Permit Modification Fact Sheet

Changes from the previous permit fact sheet are highlighted in grey.

General Information

Permit Number:	WI-0041149-09-1
Permittee Name:	PHILLIPS PLATING CORPORATION
Address:	P O Box 72 984 North Lake Ave
City/State/Zip:	Phillips WI 54555-0072
Discharge Location:	721 North Lake Ave (SW¼, SW¼ of Section 7; T37N-R01E)
Receiving Water:	Elk Lake (2240000) within the Elk River watershed in the Upper Chippewa River drainage basin, Price County
StreamFlow ($Q_{7,10}$):	Typical lake dilution of 10:1; The Elk River flows through a chain of impoundments in the Phillips area. The receiving water does not exhibit a unidirectional flow at the point of discharge.
Stream Classification:	Warm Water Sport Fishery, Recreational Water, Non-public Water Supply and within the Ceded Territory
Discharge Type:	Phillips Plating is an existing noncontinuous discharger (discharges occur approximately 4-5 days per week).
Wild Rice Impacts: *(no specific wild rice standards exist at this time)*	There are no wild rice waters inventoried near the outfall in Long Lake or Elk River. No impacts from this facility have been identified. (Evaluation completed March 2017).

Facility Description

Phillips Plating Corporation at Phillips electroplates nickel, copper, and chrome onto plastic parts. The electroplating process produces wastewater that has a low pH and contains soluble forms of the metals. The wastewater is treated by chromium reduction, pH adjustment, neutralization, a proprietary chemical precipitation and oxidation process and filtration to remove the metals. The processes cause the metals to clump and settle. Effluent is discharged on a noncontinuous basis via Sample Point (Outfall) 101 to the southwest bank of Elk Lake.

Effluent from the City of Phillips wastewater treatment system combines with Phillips Plating's effluent prior to discharge to Elk Lake (Sample Point 102). Effluent limitations have been developed for the combined discharges that protect the receiving water quality. The settled solids are removed, dewatered via filter press, dried and hauled to a hazardous waste disposal site.

Substantial Compliance Determination

Enforcement During Last Permit: All conditions and standard requirements of the current permit are being met.

After a desk top review of all discharge monitoring reports, compliance schedule items, and a previous site visit on 06/21/22, by Arthur Ryzak, WDNR, Phillips Plating Corporation has been found to be in substantial compliance with their current permit.

Compliance determination entered by Arthur Ryzak on September 8, 2023.

Sample Point Designation		
Sample Point Number	**Discharge Flow, Units, and Averaging Period**	**Sample Point Location, Waste Type/sample Contents and Treatment Description (as applicable)**
001	**COMBINED FLOW** N/A – flow is not a required parameter.	Representative samples shall be collected from the separate wastewater discharges from the City of Phillips and Phillips Plating Company and combined for testing. Both the City of Phillips and Phillips Plating Company are responsible for conducting the acute and chronic WET monitoring requirements on the combined discharge and may share costs and efforts to that end. The same monitoring requirements are contained in the City's permit. Duplicate WET test results will be entered on both facilities' DMRs.
101	**INPLANT EFFLUENT** An average of 0.02 MGD (2019 – 2023 data)	Representative samples shall be collected from the Company's treated process wastewaters (from the effluent collection tank after treatment) prior to mixing with the effluent from the City of Phillips municipal wastewater treatment plant and prior to discharge to Elk Lake via outfall 001.
102	**FIELD BLANK** N/A – flow is not a required parameter.	At least one mercury field blank shall be collected for each day a sample of mercury is collected via inplant sample point 101. The purpose of the field blank is to determine whether the field or sample transporting procedures and environment have contaminated the sample.

1 Inplant - Monitoring and Limitations

Sample Point Number: 102- MERCURY FIELD BLANK

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

Changes from Previous Permit:

Monitoring requirements were re-evaluated for the proposed permit term and no changes were required in this permit section. Sampling requirements and frequencies are the same as the previous permit.

Explanation of Limits and Monitoring Requirements

At least one field blank shall be collected for each set of mercury samples (a set of samples may include any combination of influent, effluent, or other samples collected on the same day) per ss. NR 106.145(9) and (10) Wis. Adm. Code. The purpose of the field blank is to determine if the field or sample transporting procedures and environment have contaminated the sample.

2 Surface Water - Monitoring and Limitations

Sample Point Number: 001- COMBINED EFFLUENT

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Acute WET		TUa	See Listed Qtr(s)	24-Hr Flow Prop Comp	See the "Whole Effluent Toxicity Testing" section for monitoring schedule.
Chronic WET		TUc	See Listed Qtr(s)	24-Hr Flow Prop Comp	See the "Whole Effluent Toxicity Testing" section for monitoring schedule.
pH Field		su	Quarterly	Grab	Monitoring is required July 1, 2026 to June 30, 2027. See schedule section "Combined Effluent pH Monitoring" for details.

Changes from Previous Permit

Limitations and monitoring requirements were re-evaluated for the proposed permit term and the following changes were made from the previous permit.

One year of pH sampling of the combined effluent has been added the permit term.

Explanation of Limits and Monitoring Requirements

This outfall is the combined effluent from the City of Phillips and Phillips Plating Corporation. Both facilities are responsible for conducting the acute and chronic WET monitoring requirements on the combined discharge and may share costs and efforts to that end. A Whole Effluent Toxicity (WET) screening worksheet that takes into consideration the toxicity of a facility's effluent on the receiving water over the short (acute) and long (chronic) term was completed. Based on the total points accumulated annual Acute and Chronic WET Tests are required during rotating quarters.

Originally the City of Phillips and Phillips Plating were reissued together, but due to different reissuing processes the permit term dates became unsynchronized. In consideration of the cooperative nature used to sample the Acute and Chronic WET tests, the schedules for both facilities will continue to be the same regardless of when the two permits begin and end. WET testing shall continue in accordance with the quarterly rotation of quarters 4-3-2-1.

- **2025 –** October 1 to December 31 (4th quarter)
- **2026 -** July 1 to September 30 (3rd quarter)
- **2027 –** April 1 to June 30 (2nd quarter)
- **2028** - January 1 to March 31 (1st quarter)
- **2029** - October 1 to December 31 (4th quarter)
- **2030** - July 1 to September 30 (3rd quarter)
- **2031 -** April 1 to June 30 (2nd quarter)
- **2032** - January 1 to March 31 (1st quarter)
- **2033** - October 1 to December 31 (4th quarter)
- **2034 –** July 1 to September 30 (3rd quarter)

pH - There is concern estimating the combined discharge pH based solely on mixing may not be accurate because it does not account for the effects of alkalinity and other factors that may influence the concentration of hydrogen ions in the combined discharge. Consequently, one year's worth of weekly monitoring at Outfall 001 is required from July 1, 2026, through June 30, 2027 during periods when both discharges are present. Both facilities are responsible for conducting pH sampling on the combined discharge. A schedule has been added to allow time for both permittees to coordinate a sampling procedure. Monitoring and a schedule was also included in the City of Phillips reissuance.

Sample Point Number: 101- INPLANT EFFLUENT

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Continuous	
pH Field	Daily Min	6.0 su	Daily	Grab	
pH Field	Daily Max	9.0 su	Daily	Grab	
Chromium, Total Recoverable	Daily Max	2.77 mg/L	Weekly	24-Hr Flow Prop Comp	
Chromium, Total Recoverable	Monthly Avg	1.71 mg/L	Weekly	24-Hr Flow Prop Comp	
Nickel, Total Recoverable	Daily Max	3.98 mg/L	Weekly	24-Hr Flow Prop Comp	
Nickel, Total Recoverable	Weekly Avg	3.69 mg/L	Weekly	24-Hr Flow Prop Comp	
Nickel, Total Recoverable	Monthly Avg	2.38 mg/L	Weekly	24-Hr Flow Prop Comp	
Nickel, Total Recoverable	Weekly Avg	0.86 lbs/day	Weekly	Calculated	
Suspended Solids, Total	Daily Max	60 mg/L	Weekly	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	31 mg/L	Weekly	24-Hr Flow Prop Comp	
Phosphorus, Total	Rolling 12 Month Avg	3.9 mg/L	Weekly	24-Hr Flow Prop Comp	Effective upon reissuance, this limit will be retained beyond the effective date of the final limits as it represents a minimum control level. See Water Quality Trading (WQT) sections in the permit for more information.
Phosphorus, Total		lbs/day	Weekly	Calculated	Report daily mass discharged using Equation 1a in the Water Quality

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
					Trading (WQT) section of the permit.
WQT Credits Used (TP)		lbs/month	Monthly	Calculated	Report WQT TP Credits used per month using Equation 2b in the 'Water Quality Trading (WQT)' section of the permit. Available TP Credits are specified in Table 2 of the permit and in the approved Water Quality Trading Plan.
WQT Computed Compliance (TP)	Monthly Avg	0.09 mg/L	Monthly	Calculated	Report the WQT TP Computed Compliance value using Equation 3a in the Water Quality Trading (WQT) section of the permit. Value entered on the last day of the month.
WQT Computed Compliance (TP)	6-Month Avg	0.03 mg/L	Monthly	Calculated	Value entered on the last day of June and December. Compliance with the six-month average limit is evaluated at the end of the six-month period on June 30 and Dec 31.
WQT Computed Compliance (TP)	Annual Total	2.1 lbs/yr	Annual	Calculated	Report the WQT TP Computed Compliance value using Equation 3b in the Water Quality Trading (WQT) section of the permit. Compliance is measured in December.
WQT Credits Used (TP)	Annual Total	244.8 lbs/yr	Annual	Calculated	The annual total of monthly credits used (Equation 2b) may not exceed annual available credits shown in Table 2. The result of Equation 2c may not exceed annual available credits shown in Table 2.
BOD5, Total		mg/L	Monthly	24-Hr Flow Prop Comp	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Nitrogen, Ammonia (NH3-N) Total		mg/L	Monthly	24-Hr Flow Prop Comp	
PFOS		ng/L	1/ 2 Months	Grab	Monitoring only. See PFOS/PFOA Minimization Plan Determination of Need schedule.
PFOA		ng/L	1/ 2 Months	Grab	Monitoring only. See PFOS/PFOA Minimization Plan Determination of Need schedule.
Cadmium, Total Recoverable	Daily Max	330 ug/L	Quarterly	24-Hr Flow Prop Comp	
Cadmium, Total Recoverable	Weekly Avg	140 ug/L	Quarterly	24-Hr Flow Prop Comp	
Cadmium, Total Recoverable	Monthly Avg	140 ug/L	Quarterly	24-Hr Flow Prop Comp	
Cadmium, Total Recoverable	Daily Max	0.17 lbs/day	Quarterly	Calculated	
Cadmium, Total Recoverable	Weekly Avg	0.05 lbs/day	Quarterly	Calculated	
Copper, Total Recoverable	Daily Max	290 ug/L	Quarterly	24-Hr Flow Prop Comp	
Copper, Total Recoverable	Monthly Avg	290 ug/L	Quarterly	24-Hr Flow Prop Comp	
Copper, Total Recoverable	Daily Max	0.15 lbs/day	Quarterly	Calculated	
Cyanide, Amenable	Daily Max	420 ug/L	Quarterly	Grab	
Cyanide, Amenable	Monthly Avg	420 ug/L	Quarterly	Grab	
Cyanide, Amenable	Daily Max	0.22 lbs/day	Quarterly	Calculated	
Oil & Grease (Hexane)	Daily Max	52 mg/L	Quarterly	Grab	
Oil & Grease (Hexane)	Monthly Avg	26 mg/L	Quarterly	Grab	
Hardness, Total as CaCO3		mg/L	Quarterly	24-Hr Flow Prop Comp	
Mercury, Total Recoverable		ng/L	Quarterly	Grab	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Nitrogen, Total Kjeldahl		mg/L	Quarterly	24-Hr Flow Prop Comp	
Nitrogen, Nitrite + Nitrate Total		mg/L	Quarterly	24-Hr Flow Prop Comp	
Nitrogen, Total		mg/L	Quarterly	Calculated	Total Nitrogen = Total Kjeldahl Nitrogen + Total Nitrite + Nitrate Nitrogen.
Lead, Total Recoverable	Daily Max	0.69 mg/L	1/ 6 Months	24-Hr Flow Prop Comp	
Lead, Total Recoverable	Monthly Avg	0.43 mg/L	1/ 6 Months	24-Hr Flow Prop Comp	
Silver, Total Recoverable	Daily Max	0.43 mg/L	1/ 6 Months	24-Hr Flow Prop Comp	
Silver, Total Recoverable	Monthly Avg	0.24 mg/L	1/ 6 Months	24-Hr Flow Prop Comp	
Zinc, Total Recoverable	Daily Max	2.2 mg/L	1/ 6 Months	24-Hr Flow Prop Comp	
Zinc, Total Recoverable	Monthly Avg	1.48 mg/L	1/ 6 Months	24-Hr Flow Prop Comp	
Zinc, Total Recoverable	Daily Max	1.2 lbs/day	1/ 6 Months	Calculated	

Changes from Previous Permit

Effluent limitations and monitoring requirements were re-evaluated for the proposed 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.

- Continuous monitoring requirements for **pH** are not required this term and the limit range has changed to 6.0 – 9.0 s.u.
- A **Water Quality Trading** (WQT) has been accepted as an alternative phosphorus compliance option. Applicable monitoring, limits and schedule have been included.
- **PFOS** and **PFOA** monthly monitoring is included in the permit in accordance with s. NR 106.98(2)(d), Wis. Adm. Code. The monitoring frequency for PFOS and PFOA has been reduced from Monthly to 1/ 2 Months.
- Quarterly **Nitrogen Series** (nitrate + nitrite, total Kjeldahl nitrogen and total nitrogen) monitoring has been added this permit term.

Explanation of Limits and Monitoring Requirements

Sample point 101 is the discharge from the facility prior to the combined discharge with the City of Phillips. Categorical limits for discharge to surface waters are based in part on ch. NR 261, Metal Finishing, Wis. Adm. Code. More information on monitoring and limits can be found in the "Water Quality-Based Effluent Limitations for Phillips Plating

Corporation WPDES Permit # WI-0041149" memo dated December 12, 2023, and the "Technology-Based Effluent Limitations for Phillips Plating Corporation WPDES Permit #WI-0041149-09-0" memo dated December 12, 2023.

pH – s. NR 102.04(4)c Wis. Adm. Code states "pH shall be within the range of 6.0 to 9.0." Industry specific limitations through best practicable technology (BPT) technology based effluent limits (TBELs) found in 40 CFR Part 433 Subpart A shows a 9.0 s.u. daily maximum pH limit in federal regulations which is more stringent than state regulations of 9.5 s.u. State wastewater regulations must be at least as stringent as federal regulations; therefore, the daily maximum pH limit of 9.0 s.u. is required. The daily minimum pH limit of 6.0 s.u. is required during the reissued permit term because Phillips Plating must comply with the limit before mixing with other non-metal finishing process wastewaters.

In the previous reissuance the facility monitored pH continuously per s. NR 205.06, Wis. Adm. Code. Because Phillips Plating must comply with the pH limit range of 6.0 – 9.0 s.u. consistently and are based on TBEL requirements, continuous pH monitoring requirements are not required this permit reissuance. The parameters "pH total exceedance time in minutes" and the number of "pH exceedances greater than 60 minutes" are not included in this reissuance.

BOD_5 – Monitoring for BOD_5 remains the same as the previous permit issuance. Limits are not required at this time.

Total Suspended Solids – TBELs are described in ch. NR 261 Wis. Adm. Code, applicable to metal finishing facilities that discharge into waters of the state. Monitoring and limits remain the same as the previous permit issuance.

Phosphorus - Phosphorus requirements are based on the Phosphorus Rules as detailed in NR 102 (water quality standards) and NR 217, Wis. Adm. Code (effluent standards and limitations for phosphorus). Chapter NR 217 of the Wis. Adm. Code addresses point source dischargers of phosphorus to surface waters. Currently in NR 217 Wis. Adm. Code there are three types of limit calculations used to determine if a phosphorus limit is needed: a technology based effluent limit (TBEL), a water quality-based effluent limit (WQBEL) determined by stream criteria and a WQBEL based on a Total Daily Maximum Daily Load (TMDL) allocation.

In the case of Phillips Plating Corporation:

- A TBEL of 1.0 mg/L is needed if a facility discharges more than the threshold of 60 pounds per month (rolling average) (s. NR 217.04(1)(b)1 Wis. Adm. Code). The limit memo determined that the facility discharges more than the threshold, but the facility demonstrated the need for an Alternative Effluent Limit (AEL). Based on a review of current data an **AEL of 3.9 mg/L as a 12-month rolling average is applicable** this permit term.
- Based on the size and classification of the stream, the water quality criteria for the Elk Lake is 30 ug/L. This criteria and instream background phosphorus data are used to calculate the stream criteria-based WQBELs. **The calculated WQBELs are 0.09 mg/L (monthly average), 0.03 mg/L (6-month average*)**. The wastewater treatment facility is not able to meet the WQBEL. This permit authorizes the use of trading as a tool to demonstrate compliance with the phosphorus WQBELs.

  This permit includes terms and conditions related to the Water Quality Trading Plan (WQT-2022-0004) or approved amendments thereof. The total 'WQT TP Credits' available are designated in the approved WQT Plan. The AEL of **3.9 mg/L as a 12-month rolling average will be used as the minimum control level (MCL)** and will be retained throughout the permit term. Phillips Plating Corporation proposes to convert dairy production cropping practices to permanent perennial vegetation. This vegetative cover will continue to be maintained to generate credits.

  Additional WQT subsections in the permit provide information on compliance determinations, annual reporting and re-opening of the permit.

  **Please note: compliance with the 6-month average is measured each June and December.*
- The facility does not lie within the boundaries of any approved total maximum daily load (TMDL) area, thus a phosphorus WQBEL based on a TMDL allocation is likewise not required during this permit term.

Ammonia - Using current acute and chronic ammonia toxicity criteria for the protection of aquatic life and limit calculating procedures found in ss. NR 105 and 106, Wis. Adm. Code (both effective March 1, 2004), Ammonia

limitations were calculated for the combined effluent flows from the City and Phillips Plating. Daily Maximum (35 mg/L), Weekly Average (65 mg/L – lowest limitation July – September) and Monthly Average (26 mg/L –lowest limitation July - September) limits were considered. The data from the combined facilities were compared, there is no reasonable potential for the combined discharge to exceed any of the calculated ammonia nitrogen limits. Limits are not required this permit term, but monitoring is required to continue to determine the need for limits at the next permit reissuance.

PFOS and PFOA – NR 106 Subchapter VIII – 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 previous PFOS/PFOA sample results were within 1/5 of the PFOS or PFOA standards under s. NR 102.04(8)(d)1, Wis. Adm. Code. Therefore, monthly monitoring is included. The initial determination of need for sampling shall be conducted for up to two years in order to determine if the permitted discharge has the reasonable potential to cause or contribute to an exceedance of the PFOS or PFOA standards under s. NR 102.04(8)(d)1, Wis. Adm. Code.

Pursuant to s. NR 205.066, Wis. Adm. Code, the department may specify the monitoring frequency for PFOS and PFOA on a case-by-case basis after the initial 24 months of sampling.

After a review of the data submitted with the Year 2 Report on Effluent Discharges, the department has determined that it is warranted to reduce the sampling frequency in this case. The department is requiring continued monitoring of these compounds to complete the permit term to ensure that the current effluent quality is maintained. At the next permit reissuance, the department will make another determination as to whether further reduction or removal of monitoring is warranted, based on the continued sampling results.

Total Toxic Organics (TTO) = the sum of all quantifiable effluent concentrations greater than 10 ug/L of the toxic organic pollutants listed s. NR 215.03(1)-(5), Wis. Adm. Code. The permittee shall make a TTO certification statement monthly, in lieu of monitoring, as printed on the Discharge Monitoring Report form, in accordance with s. NR 261.13(1)(a), Wis. Adm. Code, which states the following:

> "*Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for total toxic organics, I certify that to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the solvent management plan submitted to the Department".*

Metals and **Oil and Grease** (including Cadmium, Chromium, Copper, Cyanide, Lead, Nickel, Sliver, Zinc and oil and grease) - Based on the contributions of metals by Phillips Plating to the combined flow discharged by Phillips Plating and the City of Phillips, several metals continue to require limitations.

Limit Origins

Metal	Daily Maximum	Weekly Average	Monthly Average
Cadmium	WQBEL	WQBEL	NR 205.065(7)
Chromium	NR 261	n/a	NR 261
Copper	WQBEL	n/a	NR 205.065(7)
Cyanide	WQBEL	n/a	NR 205.065(7)
Lead	NR 261	n/a	NR 261
Nickel	NR 261	WQBEL	NR 261
Sliver	NR 261	n/a	NR 261
Zinc	WQBEL	n/a	NR 261
Oil & Grease	NR 261	n/a	NR 261

WQBEL **-** Calculation methods for water quality based effluent limitations of toxic and organoleptic substances is found in NR 106.06 Wis. Adm. Code. In the November 18, 2005, limit memo for the 6th reissuance evaluated all the metal requirements including potential contributions from the City of Phillips. Four metals, cadmium, copper, cyanide, and zinc were identified to need WQBELs. The WQBELs were calculated by back calculating from the water quality-based limit at the combined outfall to sample point 101 by subtracting the City of Phillips' contribution. This approach recognized the variability in the City's effluent without the need to include limits in both permits.

NR 205.065, Wis. Adm. Code - The code requires limits to be expressed as daily maximum and monthly average limits whenever practicable. To comply with this regulation, monthly average limits equal to the daily limit (Copper and Cyanide) or weekly average limit (Cadmium) have been included.

NR 261, Wis. Adm. Code – Table 1 and 2 of s. NR 261.12(1), Wis. Adm. Code contains the technology based effluent limits (TBELs) for discharge of metal finishing process wastewater to waters of the state.

Please note: Different approved analytical methods are required for samples of copper and lead that are less than 9.5 ug/L and 18.5 ug/L respectively. This is needed to better determine the need for limits at the next permit reissuance.

Mercury - A mercury effluent limit is not required this permit term. The most restrictive calculated limit (based on Wildlife Criteria) of the combined (Phillips and Phillips Plating) effluent is a monthly average limit of 14.3 ng/L, for this receiving water, based on NR 106 Wis. Adm Code. This value is greater than the 30-day effluent p99 value (0.33 n/L). Since the effluent statistical mercury concentration is less than the limit necessary to protect water quality, a limit is not required; however quarterly monitoring is required to continue tracking concentrations.

Nitrogen Series - (nitrate +nitrite, total Kjeldahl nitrogen and total nitrogen) **–** In 2011, the Upper Mississippi River Basin Association (UMRBA) completed the report "Upper Mississippi River Nutrient Monitoring, Occurrence, and Local Impacts: A Clean Water Act Perspective". Among the many recommendations of this report was that the states should expand their NPDES discharge monitoring requirements to include both phosphorus and nitrogen as they have important impacts on the mainstem upper Mississippi River as well as in the Gulf of Mexico. Consequently, the department developed the "Guidance for Total Nitrogen Monitoring in WPDES Permits" document dated October 2019, where quarterly effluent monitoring for total nitrogen (total nitrogen = total Kjeldahl + (nitrite+nitrate)) is required for major municipal and industrial facilities discharging to surface waters. Section 283.55(1)(e) Wis. Stats. allows the department to require the permittee to submit information necessary to identify the type and quantity of any pollutants discharged from the point source, and s. NR 200.065 (1)(h) Wis. Adm. Code allows for this monitoring to be collected during the permit term.

Sampling Frequencies - The "Monitoring Frequencies for Individual Wastewater Permits" guidance document (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 fairness and 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. The department has determined at this time that the facility meets the guidance and no changes in the monitoring frequency is required this permit term.

3 Schedules

3.1 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),	03/31/2025

Wis. Adm. Code. 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.	
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.	03/31/2026

3.2 Combined Effluent pH Monitoring

Required Action	Due Date
Submit a plan: Submit a sampling plan for department approval that was developed in cooperation with Phillip's Plating Company with the goal to monitor pH levels in the combined effluent (sample point 003) once per week for one year. The plan may include either sampling the combined effluent directly or through flow proportional mixing.	12/31/2025
Begin Monitoring: Implement sampling of the combined effluent for one year beginning July 1, 2026, through June 30, 2027. The City of Phillips and Phillips Plating Company are jointly responsible for conducting the pH monitoring for the combined discharge. Monitoring and this schedule will also be contained in the reissued permit for Phillips Plating Company. Duplicate pH test results will be entered on both facilities' DMRs.	07/01/2026

3.3 Annual Water Quality Trading (WQT) Report

Required Action	Due Date
Annual WQT Report: Submit an annual WQT report that shall cover the first year of the permit term. The WQT Report shall include: The number of pollutant reduction credits (lbs/month) used each month of the previous year to demonstrate compliance; The source of each month's pollutant reduction credits by identifying the approved water quality trading plan that details the source; A summary of the annual inspection of each nonpoint source management practice that generated any	01/31/2025

of the pollutant reduction credits used during the previous year; and Identification of noncompliance or failure to implement any terms or conditions of this permit with respect to water quality trading that have not been reported in discharge monitoring reports.	
Annual WQT Report #2: Submit an annual WQT report that shall cover the previous year.	01/31/2026
Annual WQT Report #3: Submit an annual WQT report that shall cover the previous year.	01/31/2027
Annual WQT Report #4: Submit the 4th annual WQT report. If the permittee wishes to continue to comply with phosphorus limits through WQT in subsequent permit terms, the permittee shall submit a revised WQT plan including a demonstration of credit need, compliance record of the existing WQT, and any additional practices needed to maintain compliance over time.	01/31/2028
Annual WQT Report Required After Permit Expiration: In the event that this permit is not reissued by the expiration date, the permittee shall continue to submit annual WQT reports by January 31 each year covering the total number of pollutant credits used, the source of the pollution reduction credits, a summary of annual inspection reports performed, and identification of noncompliance or failure to implement any terms or conditions of the approved water quality trading plan for the previous calendar year.	

Explanation of Schedules

PFOS/PFOA Minimization Plan Determination of Need - NR 106 Subchapter VIII – Permit Requirements for PFOS and PFOA Dischargers became effective on August 1, 2022. S. 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.

Combined Effluent pH Monitoring - A schedule has been added to allow time for both permittees (Phillips Plating and the City of Phillips) to coordinate a sampling procedure.

Annual Water Quality Trading (WQT) Report - Reports are required to include the following information:

- Verification that site inspections occurred;
- Brief summary of site inspection findings;
- Identification of noncompliance or failure to implement any terms or conditions of the permit or trading plan that have not been reported in discharge monitoring reports;
- Any applicable notices of termination or management practice registration; and
- A summary of credits used each month over the calendar year

Other Comments:

Phillips Plating Corporation and the City of Phillips share a surface water outfall. Because of the shared outfall, both permits have been reissued with the same annual WET testing schedule of rotating quarters (4^{th}, 3^{rd}, 2^{nd}, 1^{st}). This same schedule will also be listed in future reissuances.

Attachments:

PFOS and PFOA Water Quality-Based Effluent Limitations for Phillips Plating Corporation -WPDES Permit No. (WI-0041149) in Price County, by Amy Garbe, PE, Wastewater Engineer, dated July 27, 2026

Expiration Date:

March 31, 2029

Justification Of Any Waivers From Permit Application Requirements

N/A

Prepared By: Sheri A. Snowbank, Wastewater Specialist

Date: December 27, 2023

Date updated based on Factcheck comments: N/A (No changes were requested, February 1, 2024)

Date updated based on public notice comments: N/A (No comments received March 25, 2024)

Notice of reissuance was published in the Price County Review, PO Box 170, Phillips, WI 54555-0170.

Revised By: Sarah Donoughe, Wastewater Specialist-Adv

Date: July 31, 2026

CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: July 27, 2026

TO: Sarah Donoughe – NER

FROM: Kari Fleming – WY/3

SUBJECT: PFOS and PFOA Water Quality-Based Effluent Limitations for Phillips Plating Corporation -WPDES Permit No. (WI-0041149) in Price County

This is in response to your request for an evaluation of the need for PFOS and PFOA limitations for the Phillips Plating Corporation in Price County. This primary industrial facility discharges to Elk Lake, located in the Elk River Watershed in the Upper Chippewa River Basin.

The current permit, effective since April 2024, has monitoring only for PFOS and PFOA. The following review is based on new regulations which are now in effect throughout the state of Wisconsin and recommendations are made in accordance with chapters NR 102, 104, 105, 106, 207, and 217 of the Wisconsin Administrative Code, where applicable.

Receiving Water Information

- Name: Elk Lake
- Classification: Warm Water Sport Fish (WWSF) community, non-public water supply.
- Flow: A ten-to-one dilution ratio will be used for calculating effluent limitations based on chronic or long-term impacts, in accordance with s. NR 106.06(4)(b)2, Wis. Adm. Code, because the receiving water does not exhibit a unidirectional flow at the point of discharge.

Effluent Information

- Flow: Max Annual Average Flow = 0.0229 MGD (million gallons per day)
  For reference, the actual average flow from January 2024 to March 2026 was 0.011 MGD, including zero flow days.
- Effluent characterization: This facility is categorized as a primary industry.

The following table lists the statistics for effluent PFOS and PFOA levels from April 2024 through May 2026. Results from April 2024 through June 2024 were not included in the statistics calculations, as it was determined that the results were not representative due to sample collection errors and improper limits of qualification.

	PFOS ng/L	PFOA ng/L
Mean*	1.064	0
Std	4.38	N/A
Sample Size	25	25
Range	<1.3-13	<1.3-<2.6

*Results below the level of detection (LOD) were included as zeroes in calculation of average.

Water Quality Based Limit – PFOS and PFOA

Administrative rules for PFOS and PFOA took effect on August 1, 2022. These rule revisions include additions to ch. NR 102 (s. NR 102.05), Wis. Adm. Code, which establish PFOS and PFOA standards for surface waters. Revisions to ch. NR 106 (s. NR 106, Subchapter VIII), Wis. Adm. Code establish

procedures for determining water quality based effluent limits for PFOS and PFOA, based on the applicable standards in ch. NR 102, Wis. Adm. Code.

PFOS

Due to PFOS being a bioaccumulating compound of concern (BCC), no mixing zone is allowed pursuant to s. NR 106.98(4), Wis. Adm. Code. Therefore, the effluent limit for PFOS is set equal to criterion (8 ng/L).

PFOA

The conservation of mass equation is described in s. NR 106.06(4)(b)2. Wis. Adm. Code, and includes variables of water quality criterion (WQC) and upstream PFOA concentrations (Cs) provided below.

$$\text{Limitation} = 11(\text{WQC}) - 10(\text{Cs})$$

Where:

WQC = 95 ng/L for Elk Lake

Cs = background concentration of PFOA in the receiving water pursuant to s. NR 106.06(4)(e), Wis. Adm. Code

After substituting the appropriate variables, the calculated PFOA limit is 1,045 ng/L.

Reasonable Potential Determination

In accordance with s. NR 106.98(4)(b), Wis. Adm. Code, **the discharge does not have reasonable potential to cause or contribute to an exceedance of the water quality criterion for PFOS** because the arithmetic average of reported effluent PFOS data is less than 1/5th the calculated WQBEL (8 ng/L). Therefore, **a WQBEL is not required.**

The discharge does not have reasonable potential to cause or contribute to an exceedance of the water quality criterion for PFOA because the arithmetic average of reported effluent PFOS data is less than 1/5th the calculated WQBEL (1,045 ng/L). Therefore, **a WQBEL is not required.**

Conclusions

The discharge has no reasonable potential to cause or contribute to an exceedance of the water quality criterion for PFOS nor PFOA. Therefore, no WQBELs are required.

Pursuant to s. NR 205.066, Wis. Adm. Code, the department may specify the monitoring frequency for PFOS and PFOA on a case-by-case basis after the initial 24 months of sampling. **After a review of the available data, the department has determined that it is warranted to reduce the sampling frequency at sample point 101 in this case to every other month.**

If there are any questions or comments on these recommendations, please contact Amy Garbe by telephone at (608) 716-9968 or by email at Amy.Garbe@wisconsin.gov.

Attachments (1) – PFOS and PFOA Data

PREPARED BY: Amy Garbe date: 7/27/26

Amy Garbe, P.E., Wastewater Engineer

cc: Arthur Ryzak, Basin Engineer – NOR/Ladysmith
Nate Willis, P.E., PFAS Implementation Coordinator – CO