

Public Noticed Draft WCWBF Permit Fact Sheet

General Information

Permit Number	WI-0058726-07-0
Permittee Name and Address	West Central Wisconsin Biosolids Facility 677 Bio Ave, Ellsworth, WI 54011
Permitted Facility Name and Address and Discharge Location	West Central Wisconsin Biosolids Facility 677 Bio Ave, Ellsworth, WI
Permit Term	October 01, 2026 to September 30, 2031
Receiving Water	GWs of St. Croix and L Chipp River Basins in Trimble River and Isabelle Creek Watershed of Lower Chippewa River Basin in Pierce County
Plant Classification	C - Biological Solids/Sludges
Approved Pretreatment Program?	Not Applicable

Facility Description

The West Central Wisconsin Biosolids Facility (WCWBF) processes sludge from 20 communities using the Schwing Bioset Process. Incoming raw sludge is weighed using a truck scale prior to being discharged through one of the following screens, a Lakeside rotomat screen and a Huber drum screen. Screenings are landfilled and sludge that flows through the screen is discharged to one of two sludge storage tanks. Sludge from the sludge tank is pumped to a centrifuge where it is dewatered. The centrate (water that is separated from the sludge in the centrifuge) is hauled back to the municipalities that bring their sludge to the WCWBF for further treatment. The cake sludge, with solids concentrations between eighteen and twenty-five percent, is mechanically mixed with calcium oxide (quicklime) to achieve a pH of greater than or equal to twelve standard units. Sulphamic acid is added and mixed into the sludge/quicklime blend to promote an exothermic reaction which increases the temperature of the mixture to equal to or greater than 55 degrees Celsius. The solids are held in the reactor tube for at least forty minutes, at a minimum temperature of 55 degrees, an ammonium concentration exceeding 0.5 mg ammonium/g of total solids (dry weight) and a pressure exceeding 4.0 psi to create a Class A Exceptional Quality Biosolids Product. The Schwing Bioset Product is stored in a covered building during the winter and is land applied by label, primarily on agricultural land, during the spring, summer, and fall. The facility processes about 2,000 dry US tons of sludge annually. In 2025 the facility processed about 2156 dry US tons of sludge.

Changes proposed for the upcoming permit term include: 1) new sample points for the Class A sludge treatment system, 2) Radium 226 annual sludge sampling, 3) PFAS annual sludge sampling has been included pursuant to ss. NR 214.18(5)(b) and NR 204.06(2)(b)9., Wis. Adm. Code to quantitate risk, and 4) an updated sludge management plan.

Substantial Compliance Determination

Enforcement During Last Permit: While there were no enforcement actions this permit term, West Central Wisconsin Biosolids Facility (WCWBF) had some missing data and a late report. However, this has been addressed. After a desktop review of all discharge monitoring reports, land app reports, compliance schedule, and a compliance inspection on September 10, 2025, this facility has been found to be in substantial compliance with their current permit.

Compliance determination made by Adebawale Adesanwo on 04/13/2026.

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)
101	New sample point to be self-monitored	Electronic Log: Maintain a log of the continuous temperature monitoring of the sludge at various locations in the Schwing Bioset Reactor (Sludge requires >55 deg C for >40 minutes) and the pressure of the reactor (Reactor requires 27 kPA (4 psi) of constant pressure). This sample point is self-monitored and records kept on site and available upon request.
001	2156 Dry tons (2025) 1955 MT (2025)	PFRP Equivalent, Class A, EQ Sludge from Storage: Class A, exceptional quality cake sludge from the treatment of liquid sludge through dewatering with a centrifuge, Schwing Bioset Reactor, and transferred to an on-site building and stored in piles. Representative samples shall be collected from the stored biosolids piles prior to immediately being bagged, distributed or land applied as exceptional quality sludge. The permittee shall sample sludge for Lists 1, 2, 3 and 4 every 60 days; Lists 3 and 4 shall be monitored continuously where appropriate. Sludge shall be reanalyzed for Lists 1, 2, 3 and 4 anytime a change in feed sludge, treatment processes or operational procedure occurs. The permittee shall monitor sludge for Radium 226 and PFAS annually, and for PCBs once during 2028. All pathogen control samples shall be discrete samples. Each pathogen control sample shall meet the pathogen limit to prove effective pathogen treatment. Monitoring results for each sampling event shall be reported on a bimonthly basis. If Class B sludge is produced instead, the permittee shall comply the Class B requirements in Lists 3 and 4 and the report the total amount land applied to each department approved site on the "Annual Land Application Report" Form 3400-055.
011	New sample point	PFRP Equivalent, Class A EQ Sludge immediately after the sewage sludge treatment process: Class A, exceptional quality cake sludge from the treatment of liquid sludge through dewatering with a centrifuge and Schwing Bioset Reactor. The permittee shall collect representative samples immediately after the Schwing Bioset Reactor for Pathogen Density. Fecal coliform density or salmonella density shall be satisfied immediately after the treatment process per List 3 Pathogen Control for Class A Sludge table. All pathogen control samples shall be discrete samples. Each pathogen control sample shall meet the pathogen limit to prove effective pathogen treatment. The permittee shall collect representative samples immediately after the Schwing Bioset Reactor for Ammonium Concentration (NH ₄) levels (>05.mg/g total dry weight) and recorded onsite.
012	New sample point	PFRP Equivalent, Class A EQ Sludge pH (2-Hrs): Class A, exceptional quality cake sludge from the treatment of liquid sludge

Sample Point Designation		
Sample Point Number	Discharge Flow, Units, and Averaging Period	Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)
		through dewatering with a centrifuge and Schwing Bioset Reactor and transferred by conveyor into small piles prior to being transferred to the large storage piles. The permittee shall measure representative samples of the sludge from the piles after treatment and the conveyor belt prior to being stacked for pH after 2 hours per requirements in the List 4 Vector Attraction Reduction for Class A Sludge table.
013	New sample point	PFRP Class A EQ Sludge pH (24-Hrs): Class A, exceptional quality cake sludge from the treatment of liquid sludge through dewatering with a centrifuge and Schwing Bioset Reactor and transferred by conveyor into small piles prior to being transferred to the large storage piles. The permittee shall measure representative samples of the sludge from the piles after treatment and the conveyor belt prior to being stacked for pH after 24 hours per requirements in the List 4 Vector Attraction Reduction for Class A Sludge table.

Permit Requirements

1 Inplant - Monitoring and Limitations

1.1 Sample Point Number: 101- Electronic Log

Changes from Previous Permit:

A new sample point to be self-monitored.

1.1.1 Explanation of Limits and Monitoring Requirements

Electronic Log – This is a new sample point to be self-monitored to aid in the operations of the facility.

2 Land Application - Monitoring and Limitations

Municipal Sludge Description						
Sample Point	Sludge Class (A or B)	Sludge Type (Liquid or Cake)	Pathogen Reduction Method	Vector Attraction Method	Reuse Option	Amount Reused/Disposed (Dry Tons/Year)
001	A	Cake	Fecal Coliform or Salmonella Density /Temp/Time, Alkaline Treatment	pH Adjustment / Incorporation	Bagged	2156 Dry tons (2025)

Municipal Sludge Description						
Sample Point	Sludge Class (A or B)	Sludge Type (Liquid or Cake)	Pathogen Reduction Method	Vector Attraction Method	Reuse Option	Amount Reused/Disposed (Dry Tons/Year)
011	A	Cake	Fecal Coliform or Salmonella Density /Temp/Time, Alkaline Treatment	pH Adjustment / Incorporation	Bagged	New sample point
012	A	Cake	Fecal Coliform or Salmonella Density /Temp/Time, Alkaline Treatment	pH Adjustment / Incorporation	Bagged	New sample point
013	A	Cake	Fecal Coliform or Salmonella Density /Temp/Time, Alkaline Treatment	pH Adjustment / Incorporation	Bagged	New sample point
Does sludge management demonstrate compliance? Yes						
Is additional sludge storage required? Facility has adequate storage for its operations.						
Is Radium-226 present in any sources to the facility at a level greater than 2 pCi/liter? Yes, Spring Valley. If yes, special monitoring and recycling conditions will be included in the permit to track any potential problems in land applying sludge from this facility described in the Standard Requirements Section of the permit.						
Is a priority pollutant scan required? Not applicable.						

2.1 Sample Point Number: 001- PFRP Class A EQ Sludge Storage

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Solids, Total		Percent	1/ 2 Months	Composite	
Arsenic Dry Wt	Ceiling	75 mg/kg	1/ 2 Months	Composite	
Arsenic Dry Wt	High Quality	41 mg/kg	1/ 2 Months	Composite	
Cadmium Dry Wt	Ceiling	85 mg/kg	1/ 2 Months	Composite	
Cadmium Dry Wt	High Quality	39 mg/kg	1/ 2 Months	Composite	
Copper Dry Wt	Ceiling	4,300 mg/kg	1/ 2 Months	Composite	
Copper Dry Wt	High Quality	1,500 mg/kg	1/ 2 Months	Composite	
Lead Dry Wt	Ceiling	840 mg/kg	1/ 2 Months	Composite	
Lead Dry Wt	High Quality	300 mg/kg	1/ 2 Months	Composite	
Mercury Dry Wt	Ceiling	57 mg/kg	1/ 2 Months	Composite	

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Mercury Dry Wt	High Quality	17 mg/kg	1/ 2 Months	Composite	
Molybdenum Dry Wt	Ceiling	75 mg/kg	1/ 2 Months	Composite	
Nickel Dry Wt	Ceiling	420 mg/kg	1/ 2 Months	Composite	
Nickel Dry Wt	High Quality	420 mg/kg	1/ 2 Months	Composite	
Selenium Dry Wt	Ceiling	100 mg/kg	1/ 2 Months	Composite	
Selenium Dry Wt	High Quality	100 mg/kg	1/ 2 Months	Composite	
Zinc Dry Wt	Ceiling	7,500 mg/kg	1/ 2 Months	Composite	
Zinc Dry Wt	High Quality	2,800 mg/kg	1/ 2 Months	Composite	
pH Field	Daily Min	11.5 su	1/ 2 Months	Grab	
Nitrogen, Total Kjeldahl		Percent	1/ 2 Months	Composite	
Nitrogen, Ammonium (NH ₄ -N) Total		Percent	1/ 2 Months	Composite	
Phosphorus, Total		Percent	1/ 2 Months	Composite	
Phosphorus, Water Extractable		% of Tot P	1/ 2 Months	Composite	
Potassium, Total Recoverable		Percent	1/ 2 Months	Composite	
PCB Total Dry Wt	Ceiling	50 mg/kg	Once	Composite	See PCB subsection below.
PCB Total Dry Wt	High Quality	10 mg/kg	Once	Composite	See PCB subsectin below.
Radium 226 Dry Wt		pCi/g	Annual	Composite	
PFOA + PFOS		ug/kg	Annual	Calculated	Report the sum of PFOA and PFOS. See PFAS Permit Sections for more information.
PFAS Dry Wt			Annual	Grab	Perfluoroalkyl and Polyfluoroalkyl Substances based on updated DNR PFAS List. See PFAS Permit Sections for more information.

2.1.1 Changes from Previous Permit:

Sludge 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.

Radium 226 – Monitoring is required annually.

PFAS –Monitoring is required annually pursuant to s. NR 204.06(2)(b)9., Wis. Adm. Code.

2.1.2 Explanation of Limits and Monitoring Requirements

Requirements for disposal, including land application of municipal sludge, are determined in accordance with ch. NR 204, Wis. Adm. Code. Ceiling and high-quality limits for metals in sludge are specified in s. NR 204.07(5). Requirements for pathogens are specified in s. NR 204.07(6) and in s. NR 204.07 (7) for vector attraction requirements. Limitations for PCBs are addressed in s. NR 204.07(3)(k). Radium requirements are addressed in s. NR 204.07(3)(n).

Outfall 001 remains in the permit to track the compliance and distribution of Class A, exceptional quality sludge produced from the approved equivalent process to further reduce pathogens (PFRP). The use of the exceptional quality sludge is exempt from many requirements of ch. NR 204, Wis. Adm. Code. See Section NR 204.04(3), Wis. Adm. Code, for specific exemptions from code. If the Class A cake sludge is bagged, distributed, or land applied at a later time, the sludge shall be retested for Class A fecal coliform or salmonella requirements satisfied at that time also, to ensure that regrowth of the organisms has not occurred pursuant to s. NR 204.07(6)(a)1., Wis. Adm. Code. If the facility cannot generate Class A and exceptional quality sludge, the facility shall comply with the Class B sludge requirements under this Outfall.

Per NR 204.07(6)(a), Wis., Adm. Code, to be considered exceptional quality sludge, vector attraction reduction requirement must be met prior to or at the time of meeting the Class A pathogen control requirements unless the process used to meet the vector requirements is one of either ss. NR 204.07(7)(f), (g) or (h), Wis. Adm. Code. The facility is currently using pH adjustment to satisfy the vector attraction reduction requirements under s. NR 204.07(7)(f), Wis. Adm. Code. Therefore, the vector attraction reduction requirement do not need to be met immediately following the Schwing Bioset Reactor but following the 24-hour pH adjustment process in small piles.

The frequency of monitoring for metals, nutrients, pathogen control, and vector attraction reduction requirements of the sludge is based on the amount of sludge land applied each year pursuant to s. NR 204.06(2)(c)3., Wis. Adm. Code. The facility generated and distributed 2156 dry tons in 2025. This result is between 1654 dry tons of sludge and 16540 dry tons of sludge based on Table A in s. NR 204.06(2)(c)3., Wis. Adm. Code, which results in a sampling frequency of once per 2 months. The sample frequency remains unchanged from the previous permit.

PFAS- The presence and fate of PFAS in municipal and industrial sludges is an emerging public health concern. EPA has developed a draft risk assessment to determine future land application rates and released this risk assessment in January of 2025. The department is evaluating this new information. Until a decision is made, the “Interim Strategy for Land Application of Biosolids and Industrial Sludges Containing PFAS” should be followed

Collecting sludge data on PFAS concentrations from a wide range of wastewater treatment facilities will help protect public health from exposure to elevated levels of PFAS and determine the department’s implementation of EPA’s recommendations. To quantitate this risk, PFAS sampling has been included in this WPDES permit pursuant to ss. NR 214.18(5)(b) and NR 204.06(2)(b)9., Wis. Adm. Code.

2.2 Sample Point Number: 011- PFRP Class A EQ Sludge

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Solids, Total		Percent	1/ 2 Months	Composite	

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Ammonium (NH ₄ -N) Total	Daily Min	500 mg/kg	1/ 2 Months	Composite	

2.2.1 Changes from Previous Permit:

Sludge limitations and monitoring requirements were evaluated for this permit term and a new sample point was added. See additional explanation of limits under “Explanation of Limits and Monitoring Requirements” below.

2.2.2 Explanation of Limits and Monitoring Requirements

Per s. NR 204.07(6)(a)1., Wis. Adm. Code, Pathogen or indicator organism densities.’ The required fecal coliform density or salmonella density shall be satisfied immediately after Schwing Bioset Reactor treatment process is completed.

Requirements for disposal, including land application of municipal sludge, are determined in accordance with ch. NR 204, Wis. Adm. Code. Ceiling and high-quality limits for metals in sludge are specified in s. NR 204.07(5). Requirements for pathogens are specified in s. NR 204.07(6) and in s. NR 204.07 (7) for vector attraction requirements.

2.3 Sample Point Number: 012- PFRP Class A EQ Sludge pH 2-Hr

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
pH Field	Daily Min	12 su	1/ 2 Months	Grab	

2.3.1 Changes from Previous Permit:

Sludge limitations and monitoring requirements were evaluated for this permit term and a new sample point was added. See additional explanation of limits under “Explanation of Limits and Monitoring Requirements” below.

2.3.2 Explanation of Limits and Monitoring Requirements

Per s. 204.07 (7)(f), Wis. Adm. Code, the pH of the sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for 2 hours (Sample point 012) and then at 11.5 or higher for an additional 22 hours (Sample point 013).

Requirements for disposal, including land application of municipal sludge, are determined in accordance with ch. NR 204, Wis. Adm. Code. Ceiling and high-quality limits for metals in sludge are specified in s. NR 204.07(5). Requirements for pathogens are specified in s. NR 204.07(6) and in s. NR 204.07 (7) for vector attraction requirements.

2.4 Sample Point Number: 013- PFRP Class A EQ Sludge pH 24hr

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
pH Field	Daily Min	11.5 su	1/ 2 Months	Grab	

2.4.1 Changes from Previous Permit:

Sludge limitations and monitoring requirements were evaluated for this permit term and a new sample point was added. See additional explanation of limits under “Explanation of Limits and Monitoring Requirements” below.

2.4.2 Explanation of Limits and Monitoring Requirements

Per s. 204.07 (7)(f), Wis. Adm. Code, the pH of the sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for 2 hours (Sample point 012) and then at 11.5 or higher for an additional 22 hours (Sample point 013).

Requirements for disposal, including land application of municipal sludge, are determined in accordance with ch. NR 204, Wis. Adm. Code. Ceiling and high-quality limits for metals in sludge are specified in s. NR 204.07(5). Requirements for pathogens are specified in s. NR 204.07(6) and in s. NR 204.07 (7) for vector attraction requirements.

3 Schedules

3.1 Sludge Management Plan

A sludge management plan is required to be submitted and approved by the department.

Sludge Management Plan: Submit a sludge management plan to optimize the land application system performance and demonstrate compliance with Wisconsin Administrative Code NR 204, by the Due Date. This management plan shall include sufficient detail of the sludge management program for the facility. The plan shall include separate sections for each type of sewage sludge included in this permit. The SMP shall provide standardized information for communication to operators and the department including but not limited to the following: 1) Specify information on the sludge treatment processes for each sampling point and outfall; 2) Show and describe sample point and outfall monitoring locations on a schematic and provide photos of the specific sampling points; 3) Show, describe and tabulate the monitoring requirements at each sampling point and outfall locations; 4) Show, describe and explain sampling protocols for each location listing parameters to be monitored including: a) Pollutants, b) Nutrients c) Pathogen treatment process requirements including treatment temperature, moisture content (total solids) and pathogen densities (fecal concentrations)	12/31/2026
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d) Vector Reduction appropriate for the pathogen treatment process such as but not limited to temperatures, volatile solids reduction, moisture content, etc. as required by the WPDES permit and Ch. NR 204 Wis. Adm. Code; 5) Monitoring frequencies at each sample point and outfall; 6) Analytical methods with appropriate hold times and chain-of-custody procedures; 7) Documentation relating to temperature monitoring data recording, retrieval and printing out the data when requested; 8) Storage, verification monitoring, loading, transportation and discharge details associated with all outfalls; 9) Collection, storage, disposal information for sludge detailing pickups including loading and similar details; 10) Collection, storage and disposal processes of sludge when the sludge does not meet minimum requires to meet Class A and EQ requirements. [Note: EQ and Class A are similar. Facility should explain the difference and how they will handle the material if the material meets Class A but fails to meet EQ.] 11) Identify land application sites; 12) Describe site limitations; 13) Address vegetative cover management and removal including loading to crop needs, crop harvesting; 14) Specific the availability of storage for sludge; 15) Describe the type of transportation and spreading vehicles; 16) Track site loadings to facility's land application sites; 17) Address contingency plans for adverse weather and odor/nuisance abatement; 18) Address construction contingencies when treatment equipment is out of service; and 19) Include any other pertinent information. Once approved, all sludge management activities shall be conducted in accordance with the plan. Any changes to the plan must be approved by the department prior to implementing the changes. Note: The SMP is a living document and should be designed and constructed to allow for future updates. Consider providing an overview to explain the facilities solids flow processes, then using sections and appendices to provide more details. The use of appendices to explain start up, operation and shutdown of the sludge treatment units is encouraged to show that all sludge particles meet Class A requirements. Page numbering is encouraged where each chapter or section has individual page numbers allowing sections and table of contents to be removed and replaced easily without requiring the entire document to be reprinted with new page numbers.	
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3.1.1 Explanation of Schedule

Sludge Management Plan- An up-to-date Sludge Management Plan is required that documents how the permittee will manage generated biosolids consistent with ch. NR 204, Wis. Adm. Code.

Other Comments

TBD

Attachments

Public Notice - Republican Eagle, 120 S Fourth St, Cannon Falls, MN?

Pierce County Herald, 126 S Chestnut St., Ellsworth, WI 54011-4117

Justification Of Any Waivers From Permit Application Requirements

No waivers requested or granted as part of this permit reissuance

Prepared By: Angela Parkhurst

Wastewater Specialist

Date: August 10, 2026