged to the river if there had been no diversion to the NEW Water.

The calculation assumes that the levels of BOD5 in the wastewater from the various DAF units are similar. The design, operation and characteristics of the paper machines and DAF units indicate that the levels of BOD5 in the wastewater from the various DAF are similar. Note that the federal requirement (40 CFR 122.50) does not place limits on the amount of wastewater that may be diverted nor upon how that waste is treated or disposed of.

It should also be noted that discharge from the paper machines to the river is measured and calculated at the combined flow from the paper machines and other various sources. This calculation results in an overestimate of mass discharged from the paper machines because some mass from the other sources is included.

Furthermore, for the NEW Water diversion, the measurement of flow includes flow from paper machines and other various sources. The calculation of BOD5 diverted is based on the volume of combined flow from the paper machines and other various sources. Specifically, for the NEW Water diversion, calculation of BOD5 discharge is based on calculated mass of BOD5 at the river discharge and the volume of combined flows to the NEW Water. The result is a double overestimate of the mass of BOD5 in the wastewater from paper machines diverted to the NEW Water: first the mass for the river is an overestimate and second the volume to the NEW Water includes more than paper machines. Therefore, the overall estimates of BOD5 from the paper machines (sum for river discharge and NEW Water diversion) are conservative because they overestimate the amount of discharge.

The TMDL daily maximum limit of 1,323 lbs/day is maintained for the next permit term. The monthly average TSS TMDL limit also remains in effect.