Permit Fact Sheet

General Information

Permit Number	WI-0002585-11-0
Permittee Name and Address	WI DNR Nevin Fish Hatchery 3911 Fish Hatchery Rd, Madison, WI 53711
Permitted Facility Name and Address	WI DNR Nevin Fish Hatchery 3911 Fish Hatchery Rd, Madison, WI 53711
Permit Term	April 01, 2026 to March 31, 2031
Discharge Location	A metal bridge downstream of the rearing ponds at the confluence of the ditches on Nine Springs Creek, directly East of the hatchery operations.
Receiving Water	Nine Springs Creek (Yahara River and Lake Mendota Watershed, LR-08 - Lower Rock River Basin) in Dane County
Stream Flow ($Q_{7,10}$)	0.59 cfs
Stream Classification	Warm Water Sport Fish (WWSF) community, non-public water supply and recreational use
Discharge Type	Existing; Continuous

Facility Description

The WI DNR Nevin Fish Hatchery produces cold water fish species (brook, brown, and rainbow trout). Trout are hatched from eggs, reared in the rearing house and spiral building, and then placed in concrete raceways and earthen ponds until the desired size has been reached prior to stocking periods. The rearing tanks, raceways, and ponds are fed by artesian water (natural springs and pumped well water). All water from the raceways and spiral building combines in a settling pond for removal of suspended solids, flows to Ponds 18 & 19, and then flows to the horseshoe settling ditch prior to discharge to the Nine Springs Creek via Outfall 001. The hatchery operates 24 hours per day, 365 days per year.

Substantial Compliance Determination

Enforcement During Last Permit: There were no formal enforcement actions taken during the previous permit term.

After a desk top review of all discharge monitoring reports, compliance schedule items, and a site visit on 8/1/2025, this facility has been found to be in substantial compliance with their current permit.

Compliance determination made by Kenzie Ostien, Wastewater Engineer, on August 20, 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)**
001	2 MGD (avg. May 2020-July 2025)	At Sampling Point 001, a representative sample shall be taken after all fish production ponds prior to the settling ditch and prior to discharge to the Nine Springs Creek.
002	N/A – outfall inactive	Fish manure landspread on site (Department approval required to activate Outfall 002 must be received prior to use).

Permit Requirements

1 Best Management Practices Requirements

1.1 Best Management Practices

A Best Management Practices (BMP) Plan is a description of the standard operating procedures and actions required to control solids, store materials, maintain the aquatic animal containment structures, perform record-keeping, train employees, closely monitor feeding, collect and dispose of waste, address transport or harvest discharge, and remove dead aquatic animals.

1.1.1 Changes from Previous Permit

Requirements were evaluated for this permit term and no changes were required. The permit includes the concentrated aquatic animal production (CAAP) effluent limitation guidelines (ELGs) and associated BMP Plan requirements. WI DNR Nevin Fish Hatchery will be expected to maintain performance levels to continue to receive reductions. Historical performance can be demonstrated through both compliance and enforcement history and a demonstrated ability to consistently reduce pollutants in the discharge below the levels necessary to meet existing permit requirements. Verification of this requirement will be based on a minimal level of monitoring and successful implementation of BMPs in accordance with the CAAP ELGs. Reduction of monitoring requirements will be evaluated for each permit reissuance.

2 Surface Water - Monitoring and Limitations

2.1 Sample Point Number: 001- Hatchery Effluent

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Monthly	Total Daily	This value may be an estimate.
BOD5, Total	Daily Max	15.4 mg/L	Monthly	Grab	Limit applies May-October.
BOD5, Total	Daily Max	12.3 mg/L	Monthly	Grab	Limit applies November-April.
BOD5, Total	Weekly Avg	9.4 mg/L	Monthly	Grab	Limit applies May-October.
BOD5, Total	Weekly Avg	7.7 mg/L	Monthly	Grab	Limit applies November-April.
BOD5, Total	Monthly Avg	9.4 mg/L	Monthly	Grab	Limit applies May-October.
BOD5, Total	Monthly Avg	7.7 mg/L	Monthly	Grab	Limit applies November-April.
Suspended Solids, Total		mg/L	Monthly	Grab	
Suspended Solids, Total	Daily Max	400 lbs/day	Monthly	Calculated	Limit applies in January, November and December.

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Suspended Solids, Total	Daily Max	460 lbs/day	Monthly	Calculated	Limit applies in February.
Suspended Solids, Total	Daily Max	340 lbs/day	Monthly	Calculated	Limit applies in March.
Suspended Solids, Total	Daily Max	260 lbs/day	Monthly	Calculated	Limit applies in April.
Suspended Solids, Total	Daily Max	200 lbs/day	Monthly	Calculated	Limit applies in May.
Suspended Solids, Total	Daily Max	180 lbs/day	Monthly	Calculated	Limit applies in June.
Suspended Solids, Total	Daily Max	120 lbs/day	Monthly	Calculated	Limit applies in July and August.
Suspended Solids, Total	Daily Max	160 lbs/day	Monthly	Calculated	Limit applies in September.
Suspended Solids, Total	Daily Max	220 lbs/day	Monthly	Calculated	Limit applies in October.
Suspended Solids, Total	Monthly Avg	167 lbs/day	Monthly	Calculated	Limit applies in January, November and December.
Suspended Solids, Total	Monthly Avg	192 lbs/day	Monthly	Calculated	Limit applies in February.
Suspended Solids, Total	Monthly Avg	143 lbs/day	Monthly	Calculated	Limit applies in March.
Suspended Solids, Total	Monthly Avg	109 lbs/day	Monthly	Calculated	Limit applies in April.
Suspended Solids, Total	Monthly Avg	84 lbs/day	Monthly	Calculated	Limit applies in May.
Suspended Solids, Total	Monthly Avg	75 lbs/day	Monthly	Calculated	Limit applies in June.
Suspended Solids, Total	Monthly Avg	50 lbs/day	Monthly	Calculated	Limit applies in July and August.
Suspended Solids, Total	Monthly Avg	67 lbs/day	Monthly	Calculated	Limit applies in September.
Suspended Solids, Total	Monthly Avg	92 lbs/day	Monthly	Calculated	Limit applies in October.
pH Field		su	Monthly	Grab	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Nitrogen, Ammonia (NH3-N) Total		mg/L	Monthly	Grab	Monitoring only January-December 2029.
Chloride		mg/L	Monthly	Grab	Monitoring only January-December 2029.
Phosphorus, Total	Monthly Avg	1.0 mg/L	Monthly	Grab	This is an Adaptive Management interim limit. See the Schedules section and effluent requirements in the permit.
Phosphorus, Total	6-Month Avg	0.076 mg/L	Monthly	Grab	This is an Adaptive Management interim limit. See the Schedules section and effluent requirements in the permit.
Phosphorus, Total		lbs/day	Monthly	Calculated	Calculate the daily mass discharge of phosphorus in lbs/day on the same days phosphorus sampling occurs. Mass (lbs/day) = Concentration (mg/L) x Flow (MGD) x 8.34

2.1.1 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.

- **Ammonia Nitrogen –** Addition of monthly monitoring for one year (2029).
- **Chloride –** Addition of monthly monitoring for one year (2029).
- Updated watershed **Adaptive Management (AM)** project requirements.

2.1.2 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 dated September 19, 2025.

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.

Expression of Limits – In accordance with the federal regulation 40 CFR 122.45(d) and s. NR 205.065, Wis. Adm. Code, limits in this permit are to be expressed as daily maximum and monthly average limits whenever practicable. Minor changes have been made to the limits for BOD_5.

Flow Rate – The flow rate may be estimated using an approved method.

Ammonia Nitrogen and Chloride – Monthly monitoring in the fourth year of the permit term (2029) is included to ensure that 11 sample results are available at the next permit issuance.

Total Phosphorus – Details regarding the administrative rules for phosphorus discharges may be found at: https://dnr.wisconsin.gov/topic/Wastewater/Phosphorus. Phosphorus rules are contained in s. NR 102.06 and ch. NR 217, Subchapter III, Wis. Adm. Code. A monthly average limit of 1 mg/L is effective upon reissuance. An Adaptive Management Interim limit of 0.076 mg/L expressed as a 6-month average (averaging period of May through October and November through April) is also effective upon reissuance. Compliance with the 6-month average interim limit is evaluated at the end of each six-month period on April 30th and October 31st annually.

Adaptive Management for Total Phosphorus Compliance – The permittee requested and the Department approved a plan to implement a watershed adaptive management approach under s. NR 217.18, Wis. Adm. Code, and s. 283.13(7) Wis. Stats., as a means to achieve compliance with the phosphorus water quality standard in s. NR 102.06, Wis. Adm. Code. The phosphorus limitations and conditions in this permit reflect the approved Adaptive Management (AM) Plan No. AM-2025-02 (September 2025). The permittee shall implement the actions identified in the approved AM Plan in accordance with the goals and measures identified. The goal of the AM Plan is to reduce phosphorus loadings within the watershed action area by at a minimum of 2,112 lbs/yr by the end of this permit term. In addition, annual reports are required. See the Schedules section for more details. The Department may terminate the AM option based on the reasons enumerated in NR 217.18(3)(e)2, Wis. Adm. Code. Surface water monitoring requirements are included in the proposed permit in support of the goals and measures of the Adaptive Management Plan. Sampling is required on the day(s) each week as outlined in the approved Adaptive Management Plan.

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

3.1 Sample Point Number: 002- Fish manure landspread on site

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		gal/month	Monthly	Estimated	
Solids, Total		Percent	Monthly	Grab	
Nitrogen, Total Kjeldahl		Percent	Monthly	Grab	
Chloride		Percent	Monthly	Grab	
Nitrogen, Ammonium (NH4-N) Total		Percent	Annual	Grab	
Phosphorus, Total		Percent	Annual	Grab	
Potassium, Total Recoverable		Percent	Annual	Grab	

3.1.1 Changes from Previous Permit

By-product solids limitations and monitoring requirements were evaluated for this permit term and no changes were required.

3.1.2 Explanation of Limits and Monitoring Requirements

Requirements for land application of industrial sludge/by-product solids are determined in accordance with ch. NR 214, Wis. Adm. Code.

4 Schedules

4.1 Watershed Adaptive Management Option Annual Report Submittals

The permittee shall submit annual reports on the implementation of AM Plan No. AM-2025-02 (September 2025) as specified in permit Sections 2.2.1.3 and 2.2.1.4 and the following schedule.

Required Action	Due Date
Annual Adaptive Management Report #6: Submit an annual adaptive management report. The annual adaptive management report shall: o Confirm continued support of AM Plan No. AM-2025-02 (September 2025) with a narrative describing the permittee's support of the Plan and demonstrate fulfillment of the permittee's deliverables specified under the Yahara WINS intergovernmental agreement.	07/31/2026
Annual Adaptive Management Report #7: Submit an Adaptive Management report as defined above.	07/31/2027
Annual Adaptive Management Report #8: Submit an Adaptive Management report as defined above.	07/31/2028
Annual Adaptive Management Report #9: Submit an Adaptive Management report as defined above.	07/31/2029
Final Adaptive Management Report for 2nd Permit Term: Submit an Adaptive Management report as defined above. The report shall summarize continued support for AM Plan No. AM-2025-02 (September 2025) throughout the next permit term and indicate continued participation in the Yahara WINS intergovernmental agreement.	07/31/2030
Renewal of Adaptive Management Plan for Permit Reissuance: If the permittee intends to seek continued coverage under AM Plan No. AM-2025-02 (September 2025) per s. NR 217.18, Wis. Adm. Code, for the reissued permit term, this schedule may be modified to incorporate any changes in AM goals and actions, removed if the AM program is terminated per the Adaptive Management Reopener Clause section, or removed if the adaptive management plan has achieved water quality standards as determined by the Department within the AM action area.	09/30/2030
Annual Adaptive Management Report #10: Submit an Adaptive Management report as defined above.	07/31/2031
Annual Adaptive Management Report #11: Submit an Adaptive Management report as defined above.	07/31/2032
Annual Adaptive Management Report #12: Submit an Adaptive Management report as defined above.	07/31/2033

Annual Adaptive Management Report #13: Submit an Adaptive Management report as defined above.	07/31/2034
Final Adaptive Management Report for 3rd Permit Term: Submit an Adaptive Management report as defined above. The report shall summarize continued support for AM Plan No. AM-2025-02 (September 2025) throughout the next permit term and indicate continued participation in the Yahara WINS intergovernmental agreement.	07/31/2035
Renewal of Adaptive Management Plan for Permit Reissuance: If the permittee intends to seek continued coverage under AM Plan No. AM-2025-02 (September 2025) per s. NR 217.18, Wis. Adm. Code, for the reissued permit term, this schedule may be modified to incorporate any changes in AM goals and actions, removed if the AM program is terminated per the Adaptive Management Reopener Clause section, or removed if the adaptive management plan has achieved water quality standards as determined by the Department within the AM action area.	09/30/2035
Annual Adaptive Management Report #14: Submit an Adaptive Management report as defined above.	07/31/2036
Annual Adaptive Management Report #15: Submit an Adaptive Management report as defined above.	07/31/2037
Annual Adaptive Management Report #16: Submit an Adaptive Management report as defined above.	07/31/2038
Annual Adaptive Management Report #17: Submit an Adaptive Management report as defined above.	07/31/2039
Final Adaptive Management Report: Submit an Adaptive Management report as defined above. The report shall summarize continued support for AM Plan No. AM-2025-02 (September 2025) throughout the next permit term and indicate continued participation in the Yahara WINS intergovernmental agreement.	07/31/2040
Achieve Water Quality Standards and Adaptive Management Plan Success: All the receiving waters identified within the AM Plan No. AM-2025-02 (September 2025) shall be measured for success in accordance with Section IV of the AM Plan. Compliance may be demonstrated using effluent data and watershed modeling that uses similar assumptions as the TMDL to demonstrate that the sum total of the allocations have been achieved for each reach. If some, but not all, reaches are complying with the allocations of the TMDL, only those point sources in the complying reaches will be considered in compliance at the end of the adaptive management period. The permittee shall continue to comply with applicable effluent limits (required under s. NR 217.18(3)(e)3, Wis. Adm. Code, expressed as a 6-month avg and 1.0 mg/L monthly avg) and continue support of monitoring per AM-2025-02 (September 2025) at a minimum of monthly May through October for total phosphorus. If the allocations in the TMDL have been achieved but the applicable phosphorus water quality criterion in s. NR 102.06, Wis. Adm. Code, has not been achieved for the facility's receiving water, consistent with s. 283.13(5), Wis. Stats., and Clean Water Act section 301(b)(1)(C), further evaluation and additional actions will be necessary in the next reissued permit as necessary to achieve phosphorus water quality criterion (e.g., DNR reevaluation of TMDL allocations, imposition of more stringent limits, etc.).	03/31/2041

4.1.1 Explanation of Schedule

This compliance schedule requires the permittee to submit annual Adaptive Management (AM) reports that show progress towards meeting the goals and measures contained in the approved AM Plan. The schedule may be modified at permit reissuance, should changes in AM goals and measures or timing necessitate different dates for schedule items.

Pursuant to s. NR 217.18(1), Wis. Adm. Code, phosphorus water quality criteria must be achieved "as soon as possible". The duration for this adaptative management schedule is 15 years. This timeframe is consistent with the approved AM Plan, and represents the shortest possible duration based upon the following factors that influence time required for the water body to achieve the phosphorus criterion:

- Magnitude of point and/or nonpoint source phosphorus reductions required;
- Costs associated with point and/or nonpoint source phosphorus reductions;
- For nonpoint source reductions, the time required to contact landowners and receive adequate participation to implement practices;
- Physical characteristics of the watershed and receiving water, including landuse, soil properties, slopes, channel gradient, and level of legacy sediment/phosphorus currently in the system.

4.2 Best Management Practices (BMP) Plan

The permittee shall submit annual BMP reports meeting the requirements for concentrated aquatic animal production (CAAP) facilities.

Required Action	Due Date
Annual Report: The permittee shall submit an annual BMP report that indicates which BMPs were implemented during the previous calendar year. The report shall include the items required in Section 1 of the permit. The report shall also include an analysis of the effectiveness of BMPs implemented, how the operation of the facility was optimized, and plans for future BMP use.	01/31/2027
Annual Report: Submit an annual BMP report as defined above.	01/31/2028
Annual Report: Submit an annual BMP report as defined above.	01/31/2029
Annual Report: Submit an annual BMP report as defined above.	01/31/2030
Annual Report: Submit an annual BMP report as defined above.	01/31/2031
Annual 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 reports for the previous calendar year following the due date of annual BMP reports listed above. Annual BMP reports shall include information as defined above.	

4.2.1 Explanation of Schedule

Concentrated aquatic animal production (CAAP) effluent limitation guidelines (ELGs) require implementation of BMPs for all permitted CAAP facilities. The permittee shall ensure any major changes in operation of BMPs are approved prior to implementation.

Attachments

Water Quality-Based Effluent Limitations for the WI DNR Nevin Fish Hatchery WPDES Permit No. WI-0002585-11-0, by Sarah Luck, Water Resources Engineer, dated September 19, 2025

Adaptive Management Plan No. AM-2025-02 (September 2025)

Adaptive Management Conditional Approval Letter (November 2025)

Justification Of Any Waivers From Permit Application Requirements

This facility is categorized as a concentrated aquatic animal production (CAAP) facility and has received instructions in the application notification letter that exempt it from standard monitoring requirements.

Prepared By: Sarah Donoughe, Wastewater Specialist-Adv **Date:** November 7, 2025

CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: September 19, 2025

TO: Sarah Donoughe – SER/Green Bay

FROM: Sarah Luck – SCR/Fitchburg

SUBJECT: Water Quality-Based Effluent Limitations for the WI DNR Nevin Fish Hatchery
WPDES Permit No. WI-0002585-11-0

This is in response to your request for an evaluation of the need for water quality-based effluent limitations (WQBELs) using chapters NR 102, 104, 105, 106, 207, 210, 212, and 217 of the Wisconsin Administrative Code (where applicable), for the discharge from the WI DNR Nevin Fish Hatchery in Dane County. This secondary industry discharges to Nine Springs Creek, located in the Yahara River and Lake Mendota Watershed (LR-08) of the Lower Rock River Basin. This discharge is included in the Rock River TMDL as approved by EPA on 09/28/2011. The evaluation of the permit recommendations is discussed in more detail in the attached report.

Based on our review, the following recommendations are made on a chemical-specific basis at Outfall 001:

Parameter	Daily Maximum	Daily Minimum	Weekly Average	Monthly Average	Six-Month Average	Footnotes
Flow Rate						1,2
BOD_5 May – October November – April	 **15.4 mg/L** **12.3 mg/L**		 9.4 mg/L 7.7 mg/L	 **9.4 mg/L** **7.7 mg/L**		2,3
TSS	TMDL			TMDL		2,4
pH						1,2
Ammonia Nitrogen						5
Chloride						5
Phosphorus AM Interim Limits Final Mass Limits				 1.0 mg/L TMDL	 0.076 mg/L	2,6

Footnotes:

1. Monitoring only.
2. No changes from the current permit.
3. Additional limits to comply with the expression of limits requirements in ss. NR 106.07 and NR 205.065(7), Wis. Adm. Code, are included in bold.
4. Additional TSS and phosphorus mass limitations are required in accordance with the wasteload allocations specified in the Rock River TMDL.

Month	Monthly Ave TSS Effluent Limit (lbs/day)	Daily Max TSS Effluent Limit (lbs/day)	Monthly Ave Total P Effluent Limit (lbs/day)
January	167	400	0.900
February	192	460	0.841
March	143	340	0.745
April	109	260	0.556
May	84	200	0.423
June	75	180	0.372
July	50	120	0.272

Month	Monthly Ave TSS Effluent Limit (lbs/day)	Daily Max TSS Effluent Limit (lbs/day)	Monthly Ave Total P Effluent Limit (lbs/day)
August	50	120	0.314
September	67	160	0.393
October	92	220	0.490
November	167	400	0.808
December	167	400	0.812

5. Monitoring in the fourth year of the permit term at a frequency to ensure that 11 samples are available at the next permit issuance.
6. Under the phosphorus Adaptive Management (AM) Plan, the interim limits (and technology-based limit (TBL)) of 1.0 mg/L, monthly average and 0.076 mg/L, six-month average, should be effective upon permit reissuance. The final effluent limits the Rock River TMDL mass limits in the above table.

No WET testing is required because information related to the discharge indicates low to no risk for toxicity.

Please consult the attached report for details regarding the above recommendations. If there are any questions or comments, please contact Sarah Luck (Sarah.Luck@wisconsin.gov) or Diane Figiel (Diane.Figiel@wisconsin.gov).

Attachments (2) – Narrative and Site Map

PREPARED BY: Sarah Luck Date: September 19, 2025

Sarah Luck
Water Resources Engineer

E-cc: Kenzie Ostien, Wastewater Engineer – SCR/Fitchburg
Lisa Creegan, Regional Wastewater Supervisor – SCR/Fitchburg
Diane Figiel, Water Resources Engineer – WY/3
Nate Willis, Wastewater Section Manager – WY/3

Attachment #1

Water Quality-Based Effluent Limitations for
WI DNR Nevin Fish Hatchery

WPDES Permit No. WI-0002585-11-0

PART 1 – BACKGROUND INFORMATION

Facility Description

The WI DNR Nevin Fish Hatchery produces cold water fish species (brook, brown, and rainbow trout). Trout are hatched from eggs, reared in the rearing house and spiral building, and then placed in concrete raceways and earthen ponds until the desired size has been reached prior to stocking periods. The rearing tanks, raceways, and ponds are fed by artesian water (natural springs and pumped well water). All water from the raceways and spiral building combines in a settling pond for removal of suspended solids, flows to Ponds 18 & 19, and then flows to the horseshoe settling ditch prior to discharge to the Nine Springs Creek via Outfall 001. The hatchery operates 24 hours per day, 365 days per year.

Attachment #2 is a map of the area showing the approximate location of Outfall 001.

Existing Permit Limitations

The current permit, which expired on March 31, 2025, includes the following effluent limitations and monitoring requirements.

Parameter	Daily Maximum	Daily Minimum	Weekly Average	Monthly Average	Six-Month Average	Footnotes
Flow Rate						1
BOD_5 May – October November – April	 **15.4 mg/L** **12.3 mg/L**		 9.4 mg/L 7.7 mg/L	 **9.4 mg/L** **7.7 mg/L**		2
TSS	TMDL			TMDL		3
pH						1
Phosphorus AM Interim Limits Final Mass Limits				 1.0 mg/L TMDL	 0.076 mg/L	3,4

Footnotes:

1. Monitoring only.
2. Additional limits to comply with the expression of limits requirements in ss. NR 106.07 and NR 205.065(7), Wis. Adm. Code, are included in bold.
3. Additional TSS and phosphorus mass limitations are required in accordance with the wasteload allocations specified in the Rock River TMDL.

Month	Monthly Ave TSS Effluent Limit (lbs/day)	Daily Max TSS Effluent Limit (lbs/day)	Monthly Ave Total P Effluent Limit (lbs/day)
January	167	400	0.900
February	192	460	0.841
March	143	340	0.745

Attachment #1

Month	Monthly Ave TSS Effluent Limit (lbs/day)	Daily Max TSS Effluent Limit (lbs/day)	Monthly Ave Total P Effluent Limit (lbs/day)
April	109	260	0.556
May	84	200	0.423
June	75	180	0.372
July	50	120	0.272
August	50	120	0.314
September	67	160	0.393
October	92	220	0.490
November	167	400	0.808
December	167	400	0.812

4. The facility is complying with phosphorus limits through Adaptive Management (AM).

Receiving Water Information

- Name: Nine Springs Creek
- Waterbody Identification Code (WBIC): 804200
- Classification used in accordance with chs. NR 102 and 104, Wis. Adm. Code: Warm Water Sport Fish (WWSF) community, non-public water supply and recreational use.
- Low flows used in accordance with chs. NR 106 and 217, Wis. Adm. Code: The following 7-Q_{10} and 7-Q_2 values are for where Outfall 001 is located.
  7-Q_{10} = 0.59 cubic feet per second (cfs)
  7-Q_2 = 0.81 cfs
- Hardness = 425 mg/L as $CaCO_3$. This value represents the geometric mean of data from four WET tests conducted from November 2007 through July 2009.
- % of low flow used to calculate limits in accordance with s. NR 106.06(4)(c)5., Wis. Adm. Code: 25%
- Multiple dischargers: None.
- Impaired water status: Nine Springs Creek is listed as impaired for phosphorus and total suspended solids at the point of discharge. A TMDL has been approved for the entire Rock River Basin for phosphorus and TSS.

Effluent Information

- Flow rate:
  Maximum annual average = 2 million gallons per day (MGD)
  For reference, the actual average flow from May 2020 through July 2025 was 2 MGD.
- Hardness = 425 mg/L as $CaCO_3$. This value represents the geometric mean of data from four WET tests conducted from November 2007 through July 2009.
- Water supply: artesian flow
- Additives: None.
- Effluent characterization: This facility is categorized as a concentrated aquatic animal production (CAAP) facility and has received instructions in the application notification letter that exempt it from standard monitoring requirements.
- Effluent data for substances for which a single sample was analyzed is shown in the tables in Part 2, in the column titled “MEAN EFFL. CONC.”. Otherwise, substances with multiple effluent data are shown in the tables below or in their respective parts in this evaluation.

The following table presents the average concentrations and loadings at Outfall 001 from May 2020 through July 2025 for all parameters with limits in the current permit to meet the requirements of s. NR 201.03(6), Wis. Adm. Code:

Parameters with Effluent Limits

	Average Measurement	Average Mass Discharged
BOD_5	<2 mg/L	
TSS		12.9 lbs/day*
Phosphorus	0.047 mg/L	0.78 lbs/day

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

PART 2 – WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR TOXIC SUBSTANCES – EXCEPT AMMONIA NITROGEN

No updated effluent data for toxic substances other than ammonia nitrogen have been collected. Effluent data from the previous permit term are shown in the following table.

Effluent Sampling Data for Toxic Substances

Sample Date	Copper (µg/L)	Lead (µg/L)	Zinc (µg/L)	Chloride (mg/L)
03/09/2010				
11/15//2010				67.2
04/28/2011	<2		<3	
05/05/2011		<1		
11/29/2011	<2			
12/27/2012	<2			

"<" means that the pollutant was not detected at the indicated level of detection.

As shown in the table above, only chloride was detected. The single result is lower than $1/5^{th}$ of both the calculated daily maximum limit of 873 mg/L and weekly average limit of 414 mg/L. However, given the age of the data, **chloride monitoring during the fourth year of permit** is recommended in order to have sufficient representative data in order to determine the need for limits at the next permit reissuance.

PFOS and PFOA – The need for PFOS and PFOA monitoring is evaluated in accordance with s. NR 106.98(2), Wis. Adm. Code. Based on the type of discharge, **PFOS and PFOA monitoring is not recommended.** 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.

PART 3 – LIMITATIONS FOR BOD_5, DO, AND PH

Title 40 CFR Part 451 applies to dischargers from Concentrated Aquatic Animal Production (CAAP) facilities as described in 40 CFR Part 122.24 and Appendix C of 40 CFR Part 122. WI DNR Nevin Fish Hatchery produces 20,000 lbs/yr of cold water aquatic fish species and feeds 5,000 lbs/month or more food via a flow-through system, the effluent limit guidelines (ELGs) as described in subpart A of 40 CFR Part 451 for a flow-through/recirculating system are applicable. The applicable ELGs are best

management practices (BMPs) to be implemented at the facility and meet effluent limits based on best practicable control technology achievable, best available technology economically achievable, best conventional technology, and new source performance standards. This BMP plan pursuant to 40 CFR 451.11 and ss. 283.13(2) and 283.31(3)(d)2, Wis. Stats, is implemented in the current permit for the submittal, approval, and annual implementation of the BMP plan.

BOD_5

There are no ELGs based on biochemical oxygen demand (BOD_5) specific to CAAP facilities so only BOD_5 WQBELs based on the protection of Nine Springs Creek water quality are applicable. The weekly average concentration BOD_5 limits of 9.4 mg/L during May – October and 7.7 mg/L during November – April were calculated by the Department in 2001 using the 26-lb method.

The monthly average concentration BOD_5 limits of 9.4 mg/L during May – October and 7.7 mg/L during November – April and the daily maximum concentration BOD_5 limits of 15.4 mg/L during May – October and 12.3 mg/L during November – April were calculated in 2017 and are required to comply with the expression of limits requirements in ss. NR 106.07 and NR 205.065(7), Wis. Adm. Code.

BOD_5 effluent samples (n = 62, May 2020 – July 2025) for Outfall 001 were all nondetectable with a limit of detection of <2 mg/L.

The current BOD_5 limits are required to continue in the permit.

Dissolved Oxygen

The BOD_5 limits were calculated assuming an effluent dissolved oxygen (DO) concentration of 7.0 mg/L. However, this limit has not historically been included in the permit.

In establishing BOD_5 limitations, the primary intent is to prevent a lowering of DO levels in the receiving water below water quality standards. One component of this is maintaining a sufficient level of DO in the discharged effluent. The other component is limiting the discharge of substances which will exert oxygen demand on the receiving water in the days following discharge. In wastewater, the sum of these oxygen demanding substances is measured and limited in the form of BOD_5 measurements. Wisconsin does not have water quality criteria for BOD itself, but limiting discharge levels of BOD is necessary to ensure that the water quality criterion for dissolved oxygen is met.

Since all of the BOD_5 effluent samples were not detected at a level sufficiently below the calculated BOD_5 limits, **the Department does not find it necessary to include a DO limit at this time** since there do not appear to be substances present in the discharge that would cause the DO to go below the water quality criterion. It should be noted that a DO concentration limit of 7.0 mg/L may be included in the permit in the future.

pH

pH limits are usually recommended to be included in permits because they are related to the water quality of the receiving water. However, since WI DNR Nevin Fish Hatchery does not use any additives to adjust the pH and since the source water is artesian water on site, **no pH WQBELs are recommended at this time. Monitoring is recommended to continue.** It should be noted that pH WQBELs may be included in the permit in the future if it determined there are excursions from the 6.0 s.u. and 9.0 s.u. pH range.

PART 4 – WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR AMMONIA NITROGEN

The State of Wisconsin promulgated revised water quality standards for ammonia nitrogen in ch. NR 105, Wis. Adm. Code, effective March 1, 2004 which includes criteria based on both acute and chronic toxicity to aquatic life.

WI DNR Nevin Fish Hatchery does not currently have ammonia nitrogen limits, and ammonia nitrogen sampling was not conducted. It is unlikely ammonia nitrogen is present at levels that would exceed the most stringent ammonia nitrogen limits that would be calculated. **Therefore, ammonia nitrogen limits are not recommended during the reissued permit term. Monitoring is recommended to determine the need for ammonia nitrogen limits at the next permit reissuance.**

PART 5 – PHOSPHORUS

Technology-Based Effluent Limit
Subchapter II of Chapter NR 217, Wis. Adm. Code, requires industries that discharge greater than 60 pounds of Total Phosphorus per month to comply with a 12-month rolling average limit of 1.0 mg/L, or an approved alternative concentration limit.

Since WI DNR Nevin Fish Hatchery has a phosphorus limit in effect that is 1.0 mg/L as a monthly average, the need for a TBEL will not be considered further.

In addition, the need for a WQBEL for phosphorus must be considered.

Water Quality-Based Effluent Limits (WQBEL)
Section NR 217.16, Wis. Adm. Code, states that the Department may include a TMDL-derived effluent limit for phosphorus in addition to, or in lieu of, a s. NR 217.13, Wis. Adm. Code, WQBEL in a WPDES permit. The Rock River Basin TMDL was developed to protect and improve the water quality of phosphorus-impaired waters within the basin. Since Nine Springs Creek was listed as impaired for total phosphorus at the time the TMDL was developed, **the TMDL-based mass limits can be included in the WPDES permit absent the s. NR 217.13, Wis. Adm. Code, WQBEL limit.** If the Department determines the nonpoint source load allocation has not been substantially reduced, the Department may include the s. NR 217.13, Wis. Adm. Code, WQBEL unless these reductions are likely to occur.

TMDL Limits
The Department has developed a TMDL for the Upper and Lower Rock River Basins. The US EPA approved the Rock River TMDL on September 28, 2011. The document, along with the referenced appendices, can be found at: https://dnr.wisconsin.gov/topic/TMDLs/RockRiver/index.html.

The monthly average total phosphorus effluent limits in pounds per day (lbs/day) are calculated based on the monthly phosphorus wasteload allocation (WLA) given in pounds per month as suggested in the *TMDL Development and Implementation Guidance: Integrating the WPDES and Impaired Waters Programs* dated April 15, 2013. The WLA for this facility is found in the *Total Maximum Daily Loads for Total Phosphorus and Total Suspended Solids in the Rock River Basin* report dated July 2011. The limits are equivalent to concentrations ranging from 0.016 mg/L to 0.054 mg/L at the facility flow rate of 2 MGD. **Monthly average mass effluent limits in accordance with the following table are recommended for this discharge.**

Total Phosphorus Effluent Limitations

Month	Monthly Total P WLA[1] (lbs/month)	Days Per Month	Monthly Ave Total P Effluent Limit[2] (lbs/day)
January	27.89	31	**0.900**
February	23.55	28	**0.841**
March	23.09	31	**0.745**
April	16.69	30	**0.556**
May	13.10	31	**0.423**
June	11.17	30	**0.372**
July	8.43	31	**0.272**
August	9.73	31	**0.314**
September	11.80	30	**0.393**
October	15.18	31	**0.490**
November	24.23	30	**0.808**
December	25.16	31	**0.812**

Footnotes:
1- Appendix P. Monthly Total Phosphorus Allocations by Facility (p. 147)
2- Monthly Average Total P effluent limit (lbs/day) = Monthly Total P WLA (lbs/month) ÷ days per month

Effluent Data

The tables below summarize effluent total phosphorus monitoring data from May 2020 through July 2025.

Overall Total Phosphorus Effluent Data

	Concentration (mg/L)	Mass (lbs/day)
1-day P_{99}	0.090	1.47
4-day P_{99}	0.067	1.09
30-day P_{99}	0.054	0.89
Mean	0.048	0.78
Std	0.014	0.23
Sample size	62	62
Range	0.02 - 0.0801	0.33 - 1.3

Adaptive Management Interim Limit

WI DNR Nevin Fish Hatchery intends to pursue adaptive management (AM) to comply with the Rock River TMDL mass limits. Since this is the second permit term in which AM is being pursued, an interim limit no higher than 0.50 mg/L, expressed as a 6-month average, is required, in addition to 1.0 mg/L, expressed as a monthly average, per s. NR 217.18(3)(e)3, Wis. Adm. Code. **WI DNR Nevin Fish Hatchery currently has an AM interim limit of 0.076 mg/L as a six-month average and 1.0 mg/L, as a monthly average; these limits are recommended to continue for the second term.**

Attachment #1

PART 7 – TOTAL SUSPENDED SOLIDS

TMDL Limits

The Rock River TMDL also has wasteload allocations (WLA) for total suspended solids (TSS). For an industrial discharge, the limits for TSS must be expressed as daily maximums and monthly averages.

Total Suspended Solids Effluent Limitations

Month	Monthly TSS WLA[1] (tons/month)	Days Per Month	Monthly Ave TSS Effluent Limit[2] (lbs/day)
Jan	2.59	31	**167**
Feb	2.69	28	**192**
March	2.21	31	**143**
April	1.63	30	**109**
May	1.3	31	**84**
June	1.13	30	**75**
July	0.78	31	**50**
Aug	0.78	31	**50**
Sept	1.00	30	**67**
Oct	1.43	31	**92**
Nov	2.51	30	**167**
Dec	2.59	31	**167**

Month	Daily TSS WLA[3] (tons/day)	Daily Max TSS Effluent Limit[4] (lbs/day)
Jan	0.2	**400**
Feb	0.23	**460**
March	0.17	**340**
April	0.13	**260**
May	0.10	**200**
June	0.09	**180**
July	0.06	**120**
Aug	0.06	**120**
Sept	0.08	**160**
Oct	0.11	**220**
Nov	0.2	**400**
Dec	0.2	**400**

Footnotes:

1- Rock River TMDL Appendix Q. Monthly Total Suspended Solids Allocations by Wastewater Treatment Facility (p. 149)

2- Monthly average TSS effluent limit (lbs/day) = maximum monthly TSS WLA (tons/month) ÷ days per month x 2,000 lbs/ton

3- Rock River TMDL Appendix S. Daily Total Suspended Solids Allocations by Wastewater Treatment Facility (p. 153)

4- Daily maximum TSS effluent limit (lbs/day) = daily TSS WLA (tons/month) x 2,000 lbs/ton

Effluent Data

Limits based on the WLA should be given in a permit regardless of reasonable potential. However, for informational purposes, the following table lists the statistics for TSS discharge, as both a concentration and a mass, from May 2020 through July 2025.

Overall TSS Effluent Data

	Concentration (mg/L)	Mass (lbs/day)
1-day P_{99}	4.3	95
4-day P_{99}	2.7	52
30-day P_{99}	1.5	24
Mean	0.77	13
Std	0.83	21
Sample Size	62 (43 ND)	62
Range	<2 - 5.4	0 - 90

"<" means that the pollutant was not detected at the indicated level of detection. The mean concentration was calculated using zero in place of the non-detected (ND) result.

Attachment #1

PART 7 – WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR THERMAL

Surface water quality standards for temperature took effect on October 1, 2010. These regulations are detailed in chs. NR 102 (Subchapter II – Water Quality Standards for Temperature) and NR 106 (Subchapter V – Effluent Limitations for Temperature) of the Wisconsin Administrative Code. Daily maximum and weekly average temperature criteria are available for the 12 different months of the year depending on the receiving water classification.

In accordance with s. NR 106.53(2)(b), Wis. Adm. Code, the highest daily maximum flow rate for a calendar month is used to determine the acute (daily maximum) effluent limitation. In accordance with s. NR 106.53(2)(c), Wis. Adm. Code, the highest 7-day rolling average flow rate for a calendar month is used to determine the sub-lethal (weekly average) effluent limitation. These values were based off actual flow reported from May 2020 through June 2025.

Temperature monitoring was last conducted in April 2011 through October 2013 and is summarized in the table below.

Temperature Effluent Data & Limits by Month

Month	Representative Highest Monthly Effluent Temperature		Calculated Effluent Limit	
	Weekly Maximum (°F)	Daily Maximum (°F)	Weekly Average Effluent Limitation (°F)	Daily Maximum Effluent Limitation (°F)
JAN	45	45	50	78
FEB	46	46	51	78
MAR	46	46	53	79
APR	50	50	55	80
MAY	54	54	65	83
JUN	53	53	76	85
JUL	53	53	82	86
AUG	53	53	82	85
SEP	53	53	74	83
OCT	53	53	62	81
NOV	49	49	49	79
DEC	49	49	50	78

Reasonable Potential

Permit limits for temperature are recommended based on the procedures in s. NR 106.56, Wis. Adm. Code.

- An acute limit for temperature is recommended for each month in which the representative daily maximum effluent temperature for that month exceeds the acute WQBEL. The representative daily maximum effluent temperature is the greater of the following:

(a) The highest recorded representative daily maximum effluent temperature
(b) The projected 99th percentile of all representative daily maximum effluent temperatures

- A sub−lethal limitation for temperature is recommended for each month in which the representative weekly average effluent temperature for that month exceeds the weekly average WQBEL. The representative weekly average effluent temperature is the greater of the following:
  (a) The highest weekly average effluent temperature for the month.
  (b) The projected 99th percentile of all representative weekly average effluent temperatures for the month

Based on the available effluent data from April 2011 through October 2013, **no effluent limits or monitoring are recommended for temperature**.

PART 8 – WHOLE EFFLUENT TOXICITY (WET)

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 of staff familiar with the discharge 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 LC_{50} (Lethal Concentration to 50% of the test organisms) greater than 100% effluent, according to s. NR 106.09(2)(b), Wis. Adm. Code.

- Chronic tests predict the concentration that interferes with the growth or reproduction of test organisms during a seven-day exposure. To assure that a discharge is not chronically toxic to organisms in the receiving water, WET tests must produce a statistically valid IC_{25} (Inhibition Concentration) greater than the instream waste concentration (IWC), according to s. NR 106.09(3)(b), Wis. Adm. Code. The IWC is an estimate of the proportion of effluent to total volume of water (receiving water + effluent). The **IWC of 95%,** shown in the WET Checklist summary below, was calculated according to the following equation, as specified in s. NR 106.03(6), Wis. Adm. Code:

$$IWC\ (as\ \%) = Q_e \div \{(1 - f)\ Q_e + Q_s\} \times 100$$

Where:
Q_e = annual average flow = 2 MGD = 3.1 cfs
f = fraction of the Q_e withdrawn from the receiving water = 0
Q_s = ¼ of the 7-Q_{10} = 0.59 cfs ÷ 4 = 0.15 cfs

- Shown below is a tabulation of all available WET data for Outfall 001. Efforts are made to ensure that decisions about WET monitoring and limits are made based on representative data, as specified in s. NR 106.08(3), Wis. Adm. Code. Data which is not believed to be representative of the discharge was not included in reasonable potential calculations. The table below differentiates between tests used and not used when making WET determinations.

Tests conducted prior to July 1, 2005 are not presented in the table below due to significant changes that were made to WET test methods in 2004. These changes were assumed to be fully implemented by certified labs by no later than June 2005.

WET Data History

Date Test Initiated	Chronic Results IC_{25} %				Footnotes or Comments
	C. dubia	Fathead Minnow	Pass or Fail?	Use in RP?	
11/13/2007	>100	>100	Pass	Yes	
10/14/2008	>100	>100	Pass	Yes	
04/21/2009	-	>100	Pass	Yes	
07/28/2009	>100	-	Pass	Yes	

- According to s. NR 106.08, Wis. Adm. Code, WET reasonable potential is determined by multiplying the highest toxicity value that has been measured in the effluent by a safety factor, to predict the likelihood (95% probability) of toxicity occurring in the effluent above the applicable WET limit. The safety factor used in the equation changes based on the number of toxicity detects in the dataset. The fewer detects present, the higher the safety factor, because there is more uncertainty surrounding the predicted value. WET limits must be given, according to s. NR 106.08(6), Wis. Adm. Code, whenever the applicable Reasonable Potential equation results in a value greater than 1.0.

  Chronic Reasonable Potential = 0 < 1.0, reasonable potential is not shown, and **a chronic WET limit is not required.**

The WET checklist was developed to help DNR staff make recommendations regarding WET limits, monitoring, and other related permit conditions. The checklist indicates whether acute and chronic WET limits are needed, based on requirements specified in s. NR 106.08, Wis. Adm. Code. The checklist steps the user through a series of questions, assesses points based on the potential for effluent toxicity, and suggests monitoring frequencies based on points accumulated during the checklist analysis. As toxicity potential increases, more points accumulate, and more monitoring is recommended to ensure that toxicity is not occurring. A summary of the WET checklist analysis completed for this permittee is shown in the table below. Staff recommendations based on best professional judgment are provided below the summary table. For guidance related to reasonable potential and the WET checklist, see Chapter 1.3 of the WET Guidance Document: https://dnr.wisconsin.gov/topic/Wastewater/WET.html.

WET Checklist Summary

	Acute	Chronic
AMZ/IWC	Not Applicable. **0 Points**	IWC = 95% **15 Points**
Historical Data	No data collected since 1994. **5 Points**	No data collected since 2009. **5 Points**
Effluent Variability	Little variability, no violations or upsets, consistent operations. **0 Points**	Same as Acute. **0 Points**
Receiving Water Classification	WWSF **5 Points**	Same as Acute. **5 Points**
Chemical-Specific	No reasonable potential for limits based on ATC.	No reasonable potential for limits based on CTC.

	Acute	Chronic
Data	**0 Points**	**0 Points**
Additives	No additives used. **0 Points**	No additives used. **0 Points**
Discharge Category	Fish hatchery **0 Points**	Fish hatchery **0 Points**
Wastewater Treatment	Primary Treatment only (settling) **8 Points**	Same as Acute. **8 Points**
Downstream Impacts	No impacts known. **0 Points**	Same as Acute. **0 Points**
Total Checklist Points:	**18 Points**	**33 Points**
Recommended Monitoring Frequency (from Checklist):	2 tests during permit term.	3 tests during permit term.
Limit Required?	No	No
TRE Recommended? (from Checklist)	No	No

- The WET Checklist completed in SWAMP (and summarized above) recommends two acute tests and three chronic tests during the reissued permit term. Those recommendations are driven primarily by the IWC, lack of recent testing, and partial lack of wastewater treatment. The number of WET tests recommended during the reissued permit term have been adjusted accordingly based on the following reasons:
  - The effluent characterization of fish hatchery discharges is typically not complex or high strength, and traditional wastewater treatment is not typically necessary.
  - Consistent with the current permit and other fish hatcheries, WET testing is not recommended for fish hatcheries which do not use additives.

  Therefore, no WET testing is recommended for the reissued permit.

Attachment #2
Site Map