

Modified Permit Fact Sheet

General Information

Permit Number:	WI-0003204-10-0
Permittee Name:	Dunn Paper - Ladysmith, LLC (formally Cellu Tissue – City Forest, LLC dba Clearwater Paper – Ladysmith)
Address:	1215 East Worden Ave
City/State/Zip:	Ladysmith WI 54848
Discharge Location:	Outfall 001, located ¼ mile SE of the Flambeau River Dam in Ladysmith, WI, on the west bank. Latitude 45.4621, Longitude 91.0806
Intake Location:	Along the Ladysmith dam, 45.463960 latitude, 91.084224 longitude
Receiving Water:	Flambeau River in the Lower Flambeau River Watershed (UC07) in the Upper Chippewa River Basin.
StreamFlow (Q _{7,10}):	409 cfs
Stream Classification:	Warm water sport fish community. Non- Public water supply.

Facility Description

Dunn Paper is a paper manufacturing plant in Ladysmith, WI that produces tissue products from recycled paper fibers. The mill is a De-Ink facility that produces an annual average of 175 tons per day (TPD) of tissue products as well as 30 TPD of wet lap paper to be used as furnish for Dunn Paper and other mills. The mill consists of a river water intake structure, intake water clarifier, two paper machines, a wastewater treatment plant (WWTP), and sludge handling equipment.

Dunn Paper's paper fiber recovery process consists of repulping post-consumer wastepaper, mill broke, and coated book stock bundles into a slurry. The paper slurry is then processed with centrifugal cleaners, screens, and dissolved air flotation (DAF) units to separate and remove contaminants. The repulping and cleaning steps are followed by a reduction step to further eliminate dyes and brighten the pulp for the paper machines. The process produces a commodity grade tissue or specialty napkin product. Dunn Paper's paper making process sends noncontact cooling water, process wastewater, and boiler blowdown year round to the WWTP. The mill is investigating the potential for making some changes to improve water reclamation inside the mill. If this occurs, it is possible that effluent discharge will be reduced.

The facility applied for an alternative technology-based phosphorus limitation, however after further review and discussion, the facility and the department have agreed that it is not appropriate at this time as both parties agree that the facility is likely able to meet the rolling 12-month average when the limit becomes effective 12 months into the permit.

Reason for Modification

The schedule that is included when a permittee is initially required to monitor effluent PFAS/PFOA was inadvertently omitted. The additional language has been highlighted.

Sample Point Designation	
Sample Point Number	Sample Point Location, Waste Type/sample Contents and Treatment Description (as applicable)
701	Sample point for untreated Flambeau River water taken into the paper mill to be used as non-contact cooling water and process water.

Sample Point Designation	
Sample Point Number	Sample Point Location, Waste Type/sample Contents and Treatment Description (as applicable)
001	Process water is coarse-screened, then sent to primary settling clarifier. Primary effluent is further treated in two (1.0 million gallon and 0.5 million gallon) aeration basins. The mill wastewater is nutrient-deficient, so nitrogen and phosphorus are added to sustain biological treatment. The 0.5 million gallon basin has fine bubble diffusers and the 1.0 million gallon basin has surface aeration for both mixing and supplying dissolved oxygen. Primary and secondary solids are combined with the mill rejects in a blend tank that is then dewatered on a gravity belt thickener, followed by a belt filter press. Dewatered filtrate is returned to the primary influent wet well. Effluent is sampled using a Tru-test liquid sampler at a point following final clarification but before discharge to the Flambeau River. Flow is monitored by a Parshall flume with ultrasonic readings.
002	The dewatered mixture of dissolved air flotation deink sludge, wastewater treatment plant primary and secondary sludge for land application/spreading on Department approved sites. waste is sampled off of the gravity belt press discharge. Waste is hauled by Russ Thompson Excavating Inc. The permittee has been applying to DATCP approved sites.
102	Sample point for reporting results of analysis of the field blank sample collected at the same time as the treated wastewater effluent sample.

1 Influent – Cooling Water Intake Structure - Proposed Monitoring

Sample Point Number: 701- Flambeau River Intake

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

Changes to the Modified Permit

There are no changes from the permit reissued April 1, 2024.

Explanation of Limits and Monitoring Requirements

No additional explanations are required for this modified permit. Please refer to the factsheet created for the permit reissued April 1, 2024 for initial limit and monitoring descriptions.

2 Inplant - Proposed Monitoring and Limitations

Sample Point Number: 102- 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 to the Modified Permit

There are no changes from the permit reissued April 1, 2024.

Explanation of Limits and Monitoring Requirements

No additional explanations are required for this modified permit. Please refer to the factsheet created for the permit reissued April 1, 2024 for initial limit and monitoring descriptions.

3 Surface Water - Proposed Monitoring and Limitations

Sample Point Number: 001- WWTP Effluent

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Continuous	
BOD5, Total	Daily Max	2,743 lbs/day	5/Week	24-Hr Comp	
BOD5, Total	Monthly Avg	1,492 lbs/day	5/Week	24-Hr Comp	
Suspended Solids, Total	Daily Max	3,320 lbs/day	5/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	1,699 lbs/day	5/Week	24-Hr Flow Prop Comp	
pH (Minimum)	Daily Min	5.0 su	Daily	Continuous	
pH (Maximum)	Daily Max	9 su	Daily	Continuous	
pH Total Exceedance Time Minutes	Monthly Total	446 minutes	Daily	Calculated	
Temperature		deg F	Daily	Grab	
Phosphorus, Total	Rolling 12 Month Avg	1.0 mg/L	Weekly	24-Hr Comp	
Mercury, Total Recoverable	Monthly Avg	6.8 ng/L	Quarterly	Grab	
Mercury, Total	Monthly Avg	32 mg/day	Quarterly	Grab	

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Recoverable					
Nitrogen, Ammonia (NH ₃ -N) Total	Daily Max	20 mg/L	Weekly	24-Hr Comp	
Nitrogen, Ammonia (NH ₃ -N) Total	Monthly Avg	20 mg/L	Weekly	24-Hr Comp	
PFOS		ng/L	Monthly	Grab	
PFOA		ng/L	Monthly	Grab	
Acute WET	Daily Max	1.0 TUa	See Listed Quarters	24-Hr Comp	

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There are no changes from the permit reissued April 1, 2024.

Explanation of Limits and Monitoring Requirements

No additional explanations are required for this modified permit. Please refer to the factsheet created for the permit reissued April 1, 2024 for initial limit and monitoring descriptions.

4 Land Application - Sludge/By-Product Solids (industrial only)

Sampling Point (Outfall) 002 - WWTP Sludge

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Solids, Total		Percent	1/ 6 Months	Grab Comp	
pH Field		su	1/ 6 Months	Grab Comp	
Nitrogen, Total Kjeldahl		mg/kg	1/ 6 Months	Grab Comp	
Nitrogen, Ammonia (NH ₃ -N) Total		mg/kg	1/ 6 Months	Grab Comp	
Phosphorus, Water Extractable		mg/kg	1/ 6 Months	Grab Comp	
Phosphorus, Total		mg/kg	1/ 6 Months	Grab Comp	
Potassium, Total Recoverable		mg/kg	1/ 6 Months	Grab Comp	
Calcium Dry Wt		mg/kg	1/ 6 Months	Grab Comp	

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Zinc Dry Wt		mg/kg	1/ 6 Months	Grab Comp	
PCB Total Dry Wt		mg/kg	1/ 6 Months	Grab Comp	
Dioxin, 2,3,7,8-TCDD Dry Wt		ng/kg	1/ 6 Months	Grab Comp	
Furan, 2,3,7,8-TCDF Dry Wt		ng/kg	1/ 6 Months	Grab Comp	
Chloride		mg/kg	Annual	Grab Comp	
Lead, Dry Wt		mg/kg	Annual	Grab Comp	
Copper, Dry Wt		mg/kg	Annual	Grab Comp	
Nickle, Dry Wt		mg/kg	Annual	Grab Comp	
Cadmium Dry Wt		mg/kg	Annual	Grab Comp	
Chromium, Dry Wt		µg/kg	Annual	24-Hr Flow Prop Comp	
Dioxin, 2,3,7,8-TCDD TE		ng/kg	Once	Calculated	
Priority Pollutant Scan			Once	Grab	As specified in ch. NR 215.03 (1-6), Wis. Adm. Code (excluding asbestos). Use grab samples for mercury, cyanide and VOCs. Use 24-hr flow proportional samples for all other parameters.
PFAS Dry Wt			1/ 6 Months	Grab	Perfluoroalkyl and Polyfluoroalkyl Substances based on updated DNR PFAS List. See PFAS Section below for more information.
Dioxins & Furans (all congeners)			Once	Composite	As specified in ch. NR 106.115, Wis. Adm. Code.

Changes to the Modified Permit

There are no changes from the permit reissued April 1, 2024.

Explanation of Limits and Monitoring Requirements

No additional explanations are required for this modified permit. Please refer to the factsheet created for the permit reissued April 1, 2024 for initial limit and monitoring descriptions.

5 Schedules

5.1 Land Application Management Plan

A management plan is required for the land application system.

Required Action	Due Date
Land Application Management Plan: Submit an update to the management plan to optimize the land application system performance and demonstrate compliance with Wisconsin Administrative Code NR 214.	01/01/2025

5.2 Annual Certification Statement

Permittees not using chlorophenolic – containing biocides shall certify to the department that they are not using these biocides.

Required Action	Due Date
Annual Certification Statement: The permittee shall submit a signed annual certification statement to the Department by January 31st of the following year that the facility did not use chlorophenolic – containing biocides for the previous year. If the facility plans to start using chlorophenolic – containing biocides then the facility must notify the department in advance so the permit may be modified prior to discharging chlorophenolic – containing biocides.	January 31 of each year

5.3 Land Treatment Annual Report

The permittee must submit an annual report summarizing the cumulative total metals, TDE, nitrogen, chloride, and PCB loadings. To allow the Department to electronically track submittals, the submittal dates are included as a schedule of compliance.

Required Action	Due Date
Submit Annual Cumulative Loadings Report #1: The permittee must submit a Report meeting the requirements of Section 4.6.4, due by January 31st of the previous calendar year.	01/31/2025
Submit Annual Cumulative Loadings Report #2: The permittee must submit a Report meeting the requirements of Section 4.6.4, due by January 31st of the previous calendar year.	01/31/2026
Submit Annual Cumulative Loadings Report #3: The permittee must submit a Report meeting the requirements of Section 4.6.4, due by January 31st of the previous calendar year.	01/31/2027
Submit Annual Cumulative Loadings Report #4: The permittee must submit a Report meeting the requirements of Section 4.6.4, due by January 31st of the previous calendar year.	01/31/2028
Submit Annual Cumulative Loadings Report #5: The permittee must submit a Report meeting the requirements of Section 4.6.4, due by January 31st of the previous calendar year.	01/31/2029

5.4 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).	09/01/2025

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.	
<p>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.</p> <p>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.</p> <p>The permittee shall also submit a request to the department to evaluate the need for a PFOS/PFOA minimization plan.</p> <p>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.</p> <p>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.</p>	04/01/2026

Changes to the Modified Permit

The schedule **PFOS/PFOA Minimization Plan Determination of Need** has been added to the modified permit. It is included when a permittee begins monitoring effluent PFOS/PFOA. Permit requirements for PFOS and PFOA dischargers per ch. NR 106 Subchapter VIII became effective on August 1, 2022. Section NR 106.98, Wis. Adm. Code, specifies steps to generate data 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.

All other schedules remain the same. Please refer to the factsheet created for the permit reissued April 1, 2024 for explanations.

Expiration Date

The expiration date remains March 31, 2029.

Modification Prepared By: Sheri Snowbank, Wastewater Specialist

Date: June 4, 2025