

Permit Fact Sheet

General Information

Permit Number:	WI-0033286-10-1 *Modification
Permittee Name:	Payne and Dolan, Inc. - Capitol Sand & Grave
Address: City/State/Zip	Facility is located at: 8355 Stagecoach Rd Cross Plains WI 53528
Discharge Location:	at Outfall 001 which is located 100 feet south of Stagecoach Road bridge on Black Earth Creek.
Payne and Dolan Receiving Water:	Black Earth Creek in the Black Earth Watershed in the Lower Wisconsin River Basin in Dane County
StreamFlow (Q _{7,10}):	The 7-Q10 and 7-Q2 values are from USGS for Black Earth Creek at Stagecoach Road near Cross Plains, WI (drainage area = 9.53 mi ² , USGS station # 054064509. New flows were estimated on 7/13/2023. See WQBEL for monthly values.
Stream Classification:	Coldwater community, non-public water supply, outstanding resource water (ORW)

Facility Description

Payne and Dolan, Inc. operates a gravel and sand processing operation at site #80328, Capitol Sand & Gravel. Payne and Dolan, Inc. purchased the site on July 27, 2018. Mined stone is crushed and washed and sized for various construction projects. The mining activities have formed a gravel pit filled with groundwater and precipitation. The water within the gravel pit is periodically pumped down to maintain the water level and prevent flooding in the crushing operational area. The discharge of untreated gravel pit effluent through Outfall 001 to Black Earth Creek is covered by this permit.

Modification-1 completed to reduce the sampling frequency for DO, pH, and TSS from quarterly to semiannually (1/6 Months), with at least one sample taken during April – October and at least one sample taken during November – March. The reduction in sampling frequency was requested by the permittee after completion of one year of data collection. The department determined reduced monitoring frequency is appropriate due to the level of data variability and consistent compliance with limitations.

The modification also adjusted the compliance schedule for the temperature limits, extended the deadline for compliance and adding additional required actions.

Changes highlighted in light blue.

Substantial Compliance Determination

Enforcement During Last Permit:

Either or both October and November effluent temperature limit violations occurred in 2018 through 2022. Follow-up with the industry occurred and a change in operations was discussed to achieve compliance with effluent temperature. Temperature and flow data from January 2021 through March 2023 triggered April and June through August temperature limits in the current permit. A compliance schedule is included for re-evaluating the new temperature limits and developing a plan to comply with all effluent temperature limits remaining after the department's re-evaluation.

After a desk top review of all discharge monitoring reports, and a site visit on June 5, 2023, this facility has been found to be in substantial compliance with their current permit.

Sample Point Designation		
Sample Point Number	Discharge Flow, Units, and Averaging Period	Sample Point Location, WasteType/sample Contents and Treatment Description (as applicable)
001	<p>2018 to 2023 = Annual average = 2.66 MGD (Million Gallons per Day)</p> <p>For reference, the actual average flow from January 2021 through March 2023 (a period used because it is representative of current conditions), excluding zero flow days, was 2.30 MGD.</p>	<p>Representative samples of untreated gravel pit effluent shall be collected at Outfall 001 which is located 100 feet south of Stagecoach Road bridge on Black Earth Creek. Monitoring requirements and limitations specified below are in effect whenever discharge occurs.</p>

1 Surface Water - Proposed Monitoring and Limitations

Sample Point Number: 001- Gravel Pit Effluent

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Calculated	
Dissolved Oxygen	Daily Min	6.0 mg/L	1/6 Months	Grab	Limit effective April 1 to October 31. Two samples annually with one sample taken April – October and one sample taken November – March.
Dissolved Oxygen	Daily Min	7.0 mg/L	1/6 Months	Grab	Limit effective November 1 to March 31. Two samples annually with one sample taken April – October and one sample taken November – March.
pH Field	Daily Min	6.0 su	1/6 Months	Grab	Two samples annually with one sample taken April – October and one sample taken November – March.
pH Field	Daily Max	9.0 su	1/6 Months	Grab	Two samples annually with one sample taken April – October and one sample taken November – March.
Temperature Maximum	Daily Max	72 deg F	Daily	Continuous	Limit effective in June per the Temperature Limits

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
					compliance schedule.
Temperature Maximum	Daily Max	73 deg F	Daily	Continuous	Limit effective July and August per the Temperature Limits compliance schedule.
Temperature Maximum	Weekly Avg	57 deg F	Daily	Continuous	Limit effective in April per the Temperature Limits compliance schedule.
Temperature Maximum	Weekly Avg	67 deg F	Daily	Continuous	Limit effective in June and July per the Temperature Limits compliance schedule.
Temperature Maximum	Weekly Avg	65 deg F	Daily	Continuous	Limit effective in August per the Temperature Limits compliance schedule.
Temperature Maximum	Weekly Avg	53 deg F	Daily	Continuous	Limit effective in October upon permit reissuance.
Temperature Maximum	Weekly Avg	48 deg F	Daily	Continuous	Limit effective in November upon permit reissuance.
Suspended Solids, Total		mg/L	1/6 Months	Grab	Two samples annually with one sample taken April – October and one sample taken November – March.
Phosphorus, Total		mg/L	Monthly	Grab	Monitoring required in 2027 only.

Changes from Previous Permit

Monitoring Frequencies changes:

Dissolved oxygen monitoring increased to quarterly.

pH monitoring increased to quarterly.

Temperature monitoring increased to daily.

Total Suspended Solids monitoring increased to quarterly.

Total Phosphorus monitoring increased to monthly in 2027 only.

Modification -1: Sample frequency for DO, pH and TSS reduced from Quarterly to 1/6 Months (semi-annually).

The temperature compliance schedule has been updates with new dates for compliance and updated action steps.

Explanation of Limits and Monitoring Requirements

Water Quality Based Limits

Refer to the QBEL memo for the detailed calculations, prepared by the Water Quality Bureau dated August 25, 2023 used for this reissuance.

Industrial Effluent Limits –In accordance with the federal regulation 40 CFR 122.45(d), limits in this permit are to be expressed as daily maximum and monthly average limits whenever practicable. The recommended limits meet the expression of limits requirements in ss. NR 106.07 and NR 205.065(7), Wis. Adm. Codes, and additional limits are not required.

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 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 an increase in monitoring frequency is warranted due to:

- Temperature maximum – matching the permit to the type of sampling used at the facility
- Dissolved Oxygen – the lack of data to support a lower monitoring frequency with a vulnerable fishery downstream
- pH – lack of data to support a lower monitoring frequency
- Total suspended solids – lack of data to support an evaluation of potential to exceed a limitation or support a lower monitoring frequency
- Total phosphorus - lack of data to support an evaluation of potential to exceed a limitation in the QBEL memo for the next reissuance

If the permittee believes the facility should be eligible for a lower monitoring frequency based on performance during the permitted term, they may request a reduction with their next permit application.

PFOS and PFOA-

NR 106 Subchapter VIII – Permit Requirements for PFOS and PFOA Dischargers became effective on August 1, 2022. Pursuant to s. NR 106.98(3)(b), Wis. Adm. Code, the department evaluated the need for PFOS and PFOA monitoring. Based on information available at the time the proposed permit was drafted, the department has determined the permittee does not need to sample for PFOS or PFOA as part of this permit reissuance. The department may re-evaluate the need for sampling at the next permit reissuance if new information becomes available that suggests PFOS or PFOA may be present in the discharge.

Dissolved Oxygen and pH (field analyses)

Testing for these parameters should be performed within 15 minutes after collection.

THERMAL RULES – Surface water standards for temperature became effective October 1, 2010 and are detailed in NR 102 – Water Quality Standards for Temperature and NR 106 – Effluent Limits for Temperature. Calculations were performed using the monthly low flows estimated by USGS on July 13, 2023. It should also be noted higher effluent flow rates do not impact the thermal limit recommendations as most limits are already equal to criteria.

1/6 Months Sampling Frequency - The sampling frequency of 1/6 Months requires two samples per calendar year. The permittee shall ensure at least one sample is taken during April – October and one sample take November – March to provide representative data of the operations through the calendar year.

Temperature - The temperature compliance schedule has been updated to include additional required action steps and an extended timeline for compliance with the additional temperature limits. The permittee will complete studies/actions needed to determine compliance methods for temperature. These studies may also include compliance options for the

temperature limits currently in effect however, additional evaluation and approvals are required for limits that are in effect.

2 Schedules

2.1 Temperature Limits (Industrial Facilities)

This compliance schedule requires the permittee to achieve compliance by the specified date.

Required Action	Due Date
Report on Effluent Discharges: Submit a report on effluent temperature with conclusions regarding compliance. If the Department determines that because of data variability, 24 months of monitoring data is required to determine the need for temperature limits, the Department will so notify the permittee in writing and all dates in the permit schedule will be extended by 12 months. Informational Note - Refer to the Surface Water subsection regarding 'Determination of Need for Effluent Limits' for information concerning a Department determination on the need for limits and pursuing re-evaluation of limits per NR 106 Subchapters V & VI or NR 102.26, Wis. Adm. Code.	01/01/2025
Action Plan: Submit a study plan for approval for collecting data for site specific ambient temperature data or other study as proposed. The plan should include information on proposed sample locations, frequency of data collection, and methods used to record and collect data.	07/01/2025
Implement Plan: Start collecting data for site specific ambient temperature or other approved study per the approved study plan.	12/31/2025
Progress Report: Submit a progress report on the implementation of the temperature study plan. The progress report shall include sample locations, sample dates and times, recorded results, along with a summary of any challenges encountered and proposed modifications to the study plan, if applicable.	12/31/2026
Report on Temperature Study: Site-Specific Temperature Evaluation Report: Submit a report with at least 2 years of data and other requirements of s. NR 102.26(1), Wis. Adm. Code or other means of compliance if applicable.	12/31/2027
Complete Actions and Achieve Compliance: Complete actions necessary to achieve compliance with effluent temperature limitations at sample points 001 and 002.	12/31/2028

2.2 Permit Application Phosphorus Monitoring

Permittee will provide 12 phosphorus data points for the reissuance application.

Required Action	Due Date
Phosphorus Monitoring: The permittee shall collect 12 samples for phosphorus in 2027 to provide data for the reissuance application. If monthly monitoring will not provide at least 12 samples due to months without discharge, the permittee may sample more frequently than monthly but no closer than 10 days apart.	12/31/2027

2.3 Permit Application Submittal

The permittee shall file an application for permit reissuance in accordance with NR 200, Wis. Adm. Code.

Required Action	Due Date
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Permit Application Submittal: Submit a complete permit application to the Department no later than 180 days prior to permit expiration.	07/04/2028
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Explanation of Schedules

Temperature maximum limits in April, June, July, and August may receive a compliance schedule since this is the first imposition of limits during those months. Modification -1 changed the schedule has been updated to extend the final compliance data and include required steps to fully evaluate compliance options and the current temperatures in stream.

Phosphorus monitoring required in a schedule to ensure the permittee will have 12 data points to submit for their reissuance application.

The Permit Application Submittal was included to provide a reminder for providing the application to the department in a timely manner.

Special Reporting Requirements

None

Attachments:

Water Quality Based Effluent Limits memo from Sarah Luck, dated August 25, 2023.

Proposed Expiration Date:

12/31/2028

Justification Of Any Waivers From Permit Application Requirements

The facility was exempted from metals testing for their reissuance application. The facility will be required to perform metals testing for their next reinsurance application.

Prepared By:

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Date: 9/14/2023

Modification Prepared by:
Jennifer Jerich, Wastewater Specialist
Modification Date: 1/15/2025