

**Wisconsin Department of Natural Resources
Natural Resources Board Agenda Item**

Item No. 4.A.

SUBJECT:

Request that the Board adopt Emergency Board Order WA-06-20(E), proposed rules creating chapter NR 159 related to regulating firefighting foam that contains certain contaminants.

FOR: August 2020 Board meeting**PRESENTER'S NAME AND TITLE:** Darsi Foss, Environmental Management Division Administrator**SUMMARY:**

2019 Wisconsin Act 101 (Act 101) directs the Department of Natural Resources to promulgate an emergency rule under s. 299.48 (5), Wis. Stats., no later than September 1, 2020. Notwithstanding s. 227.24 (1) (a) and (3), Wis. Stats., the department is not required to provide evidence that promulgating the rule as an emergency rule is necessary for the preservation of public peace, health, safety, or welfare and is not required to provide a finding of emergency.

The objective of the proposed emergency rule is to implement and administer s. 299.48, Wis. Stats., related to regulating firefighting foam containing intentionally added poly- and per-fluoroalkyl substances (PFAS). PFAS are highly resistant to degradation and have been detected globally in water, soil, air, sediment, human blood serum, fish and wildlife. In Wisconsin, PFAS have been detected in drinking water, groundwater, surface water, soil, sediments, air, fish and wildlife near sources of industrial use, manufacturing, and known discharges of firefighting foam to the environment. 2019 Wisconsin Act 101 created s. 299.48, Wis. Stats. This statute prohibits the discharge of foams with intentionally added PFAS, except when the foams are used for firefighting or fire prevention operations or for testing purposes. The statute contains reporting and recordkeeping requirements and requirements for appropriate containment, treatment and disposal or storage of foam used for testing purposes.

The rule creates ch. NR 159, Wis. Adm. Code, to address the prohibition of discharges of these foams; address responsibilities for notifications of discharges to the environment; address the exemptions for emergency firefighting or fire prevention operations; and address what is considered appropriate containment, treatment, and disposal or storage measures for testing purposes of these foams.

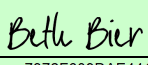
Effects on small business are related to recordkeeping, containment, treatment, and disposal or storage measures where foam is located and there are currently no provisions for those activities. However, those costs are anticipated to be less than the cost to clean and remediate uncontrolled discharges to the environment and subsequent remediation.

The Board last acted on this rule on June 24, 2020 when it approved the scope statement for the emergency and permanent rules. The department is continuing to work on the permanent rule. If approved, the emergency rule will remain in effect for 3 years or until a permanent rule takes effect, whichever is sooner.

RECOMMENDATION: That the Board adopt Board Order WA-06-20(E).**LIST OF ATTACHED MATERIALS (check all that are applicable):**

- ☒ Background memo
☒ Fiscal estimate
☒ Response summary

- ☐ Attachments to background memo
☒ Board order/rule
☐ (insert document name)

Approved by	Signature	Date
George B. Wolbert, Waste & Materials Management Program Director	George B. Wolbert Remote Approval	7/23/20
Bart Sponseller for Darsi J. Foss, Environmental Management Division Administrator	Bart Sponseller on behalf of Darsi Foss Remote Approval	7/23/2020
Preston D. Cole, Secretary	<div>DocuSigned by:</div>  <div>7372F609DAE441F...</div>	7/24/2020 10:10 AM CDT

CORRESPONDENCE/MEMORANDUM

DATE: July 22, 2020

TO: All Members of the Natural Resources Board

FROM: Preston D. Cole, Secretary

SUBJECT: Background memo on Board Order WA-06-20(E), proposed rules creating chapter NR 159 related to regulating firefighting foam that contains certain contaminants.

1. Subject of Proposed Rule:

Creation of chapter NR 159 related to regulating firefighting foam that contains intentionally added PFAS.

2. Background:

PFAS (perfluoroalkyl and polyfluoroalkyl substances) are a group of synthetic chemicals used in industry and consumer products worldwide since the 1950s. They do not break down in the environment for extremely long periods of time and they accumulate in the human body. Exposure to certain PFAS may cause adverse health effects.

Some firefighting foams currently used to extinguish flammable liquid fires, such as Class B and Class A/B foams, include intentionally added PFAS, meaning PFAS is a constituent of the foam added during the manufacturing process.

2019 Wisconsin Act 101, codified in s. 299.48, Wis. Stats., prohibits the use of Class B and dual action Class A and B firefighting foams that contain intentionally added PFAS as of September 1, 2020, except in the following two situations:

1. When used as part of an emergency firefighting or fire prevention operation; or
2. When used for testing purposes at a testing facility that has implemented appropriate containment, treatment and disposal or storage measures to prevent discharges of the foam to the environment, and does not flush, drain or otherwise discharge the foam into a storm or sanitary sewer.

Wisconsin Act 101, section 2 directs the department to promulgate rules no later than September 1, 2020, to implement and administer the requirements in s. 299.48, Wis. Stats., including rules to determine appropriate containment, treatment, and disposal or storage measures for testing facilities.

3. Why is the rule being proposed?

2019 Wisconsin Act 101, section 2, states that the department shall promulgate rules under s. 299.48 (5), Wis. Stats., no later than the first day of the 7th month beginning after the effective date of section 299.48. The department is proposing this emergency rule to comply with the Legislature's directive. Emergency rules promulgated under this subsection remain in effect until 3 years after the effective date, or the date on which permanent rules take effect. Notwithstanding s. 227.24 (1)(a) and (3), Wis. Stats., the department is not required to provide evidence that promulgating a rule under this subsection as an emergency rule is necessary for the preservation of public peace, health, safety, or welfare and is not required to provide a finding of emergency for a rule promulgated under this subsection. Section 2(1) of Act 101 took effect on the day after publication, which was February 6, 2020. Emergency rules are expected to be promulgated no later than September 1, 2020.

4. Summary of the rule:

This rule creates ch. NR 159 to implement the legislature's directive to the department to promulgate rules to implement and administer s. 299.48, Wis. Stats. The proposed emergency rule contains the following summarized requirements:

"Foam" is defined as Class B firefighting foam with intentionally added PFAS in all forms, including:

- (a) In concentrate.
- (b) Mixed with or diluted in water or other liquids.
- (c) Wastewater containing foam unless sufficiently treated in accordance with s. NR 159.08(1).

Prohibitions and use:

The use of Class B firefighting foams with intentionally added PFAS, including for training exercises, is prohibited. The use of foams is allowed for emergency firefighting, fire prevention operations, and testing purposes so long as certain requirements are met.

Notification and recordkeeping:

The proposed emergency rule contains notification requirements for persons who use foam for firefighting operations or who discharge foam to the environment as part of testing operations. Any person in possession of foam must maintain records of the amounts of foam kept on site and its safety data sheets.

Storage:

Any person handling or storing foam shall manage the foam in accordance with safety data sheets and in a manner that will prevent discharges to the environment. This includes self-inspection and spill containment plans, use of leak-proof, closed and labeled containers, and provisions for cleanup of spills and discharges.

Containment:

Any person testing foam, including testing foam effectiveness and fire suppression systems, foam delivery systems and associated equipment or vehicles, must contain the foam in a manner that will prevent discharge of a hazardous substance to the environment. This includes: containment that meets industry and national association testing standards; testing and flushing of equipment, systems, and facilities using a containment system capable of capturing, diverting, and storing generated foam; measures to prevent foam that escapes containment from entering surface waters, groundwater, storm sewers or sanitary sewers; and a containment system design that takes into account location and use of the foam, the risk to the environment, the automatic or manually activated design of a foam system, and any other applicable local, state, or federal regulations.

Treatment:

Any person choosing to treat foam in Wisconsin shall ensure treatment is conducted in a manner that will prevent a discharge of foam to the environment, i.e. air, lands or waters of the state. One option for treatment is incineration or thermal destruction, which must be able to destroy PFAS. Other treatment options include treating foam to effluent concentrations specified in the rule by using a treatment technology that is equal to or better than the treatment technologies specified in the rule. Specifically, the rule states that before a testing facility may discharge treated foam directly to waters of the state or to a sanitary sewer, a facility must employ a treatment technology that reduces PFAS concentrations in the foam for the listed PFAS parameters to numeric effluent standards or the testing laboratory's monitoring detection limit, whichever is higher. Design of treatment systems requires department approval.

Disposal:

In Wisconsin, foam must be treated in accordance with this rule or effectively immobilized through solidification or a comparable process prior to disposal. Foam may only be disposed of at a licensed solid waste facility.

Additional measures for appropriate containment, treatment, and disposal or storage will be considered during the development of a permanent rule. Regarding the prevention of a discharge of air contaminants from the use of foam with intentionally added PFAS for testing purposes, the department has a process under s. 285.27 (2) (b), Wis. Stats., which may be used to further assess appropriate measures to be implemented in the permanent rule. The department's work on the permanent rule is ongoing.

5. How does this proposal affect existing policy?

As noted, s. 299.48, Wis. Stats., prohibits the use of Class B and dual action Class A and B firefighting foams that contain intentionally added PFAS as of September 1, 2020, except when used as part of an emergency firefighting or fire prevention operation, or when used for testing purposes. The purpose of this rule is to implement and administer s. 299.48, Wis. Stats., including to determine appropriate containment, treatment, and disposal or storage measures for testing facilities.

PFAS is an emerging contaminant for which policy in Wisconsin and federally is still being studied and developed. This rule implements the statutory requirements in s. 299.48, Wis. Stats., relating to the uses of firefighting foams that contain intentionally added PFAS. The rule complements existing policy under the remedial action statute, ch. 292, Wis. Stats., in situations where PFAS discharges constitute a hazardous substance discharge. Under ch. 292, Wis. Stats., and chs. NR 700 through 754, Wis. Adm. Code, any person who causes the discharge of a hazardous substance discharge to the environment (i.e., to the air, land or waters of the state) shall notify the department and take the actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands or waters of this state.

6. Has Board dealt with these issues before?

Yes. The Board approved the preliminary public hearing notice for the scope statement for WA-06-20(E) and WA-07-20 at its May 2020 meeting. The Board approved the scope statement for WA-06-20(E) and WA-07-20 and conditionally authorized hearings for WA-07-20 at its June 2020 meeting.

7. Who will be impacted by the proposed rule? How?

Potentially affected parties include three main types of sectors: municipal firefighting entities; foam and foam equipment manufacturing, installation, and testing entities; and public and private facilities that have installed fixed foam systems or that store firefighting foam to be used for fire suppression. Potentially affected parties were contacted for comments on rule language during drafting of the emergency rule.

The primary impacts of the rule are related to containment, treatment, and disposal or storage measures where foam is located. Preliminary estimated impacts for management, containment and proper disposal of firefighting foams with intentionally added PFAS are anticipated to be less than the cost to clean and remediate uncontrolled discharges to the environment and subsequent remediation. This rule does not prohibit the manufacture, sale, or distribution of Class B firefighting foam that contains intentionally added PFAS.

8. Soliciting public input on economic impact synopsis:

In an effort to develop a conservative estimate, the department assumed a majority, if not all business entities affected by the rule, are small businesses. Emails and calls were made to industry experts and facilities with fixed foam systems to determine foam amounts; any existing containment, storage,

treatment, and disposal activities; testing activities; and current and potential costs. Industry sectors were also contacted for comments on draft emergency rule language during rule development.

Additional comments on an EIA for the permanent rule will be solicited from potentially affected parties, which include three main types of sectors: municipal firefighting entities; foam and foam equipment manufacturing, installation, and testing entities; and public and private facilities that have installed fixed foam systems or that store firefighting foam to be used for fire suppression.

9. Small Business Analysis:

Small businesses impacted by this rule would be various facilities that use Class B firefighting foam in their fixed fire suppression systems. These would be facilities that have a need for suppression of possible liquid (gasoline, oil) fires.

Storage: minimal additional economic impact expected; new requirements for facilities may lead to the purchase of additional storage/containers needed for foam, additional labor costs associated with labeling and inspection, and the purchase of materials to prevent discharge to the environment. There will be additional costs associated with these requirements, but these costs are not anticipated to be significant. Direct economic estimates based on the types of storage, the expected storage volume, and labor costs will be solicited and evaluated by the department in advance of the permanent rule.

Containment, treatment and disposal: moderate economic impact expected, additional estimates under solicitation and evaluation by the department. It is estimated that there are approximately 150-200 fixed fire suppression systems within public and private facilities that utilize Class B firefighting foam. A limited survey of facilities with fixed foam systems indicated that these fixed systems are primarily in areas with existing containment, resulting in minimal to no economic impact. Industry experts estimated that system testing and resultant foam disposal costs will increase for these facilities, and cost approximately \$3,000 to \$20,000 per facility. Assuming 200 facilities in the State, the statutory and rule requirements would range in impact from approximately \$600,000 to \$4,000,000 per year, with the midpoint estimate of \$2,300,000. However, costs are expected to lessen over time with adoption of alternative methods such as surrogate and water equivalency testing and using replacement foams that do not contain PFAS.

Estimated costs for management, containment and proper disposal of firefighting foams with intentionally added PFAS, are anticipated to be less than the cost to clean and remediate uncontrolled discharges to the environment and subsequent remediation. This rule does not prohibit the manufacture, sale, or distribution of Class B firefighting foam that contains intentionally added PFAS.

Drafter: Kate Strom Hiorns

Department Response to Informal Public Comment Request on Draft W.	
Commenters	Comment
Thomas Klopf, Greendale	Supports ban, suggests 12/31/20 date to ban emergency use as well; wants public info noting PFAS contamination sites
Doug Oitzinger, Marinette; Vicki Quint Code PFAS/PFAS Community Campaign	Add underlined section: (14) "Fixed system" means a permanent fire suppression system typically installed within a building or facility, <u>and ships or other watercraft</u> . Larger ships may have class B foam suppression systems within the vessel
Laura Olah, Citizens for Safe Water Around Badger; Vicki Quint Code PFAS/PFAS Community Campaign; Waukesha County Environmental Action League	Any phrase "break down" should be replaced with the term "destroy"
Laura Olah, Citizens for Safe Water Around Badger; Vicki Quint Code PFAS/PFAS Community Campaign; Waukesha County Environmental Action League	Add definition of "intentionally added PFAS" where "PFAS is a constituent of the foam added during the manufacturing process"
Laura Olah, Citizens for Safe Water Around Badger; Vicki Quint Code PFAS/PFAS Community Campaign; Waukesha County Environmental Action League	Add to "Foam" definition and NR 159.04 Prohibition and exemptions: "Foam" means and includes class B <u>and certain A/B</u> firefighting foam(s)
Laura Olah, Citizens for Safe Water Around Badger; Vicki Quint Code PFAS/PFAS Community Campaign; Waukesha County Environmental Action League	NR 159.06 Storage. (8) Secondary containment: We recommend a significantly lower threshold for secondary containment than 100 gallons.
Laura Olah, Citizens for Safe Water Around Badger; Vicki Quint Code PFAS/PFAS Community Campaign; Waukesha County Environmental Action League	NR 159.07 Containment. (4): Delete "direct" discharge OR stipulate "direct or indirect" discharge

<p>Laura Olah, Citizens for Safe Water Around Badger; Vicki Quint Code PFAS/PFAS Community Campaign</p>	<p>NR 159.08 Treatment and disposal. (1)(a) Incineration or Thermal Destruction: This section is notably vague and needs significant clarification. The draft appears to presume that there are incinerators that have been proven to destroy PFAS and this is incorrect. If item (1)(a) is retained, we suggest the following clarifications as noted in quotation marks: Incineration, “thermal treatment, conversion energy systems, gasification units, cement kilns, carbon filter regeneration, and similar units” shall be “specifically permitted, licensed, demonstrated and” conducted at a temperature range “and residence time adequate “sufficient “ to break down and destroy PFAS while also ensuring the maximum degree of reduction in emission of PFAS, “gaseous emissions, by-products of combustion, transformation products and particulate matter that shall be readily and properly monitored.”</p> <p>Cross-references to other applicable Wisconsin regulations should also be noted in this section.</p>
<p>Vicki Quint Code PFAS/PFAS Community Campaign</p>	<p>“There is no regulation preventing the use of fluorine-free foams by non-military users, including firefighting training centers, chemical manufacturers, oil refineries, and others.”¹ Fluorine-free foams have been used successfully worldwide for the past 20 years.</p>
<p>Chief Michael Folgert, Town of Peshtigo Fire Department</p>	<p>Class B firefighting foam definition: Please state in the definition that this does not include foams manufactured solely as Class A foams which do not contain intentionally added PFAS ingredients and are intended for use on ordinary combustible fires.</p>
<p>Chief Michael Folgert, Town of Peshtigo Fire Department</p>	<p>Notification when used for emergency firefighting: This notification requirement is appropriate as long as the emergency firefighting or fire prevention operations are addressed and mitigated first.</p>
<p>Chief Michael Folgert, Town of Peshtigo Fire Department</p>	<p>Notification of testing discharge: Under the definitions section, a “person” can include a municipality or even a fire chief. Although certain exemptions permit the emergency use of Class B foams, it appears that other provisions of this code, including the storage, notification, treatment, clean-up and disposal are not exempt. We need clear language to define the responsible person as the one who caused the original fire, spill or release and to protect the municipality, fire department, and chief from liability, including civil or criminal action, in the event an emergency dictates the need to use Class B foam.</p>

Chief Michael Folgert, Town of Peshtigo Fire Department	NR 159.06 (4) Storage: In many cases, foam concentrate is stored at a fire station in its original plastic 5-gallon container, which is certainly not puncture resistant. Are these containers deemed acceptable? I suggest including wording to indicate that the original manufacturer provided containers are appropriate containers for storage.
Chief Michael Folgert, Town of Peshtigo Fire Department	NR 159.07 (5) Containment: After the first sentence, insert language to ensure that life safety considerations are addressed first and that all provisions as outlined in sub-section 5 are obtained and implemented without hindering the emergency firefighting or fire prevention operations.
Laura Olah, Citizens for Safe Water Around Badger	Air emissions are a significant route for PFAS releases to the environment as evidenced by soil deposition and presence in rainwater. However, PFAS air emissions are not currently regulated under the Clean Air Act or any other federal law. Air testing methods are being developed for volatile PFAS using both targeted and non-targeted analysis. Here in Wisconsin, we need a clear mechanism to assess and prevent PFAS emissions exposures. We recommend that the Emergency Rule be amended to address PFAS air emissions associated with the management of firefighting foams that contain PFAS.

<p>Doug Lackey, GM Fire Systems & Equipment at Ahern Fire</p>	<p>Secondary containment during testing of fixed AFFF foam-water sprinkler systems is overly restrictive and will prevent conflict of the rule during these required tests. The current language would require containment tankers to be located within a dyke system while receiving the test flows during a fixed AFFF foam-water system test. Means of containing and capturing test flows can be made from the fixed systems to the containment vessels without discharge to environment. The rule as written will require that testing of the system to not be performed as required by NFPA-If testing large systems with secondary containment was the law, the systems would not be able to be tested (or tested properly), OR, the secondary containment rule will not be able to be met when performing the test in many cases. <i>As follow up, I asked: And during testing of suppression systems, is the test flow typically connected directly to containment tankers/vehicles or could it also be done collecting in a container?</i> Both, but in my opinion direct connection (a closed connection) to the containment vessel is the safest way to manage these test discharges on large systems. Discharging these flows into totes is possible on very small systems and secondary containment could be consider in those situations. It is very common to test at flow rates which cannot be safely captured in a smaller vessel like a tote. NFPA provides direction on flow rates for testing the systems which varies by system design, which requires large flow rates in many cases</p>
<p>Doug Lackey, GM Fire Systems & Equipment at Ahern Fire</p>	<p>Treatment and Disposal methods for AFFF foam-water solutions generated during annual testing of existing fixed fire protection systems or acceptance testing of new installations appear to be focused on a limited number of options. Other disposal/treatment options are available which prevent the potential for environmental contamination and are not addressed in the draft rule. <i>As follow up I asked: What other disposal/treatment option are available that we should address in the rule?</i> We rely on our waste disposal partners to keep us informed of the environmentally responsible methods for disposal. Deep well injection has been endorsed by those experts in the industry. I am not expert on that by any stretch, but I offered that comment in hopes that it would be considered and ruled on as acceptable or not acceptable by the DNR.</p>
<p>Doug Lackey, GM Fire Systems & Equipment at Ahern Fire</p>	<p>Regarding “Best Available Technology” under Treatment. Again, I am not expert on this technology, but as I read the rule, this would be a moving target that can never be truly defined. The technology will change constantly year to year, how would a treatment facility stay in compliance or who defines what is the best available technology?</p>

Chief Tim Bantes, Town of Grand Chute, and President of WI Fire Chiefs Association	Feel strongly that DNR advocate for additional resources for collection and disposal of the foam, through DATCP clean sweep. Many are volunteer or small departments, do not have resources financially to take care of proper disposal. Ultimate goal is to get rid of it, then move this forward. If we can get that one piece taken care of we can eliminate 70% of every other issue. Remind DNR - our resources are limited. When you mandate on FD, you burden them. Want survey results to be transparent, so we can help educate, and so we can use that to help us show elected officials what we are dealing with.
Jeff Lamont - Save our Water in Marinette	Yes, air deposition needs to be addressed. High school is downwind of firetraining center in Marinette, after open burning fires would find particulates on cars throughout parking lot and at air intake at HS.
John Robinson	159.04(3) limitations on treatment options, discharge: Does this include stormwater basins, infiltration basins and bioremediation basins. If not, it should.
Unnamed, question during public meeting	Does exemption 1 apply to industrial occupancies that have C8 or C6 Class B foams in their systems?
Eric Uram, Headwater LLC	SDS documentation go out of date and result in recommendations insufficient to protect the environment. WDNR needs assurances that SDS sheets will result in protection and contain the most current information. Require annual review of SDS and updated references
Eric Uram, Headwater LLC	WDNR should require any company selling AFFF in WI to have chemical standards for the PFAS chemicals present in their products. Further, that these standards will be available to the testing industry at a reasonable cost (preferably no-cost) for use in their testing methods.

Eric Uram, Headwater LLC	WDNR has no jurisdiction beyond the borders of the state and the ability for an entity to transfer their ownership of AFFF to an entity outside of the state who may not meet the intent of this law. What requirements are being made to eliminate circumvention of the rule?
Eric Uram, Headwater LLC	The timeframe for management (off-site treatment and disposal) is not indicated. Some indication that management needs to reflect monitored management in-perpetuity. Anything short of that will allow for releases under current language.
Eric Uram, Headwater LLC	Does WDNR plan to allow facilities in WI to incinerate PFAS? Currently, no certification exists for treatment. Does WDNR know of a certification program that can address issues related to proper destruction? Your definitions of incineration or thermal disposal are weak and do not reach the state of the art for mineralizing PFAS.
Eric Uram, Headwater LLC	What measures does WDNR plan in order to properly address these (GAC and IX waste streams) at end of life?
Tyco Fire Protection Products	The proposed emergency rules: exceed the underlying statutory authority by requiring treatment far below the applicable drinking and ground water standards; regulate non-foam liquids as “foam”; expand and implicitly revise the regulatory definition of waste; regulate facilities not engaged in foam testing; impose treatment, emission, and discharge standards that are vague and unenforceable; and regulate the methods of waste treatment and disposal authorized by other states.
Tyco Fire Protection Products	Proposed NR 159 substantially broadens the scope of DNR’s regulation to include facilities that have not used Class B in an emergency, and that do not conduct testing - indeed, any facility storing foam anywhere in the State.
Tyco Fire Protection Products	Tyco requests that at minimum, ch. NR 159 be revised as follows:
	A. Establish discharge standards in NR 159.08(1)(b) to require foam to be treated as required in Sections NR 159.08(1)(b) and (2)(a) to a combined 20 ppt concentration of PFOS and PFOA.
	B. Revise the provisions for treatment in Section NR 159.08 to clarify that the provisions for treatment and disposal only apply to facilities in Wisconsin, and do not regulate other methods of approved treatment and disposal beyond the borders of the state.
	C. Remove the recordkeeping and secondary containment requirements not explicitly authorized by Act 101.
	D. Revise the proposed emission requirements for commercial foam testing facilities to instead require testing inside an enclosed building.

	E. Eliminate the requirement for disposal of stored foam within 3 months of the expiration date on the container.
Don Johnston, U.S. Venture, Inc.	159.06(6) Storage – The Rule needs to clarify that “Proper disposal of containers within 3 months of the expiration date of the foam” means 3 months after foam expiration. The timeframe should also be extended to 180 days to match the requirement for Small Quantity Generators of Hazardous Waste. The rule should also allow for foam to stay in use past the manufacturer’s expiration date if tested and found to still be of usable quality.
Don Johnston, U.S. Venture, Inc.	NR 159.06(8) Secondary Containment—The Rule needs to provide WDNR and the regulated community flexibility in meeting the curbing/dike requirement particularly for existing structures. There is such a mechanism in the Federal SPCC rules that could be used as an example.
Don Johnston, U.S. Venture, Inc.	NR 159.07(1) Secondary Containment—The Rule should provide some guidance as to what can be used as “other industrial and national association standards.”
Don Johnston, U.S. Venture, Inc.	NR 159.07(5) Secondary Containment—The Rule should provide some guidance or specificity as to whether a facility, such as a petroleum terminal with a Foam System, has adequate containment in the event of a foam discharge.
Don Johnston, U.S. Venture, Inc.	NR 159.08 Treatment and Disposal—Can the Department impose requirements on out-of-State TSDF facilities, if the generator sends the collected foam/PFAS material out of State?
Don Johnston, U.S. Venture, Inc.	NR 159.08(1)(b)1 Best Available Technology—The Rule should provide a level of treatment in addition to a prescriptive treatment method to provide the regulated community as much flexibility as possible.
Don Johnston, U.S. Venture, Inc.	NR 159.09 Lab Analyses and Samples for PFAS in foam—The Department should confirm that there are readily available labs that are capable of testing to the desired discharge limit provided in NR 159.08(1)(b)1.
WI Airport Management Association	The current draft language for containment, treatment, disposal and storage does not properly specify that it is only related to foam dispensed during the testing process. Instead, it appears like the intent is to establish requirements for containment, treatment, disposal and storage of all foam, including that stored in trucks and the original manufacturers containers.

WI Airport Management Association	Airports have foam in tanks on trucks that are specifically made for the purpose of emergency firefighting. To require these tanks to have a secondary containment system would be incredibly expensive and a significant financial burden for airports and the municipalities that oversee them. Furthermore, we are not aware of any instances at Wisconsin airports where a truck tank with firefighting foam containing PFAS has leaked. Our request is that the language in both (7) and (8) on page 14 be removed
WI Airport Management Association	the first sentence of (5) on page 15 should be updated to reflect “that uses or discharges of foam for other than testing <u>or emergency purposes</u> under exemptions listed in s. NR 159.04 (2)”. Once again, it’s important to reflect here that containment is only related to foam derived from testing as it will be impossible to design a containment system for foam dispensed during an emergency response
Municipal Environmental Group – Wastewater Division	MEG supports the Department’s efforts to keep PFAS compounds out of sanitary sewer systems. MEG is concerned, however, that Emergency Rule WA-06-20(E) essentially establishes a zero detect discharge standard for PFAS despite the fact that, due to the ubiquity of these compounds, PFAS are detected at much higher levels throughout our environment. Any standards established by the Department regarding PFAS compounds should be based on sound science and consider the background levels of those compounds in the environment.
Waukesha County Environmental Action League	Section NR159.08(1)(a) – Treatment and Disposal This section appears to imply incineration/gasification will destroy PFAS or PFAS-contaminated materials. WEAL does not agree with this assumption
Waukesha County Environmental Action League	WEAL asks to include the following in (1)(a): Thermal Waste Processing Device, Conversion Technology, Conversion Energy System, Gasification, Plasma Arc, Cement Kilns, Carbon Filter Units, or other terms that may be used to describe an Incineration or “Thermal Destruction” systems. Do not to allow Research & Testing Exemptions for PFAS or PFAS-contaminated materials.
Carly Michiels, Clean Wisconsin	Supports rulemaking
Marcus A. Branstad, American Chemistry Council	Definitions Section (16) Includes PFAS in the hazardous substance definition. It is the position of ACC that this language is outside the scope of the rulemaking process and should be removed.
Marcus A. Branstad, American Chemistry Council	Requested additional time to review rule elements with experts; Would like to explore a practical detection level that is risk based and not simply as low as we can go.

PFAS Regulatory Coalition, Washington D.C.	Coalition requests that the State remove from the Draft Rule all references to disposal at a hazardous waste disposal facility
PFAS Regulatory Coalition, Washington D.C.	Coalition seeks clarification regarding whether the Draft Rule would apply to individual PFAS compounds or to all of the thousands of PFAS compounds
PFAS Regulatory Coalition, Washington D.C.	EPA has not finalized the Clean Water Act (CWA) 1600-series analytical method, and the method is not expected to be finalized until 2021
PFAS Regulatory Coalition, Washington D.C.	the proposed “non-detect” standard is unachievable with current laboratory capabilities because no certified laboratories exist to perform the required testing. Rule should allow regulated entities to submit other new and existing analytical methods as alternatives, in order to promote flexibility and practicability
PFAS Regulatory Coalition, Washington D.C.	Rule should recognize the differences between the method detection limits (MDL) and the PQL and specify the use of the practical quantitation limit (PQL) as the most accurate detection limit. Also, provide for a delayed effective date or phased implementation that allows for laboratories to develop the expertise necessary to reliably accommodate the increased testing that the Draft Rule will require.
PFAS Regulatory Coalition, Washington D.C.	Treatment: Coalition seeks clarification regarding the basis for the minimum contact time and replacement frequency, and urges DNR to consider the availability of safe disposal options for the byproducts of GAC treatment
PFAS Regulatory Coalition, Washington D.C.	Coalition requests that DNR provide justification for its best available technology (BAT) determination; State does not have authority to prescribe how a regulated entity manages a side stream within a treatment system

PFAS Regulatory Coalition, Washington D.C.	Rule's mandates regarding air emissions are too vague for regulated entities to demonstrate compliance. For example, DNR should define what constitutes containment of air emissions "to the extent possible." Rule should define what constitutes "elimination" of air emissions from incineration of PFAS. Coalition urges DNR to clarify or remove all requirements related to air emissions.
PFAS Regulatory Coalition, Washington D.C.	Rule contains a mandate that regulated entities "shall take the actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands, or waters of this state." DNR should clearly define the actions that fulfill this mandate.
PFAS Regulatory Coalition, Washington D.C.	Coalition urges DNR to rely on quarterly inspections, which align with some inspections already being conducted under stormwater pollution prevention plans. And disposal of containers within three months of expiration of the foam is arbitrary.
PFAS Regulatory Coalition, Washington D.C.	Coalition requests that DNR include implementation deadlines of at least two years to allow for these additional costs, particularly related to storage and containment, to be included in future budgets.
Wisconsin Manufacturers & Commerce	An appropriate level of treatment is not the same as treatment to a level on non-detection. Had the Legislature intended to require treatment to a non-detect level, it would have placed that requirement in the statutes. The rule should require treatment to a level consistent with a promulgated drinking water standard for PFAS, or in the absence of a promulgated standard, a health advisory issued by the United States EPA.
Wisconsin Manufacturers & Commerce	Act 101 very explicitly limited storage requirements and related rulemaking authority to testing facilities seeking the exemption under s. 299.48(3)(b). Consequently, the Department must remove the application of storage requirements under the proposed rule to non-testing facilities because it lacks the requisite statutory authority
Wisconsin Manufacturers & Commerce	Department lacks explicit statutory authority for monthly inspections, the means by which storage containers must be fabricated, and the disposal of containers within 3 months of the expiration date. Similarly, the secondary containment requirements like impervious floors, curbs, berms, sumps and disconnection of drains to storm or sanitary sewers would require costly building retrofits.
Wisconsin Manufacturers & Commerce	Act 101 does not confer any authority to the Department to regulate the disposal of firefighting foam containing PFAS for any persons or facilities that are not testing facilities relying on the exemption for testing facilities under s. 299.48(3)(b).
Wisconsin Manufacturers & Commerce	Act 101 does not authorize the DNR to promulgate rules imposing volume-based recordkeeping requirements

Wisconsin Manufacturers & Commerce	The draft emergency rule purports to redefine this legislatively prescribed definition foam
Wisconsin Manufacturers & Commerce	Act 101 provides no explicit authority to regulate air emissions related to PFAS, nor does Chapter 285 of the Wisconsin Statutes, which regulates air pollution.

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Response
No authority to make those changes in this rule
Suggest changing definition to: "Fixed system" means a permanently installed fire suppression system designed for use on the specific fire hazards they are expected to control or extinguish.
Used once in rule language as "break down and destroy," removed "break down"
Add 159.03(17): "Intentionally added PFAS" means PFAS is a constituent of the foam added during the manufacturing process.
Could add, but it is not needed. The Class B firefighting foam definition in the rule refers to statute that already states "which may include a dual action Class A and B foam"
Could use 159.06(7) rather than (8), which would require any person that stores foam of any amount to have secondary containment (See many comments below regarding this subject)
removed "direct" in sub. (4)

Suggestion: Incineration or thermal treatment of foam or material containing PFAS shall be conducted at a temperature range and residence time sufficient to destroy PFAS while also ensuring the maximum degree of reduction in emission of PFAS, including elimination of such emissions where achievable. (see final language)

Could add Note under definition that it does not include Class A foams

Current statutory and rule language reflects this

Determination of a responsible party is outside the scope of this rule

Change to: (4) Containers for storage and transport shall be ~~puncture-resistant~~ and fabricated from or lined with materials compatible with foam and designed to minimize evaporation of foam, including containers direct from the manufacturer.

Section of rule changed more than this original proposal - Could change to: (5) Any person or testing facility that uses or discharges foam for other than testing under exemptions listed in s. NR 159.04 (2) (b) shall employ measures to contain foam and prevent potential discharge of the foam to the environment, without hindering fire fighting or fire prevention operations. Measures shall include materials such as dikes or booms to block drains or inlets leading to storm or sanitary sewers, material for absorbing any spills, and storage containers.

Process under s. 285.27(2)(b), Stats., (Performance and emission standards) may be used to further assess appropriate measures to be implemented in the permanent rule

Removed secondary containment provisions from rule. Other option was to emphasize the secondary containment in the Storage section to apply to storage: "Secondary containment during storage shall be..." Also, 159.07(3)(b) could be amended to: (b) Testing and flushing of vehicles and mobile firefighting equipment that store foam shall be conducted with a containment system capable of capturing, diverting, and storing generated foam and run-off

Clarify that treatment and disposal elements apply to WI only

We current include wastewater design and operational standards to meet the best available technology. Also included new technology option language

No direct impacts on rule language.
Process under s. 285.27(2)(b), Stats., (Performance and emission standards) may be used to further assess appropriate measures to be implemented in the permanent rule
Current wording is based on statute: (3) Appropriate containment, treatment, and disposal or storage measures may not include flushing, draining, or otherwise discharging foam into a storm or sanitary sewer. Storm and sanitary sewer is defined in SPS 381.01(212) "Sanitary sewer" means a pipe that carries wastewater consisting in part of domestic wastewater. SPS 381.01(245) "Storm sewer" means a pipe, other than a pipe located inside a building, that carries any of the following: storm water, groundwater or clear water.
The statute applies to all PFAS, but language was added to the rule in order to sample for specific compounds at laboratories.
SDS requirements in statute, relied upon as industry standard
PFAS chemicals present in AFFF products are proprietary so there is no way the department could obtain this information. Companies that create AFFF are not capable of creating analytical PFAS standards to use for testing.

We have no jurisdiction on waste treatment and disposal in other states. Will clarify language to reflect that.

The rule does not require treatment and disposal. Foam could be stored instead.

"Break down" term removed from rule; Incineration section based on National Defense Authorization Act

Covered under disposal section of rule

Discussed legislative intent with WI Legislative Council: foam includes water containing foam. Non-detect levels are technologically feasible during foam treatment.

Agreed - scope defined in rule

Language revised in rule

Revise our language on treatment and disposal to clarify that requirements are for WI only.

Adjust recordkeeping requirements to SDS only; removed secondary containment

Containment requirements amended

Removed the requirement to dispose of expired foam.
Removed the requirement to dispose of expired foam.
Containment requirements amended
This applies to testing standards, kept general on purpose
Containment requirements amended
No. Clarification added to denote we are only regulating treatment and disposal in WI
Treatment requirements amended
As of July 2020 there are seven laboratories that have applied for WI certification to perform this type of testing. All of these laboratories have performed MDL studies. Since the department is requiring that laboratories report to their MDL all seven labs are ready to perform this testing. Section edited.
Containment and treatment requirements amended

Containment requirements amended.
(Original info for storage taken from
Australia foam guidance, 1C.1.6 in
<https://www.defence.gov.au/estatemanagement/governance/policy/environment/pollution/docs/PPMM/Annex%201C.pdf>)

Containment requirements amended

Statute requires appropriate
treatment, meet lowest levels possible;
Treatment section amended

Covered in the general existing
language

Hazardous substance definition already
exists in statute, ch. 292 and 299

Tight timeline defined by statute and
rulemaking process requirements

PFAS is not designated as a hazardous waste in WI. Hazardous substance definition already exists in statute, ch. 292 and 299. Disposal section amended

Based on authorizing statute, "PFAS" means all compounds found in firefighting foam. Treatment section amended.

The method was listed only to provide a reference to the compound list that the department wanted laboratories to test for. Because the method is still in draft stage the department is now providing a list of PFAS in Table 1 that must be tested for.

This statement is not true. The proposed standard was a laboratory's MDL which each laboratory is capable of reporting to. The department will look at promoting flexibility in the permanent rule. Treatment section amended.

The department recognizes the differences between the MDL and PQL and is requiring reporting to the laboratory's MDL. There is no reason to delay the effective date as WI currently has seven laboratories with plenty of capacity to perform this testing.

Treatment requirements amended

Treatment requirements amended

Section of emergency rule removed
Removed from rule. Existing remediation requirements in effect.
Changed to quarterly inspections. Removed expiration language.
Containment section amended
Treatment requirements amended
Rule amended
Changed to quarterly inspections. Removed expiration language altogether. Do not require puncture resistant container - changed language to allow container from manufacturer.
Rule elements clarified
Removed; require to only keep SDS as records

Discussed legislative intent with WI
Legislative Council: foam includes
water containing foam.

Rule amended

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<p>1. Type of Estimate and Analysis <input checked="" type="checkbox"/> Original <input type="checkbox"/> Updated <input type="checkbox"/> Corrected</p>	<p>2. Date July 22, 2020</p>
<p>3. Administrative Rule Chapter, Title and Number (and Clearinghouse Number if applicable) NR 159 – Management of Class B Firefighting Foam</p>	
<p>4. Subject Regulating firefighting foam that contains certain contaminants. WA-06-20(E)</p>	
<p>5. Fund Sources Affected <input type="checkbox"/> GPR <input type="checkbox"/> FED <input type="checkbox"/> PRO <input type="checkbox"/> PRS <input type="checkbox"/> SEG <input type="checkbox"/> SEG-S</p>	<p>6. Chapter 20, Stats. Appropriations Affected --</p>
<p>7. Fiscal Effect of Implementing the Rule <input checked="" type="checkbox"/> No Fiscal Effect <input type="checkbox"/> Increase Existing Revenues <input type="checkbox"/> Increase Costs <input type="checkbox"/> Decrease Costs <input type="checkbox"/> Indeterminate <input type="checkbox"/> Decrease Existing Revenues <input type="checkbox"/> Could Absorb Within Agency's Budget</p>	
<p>8. The Rule Will Impact the Following (Check All That Apply) <input type="checkbox"/> State's Economy <input checked="" type="checkbox"/> Specific Businesses/Sectors <input checked="" type="checkbox"/> Local Government Units <input type="checkbox"/> Public Utility Rate Payers <input checked="" type="checkbox"/> Small Businesses (if checked, complete Attachment A)</p>	
<p>9. Estimate of Implementation and Compliance to Businesses, Local Governmental Units and Individuals, per s. 227.137(3)(b)(1). \$2,300,000 per year on average is reasonably expected with \$4,000,000 per year as the higher end of the range.</p> <p>Some aspects of the economic cost of storage, containment, treatment and disposal for entities that use foam for testing purposes are unclear and an estimate at this time will be unreliable. The department will engage entities impacted by this rule to estimate the economic cost of storage, containment, treatment and disposal for entities that use foam for testing purposes and any additional costs that may be reasonably expected during the permanent rulemaking phase.</p> <p>Fiscal Impact on the State: The proposed emergency rule is intended to be substantially self-implementing and no additional costs are expected.</p>	
<p>10. Would Implementation and Compliance Costs Businesses, Local Governmental Units and Individuals Be \$10 Million or more Over Any 2-year Period, per s. 227.137(3)(b)(2)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	
<p>11. Policy Problem Addressed by the Rule PFAS (perfluoroalkyl and polyfluoroalkyl substances) are a group of synthetic chemicals used in industry and consumer products worldwide since the 1950s. They do not break down in the environment for extremely long periods of time and they accumulate in the human body. Exposure to certain PFAS may cause adverse health effects. Some firefighting foams currently used to extinguish flammable liquid fires, including Class B and Class A/B foams, include intentionally added PFAS, meaning PFAS is a constituent of the foam.</p> <p>This rule implements s. 299.48, Wis. Stats., which prohibits the use or discharge of firefighting foam that contains intentionally added PFAS with two primary exceptions: foam that contains intentionally added PFAS may be used (1) for testing purposes or (2) as part of an emergency firefighting or fire prevention operation. Section 299.48, Wis. Stats., requires the department to promulgate rules to implement and administer section 299.48, including rules to determine appropriate containment, treatment, and disposal or storage measures for testing facilities.</p>	
<p>12. Summary of the Businesses, Business Sectors, Associations Representing Business, Local Governmental Units, and Individuals that may be Affected by the Proposed Rule that were Contacted for Comments.</p>	

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Potentially affected parties include three main types of sectors: municipal firefighting entities; foam and foam equipment manufacturing, installation, and testing entities; and public and private facilities that have installed fixed foam systems or that store firefighting foam to be used for fire suppression. Comments on an EIA for the permanent rule will be solicited from all sectors. The following entities, in addition to broader inquiries, were contacted for comments on draft emergency rule language and will be solicited during the development of the EIA for the permanent rule package:

- WI Airport Management Association
- WI Fire Chiefs Association
- League of Wisconsin Municipalities
- WI Towns Association
- WI Technical College System
- WI Department of Safety and Professional Services
- WI Department of Transportation
- Major private entities in the manufacturing and testing industry
- Solid Waste Association of North America – WI Chapter
- Wisconsin Manufacturers & Commerce

13. Identify the Local Governmental Units that Participated in the Development of this EIA.

The department will contact local governments and fire department associations that may be potentially impacted by the rule. Local governments and fire departments may be impacted by costs of containment, storage, treatment and disposal if they conduct testing on foam or foam equipment. While the rule does not mandate the disposal of firefighting foam with intentionally added PFAS, costs for disposal may be higher than they would have been prior to the adoption of s. 299.48, Wis. Stats., (if it was formerly discharged to the ground or to a sewer) based on the requirements for appropriate disposal in the emergency rule.

14. Summary of Rule's Economic and Fiscal Impact on Specific Businesses, Business Sectors, Public Utility Rate Payers, Local Governmental Units and the State's Economy as a Whole (Include Implementation and Compliance Costs Expected to be Incurred)

The discharge of PFAS to the environment imposes costs on both public and private entities and members of the public. Under ch. 292, Wis. Stats., any person who uses firefighting foam with intentionally added PFAS that results in a hazardous substance discharge to the environment must take the actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands or waters of this State. The costs for appropriate containment, treatment, disposal and storage of firefighting foam containing intentionally added PFAS under s. 299.48, Wis. Stats., and the proposed emergency rule are anticipated to be less than the costs that otherwise would result from uncontrolled discharges of PFAS to the environment.

The primary economic implications of the rule are related to containment, treatment, and disposal or storage measures for foam containing intentionally added PFAS for testing facilities or for public or private entities that conduct those activities. While these measures will impose additional costs, the emergency rule timeframe did not allow for comprehensive cost estimates and the department intends to provide a more detailed and accurate impact summary with the permanent rule following additional stakeholder engagement.

(A) Economic Impact on Specific Business and Business Sectors: Foam and foam equipment manufacturing,

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installation, and testing entities; public and private facilities that have mobile or installed fixed foam systems or that store firefighting foam to be used for fire suppression.

- i. Prohibitions and use: no economic impact anticipated: The rule does not ban use for firefighting or fire prevention, does not require disposal and conditionally allows for testing of fire suppression systems.
- ii. Notification: minimal economic impact if any: Fire departments and public or private systems must report discharges as soon as practicable without hindering firefighting or fire prevention operations. Notification cost that may be reasonably expected is indeterminate even though we anticipate it to be minimal to none.
- iii. Recordkeeping: minimal to no additional economic impacts: Management of existing documentation of Safety Data Sheets does not create new paperwork requirements. Record keeping cost that may be reasonably expected is indeterminate even though we anticipate it to be minimal to none .
- iv. Storage: minimal additional economic impact expected; New requirements for facilities may lead to the purchase of additional storage/containers needed for foam, additional labor costs associated with labeling and inspection, and the purchase of materials to prevent discharge to the environment. There will be additional costs associated with these requirements but are not anticipated to be significant. Direct economic estimates based on the types of storage, the expected storage volume, and labor costs will be solicited and evaluated by the department in advance of the permanent rule.
- v. Containment, treatment and disposal: moderate economic impact expected, additional estimates under solicitation and evaluation by the department. It is estimated that there are approximately 150-200 fixed fire suppression systems within public and private facilities that utilize Class B firefighting foam. A limited survey of facilities with fixed foam systems indicated that these fixed systems are primarily in areas with existing containment, resulting in minimal to no economic impact. Industry experts estimated that system testing and resultant foam disposal costs will increase for these facilities, and cost approximately \$3,000 to \$20,000 per facility. Assuming 200 facilities in the State, the statutory and rule requirements would range in impact from approximately \$600,000 to \$4,000,000 per year, with the midpoint estimate of \$2,300,000. However, costs are expected to lessen over time with adoption of alternative methods such as surrogate and water equivalency testing and using replacement foams that do not contain PFAS. Additionally, some manufacturers with foam testing operations in Wisconsin have been phasing out the use of PFAS in foam products and testing, which may increase as alternatives become more readily available. Any current system tests that generate Class B foam with intentionally added PFAS, if not stored and removed for disposal, would require appropriate treatment. Currently, wastewater containing foam, when generated by facilities during system tests, must comply with existing administrative code governing WPDES permits for pretreatment of discharges to wastewater treatment plants. Therefore, the impact of this rule on testing facilities is expected to be minimal to moderate. Direct economic estimates will be solicited and evaluated by the department in advance of the permanent rule.

(B) Economic and Fiscal Impact on Local Government Units and Public Entities

- i. Prohibitions and use: no additional economic impacts are anticipated: The rule does not ban use for firefighting or fire prevention and does not require disposal. A recent fire department survey sent to the state's 825 fire departments determined that they intend to dispose of ~18,000-31,000 gallons of firefighting foam concentrate in the aggregate, but these costs are discretionary.
- ii. Notification: no additional economic impacts are anticipated
- iii. Recordkeeping: no additional economic impacts are anticipated: Management of existing documentation such as Safety Data Sheets does not create new paperwork requirements.
- iv. Storage: minimal additional economic impacts from this rule are anticipated: If fire departments use foam for testing purposes, new requirements for storage may lead to the purchase of additional storage/containers needed for foam, additional labeling and inspection, and the purchase of materials to prevent discharge to the

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environment. There will be additional costs associated with these requirements but these costs are not anticipated to be significant. Direct economic estimates will be solicited and evaluated by the department in advance of the permanent rule.

- v. Containment, treatment and disposal: minimal additional economic impacts are anticipated: Fire departments may choose to keep foam for emergency firefighting use. Disposal costs are discretionary. Direct economic estimates for potential containment will be solicited and evaluated by the department in advance of the permanent rule.

(C) Fiscal Impact on the department: The proposed emergency rule is intended to be substantially self-implementing and no additional costs are expected.

- i. Prohibitions and use: self-implementing, no fiscal impact: The department's Forestry Division determined that it currently does not use any firefighting foam with intentionally added PFAS.
- ii. Notification and recordkeeping: no fiscal impact
- iii. Recordkeeping: no fiscal impact

15. Benefits of Implementing the Rule and Alternative(s) to Implementing the Rule

Section 299.48 (5), Wis. Stats., requires the department to promulgate rules to implement and administer the section, including to determine appropriate containment, treatment, and disposal or storage measures for testing facilities.

Benefits of implementing the rule include reduction in the discharge of PFAS to the environment and the very significant potential costs of remediating discharges. PFAS accumulate in the environment and in the human body, and exposure to certain PFAS may cause adverse health effects.

16. Long Range Implications of Implementing the Rule

Long range fiscal implications of the rule are related to recordkeeping, containment, treatment, and disposal or storage measures. The benefits of implementing the rule could lead to overall fiscal benefit because of the reduction of PFAS in the environment - and reduced need for clean-up - and less impact on human health.

17. Compare With Approaches Being Used by Federal Government

The federal Defense Authorization Act of 2020 included several PFAS-related provisions, largely because PFAS contamination of water supplies has been identified at or around several military installations. The Act specifies in section 323 that PFAS-containing firefighting foam may only be released for purposes of an emergency response. A non-emergency release of PFAS foam may be made for the purposes of testing of equipment or training of personnel, if complete containment, capture, and proper disposal mechanisms are in place to ensure no foam is released into the environment. It also requires the military to develop a fluorine-free foam specification by January 31, 2023 and sets a deadline for banning the use on military bases in the future.

The Defense Authorization Act establishes guidelines for the proper disposal of firefighting foam at military sites and directs the military to develop guidance to address these issues. Specifically, all incineration of firefighting foam containing PFAS chemicals must be conducted at a temperature range adequate to break down PFAS chemicals, while also ensuring the maximum degree of reduction in emission of PFAS chemicals and must be conducted in accordance with the Clean Air Act at a facility permitted to receive the waste. The Act also requires the Environmental Protection Agency (EPA) to publish interim guidance on the destruction and disposal of PFAS substances and materials, which is expected before the end of 2020.

The Federal Aviation Administration (FAA) Reauthorization Act of 2018 was passed on October 5, 2018 and states that

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no later than three years after the date of enactment, the FAA shall no longer require the use of fluorinated chemicals (found in PFAS) to meet the performance standards accepted under federal regulations. As a result of this change, the FAA and FAA-regulated facilities will no longer be required to use firefighting foams that contain PFAS.

State definitions of "environmental pollution" and "discharge" of a "hazardous substance" are not the same as the definition of a hazardous substance in the federal Superfund law and in some other states' laws. When discharged to the environment in Wisconsin, certain PFAS meet the definitions of a hazardous substance and/or environmental pollution under state statutes (s. 292.01, Wis. Stats.). There is no comparative federal law that specifically prohibits the use or discharge of firefighting foam that contains intentionally added PFAS.

18. Compare With Approaches Being Used by Neighboring States (Illinois, Iowa, Michigan and Minnesota)

Illinois has legislation pending, SB3154, that would, on and after January 1, 2021, prohibit the knowing manufacture, sale, offering for sale, distribution for sale, or distribution for use of a Class B firefighting foam containing intentionally added PFAS. This legislation would also require manufacturers of Class B firefighting foam containing PFAS to register with the Illinois EPA and pay to the EPA an annual registration fee of \$5,000. There is also separate legislation pending that would require the creation of groundwater quality standards to limit two PFAS, PFOA (perfluorooctanoic acid) and PFOS (perfluorooctanesulfonic acid) to 70 ppt combined or individually; and that directs the Dept. of Public Health to establish maximum contaminant levels (MCLs) in public water systems for PFOA and PFOS, and other PFAS.

Indiana's House Bill 1189 was signed into law on March 30, 2020. This law prohibits the use of Class B firefighting foam containing an intentionally added PFAS: (1) for training purposes; and (2) for testing purposes, unless the testing facility has implemented appropriate measures to prevent releases of the firefighting foam to the environment. Indiana also has non-binding guidance that sets screening levels for three PFAS per EPA's health advisory level of 70 ppt.

As of January 2020, Iowa has a non-binding guidance "action plan" to identify and minimize PFAS exposures, prevent future releases, and provide education and outreach. HF 2241 failed to pass last session that would have prohibited the manufacture and sale of firefighting foam containing PFAS, prohibit the use of PFAS foam for training purposes, and require manufacturers of firefighter protective equipment to disclose the inclusion of PFAS in their products. Iowa DNR is developing a plan to assess risk to public water supplies from PFAS and may sample the higher risk facilities in the future.

Michigan has created by executive order a PFAS action team to identify, recommend, and implement responses to PFAS contamination. Three bills focused on fire departments and fire fighter activities have moved through the MI legislature: House Bill 4389 establishes a PFAS firefighting foam collection program at the Department of Environment, Great Lakes, and Energy (EGLE), and requires reporting of the use of firefighting foams within 48 hours including the following information: the purpose for the PFAS foam use, where it was used, how much was used, how much water was used, the brand and manufacturer of the product used, and the proposed process for cleanup and disposal. House Bill 4390 bars the use of PFAS firefighting foam in firefighting training, and requires proper training for the emergency use, handling, storage, disposal and cleanup of PFAS foam. House Bill 4391 calls for rulemaking to be promulgated by the Department of Labor to establish best practices for handling & storing PFAS foam by emergency responders, ban the use of PFAS foam for training purposes, and to end the use of PFAS foam for equipment calibration unless certain stringent conditions have been met.

Michigan recently announced it had collected and disposed of over 30,000 gallons of PFAS-containing firefighting foam through a clean sweep type program. Michigan recommends that fire departments use only Class A foam unless Class B foam is needed to protect human life or critical infrastructure, and that they train only with Class A foams.

Minnesota passed legislation that took effect July 1, 2020 requiring that any Class B firefighting foam containing PFAS

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that is used on a fire must be reported to the State Fire Reporting System within 24 hours. It also prohibits use of PFAS-containing firefighting foam for testing and training unless appropriate containment, treatment, and disposal measures are implemented to prevent releases of foam to the environment. Minnesota has not created additional guidance or rules to describe appropriate containment, treatment, and disposal measures. Minnesota also has non-binding guidance identifying maximum levels of PFBS, PFHxS, PFOS, and PFOA in drinking water.

19. Contact Name	20. Contact Phone Number
Kate Strom Hiorns	608-261-8449

This document can be made available in alternate formats to individuals with disabilities upon request.

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ATTACHMENT A

1. Summary of Rule's Economic and Fiscal Impact on Small Businesses (Separately for each Small Business Sector, Include Implementation and Compliance Costs Expected to be Incurred)

The department does not know how many of potentially impacted entities meet the statutory definition of small business. However, in an effort to develop a conservative estimate, the department assumed a majority, if not all entities, are small businesses.

Small businesses impacted by this rule would be various facilities that use Class B firefighting foam in their fixed fire suppression systems. These would be facilities that have a need for suppression of possible liquid (gasoline, oil) fires.

Storage: minimal additional economic impact expected; new requirements for facilities may lead to the purchase of additional storage/containers needed for foam, additional labor costs associated with labeling and inspection, and the purchase of materials to prevent discharge to the environment. There will be additional costs associated with these requirements but these costs are not anticipated to be significant. Direct economic estimates based on the types of storage, the expected storage volume, and labor costs will be solicited and evaluated by the department in advance of the permanent rule.

Containment, treatment and disposal: moderate economic impact expected, additional estimates under solicitation and evaluation by the department. It is estimated that there are approximately 150-200 fixed fire suppression systems within public and private facilities that utilize Class B firefighting foam. A limited survey of facilities with fixed foam systems indicated that these fixed systems are primarily in areas with existing containment, resulting in minimal to no economic impact. Industry experts estimated that system testing and resultant foam disposal costs will increase for these facilities, and cost approximately \$3,000 to \$20,000 per facility. Assuming 200 facilities in the state, the statutory and rule requirements would range in impact from approximately \$600,000 to \$4,000,000 per year, with the midpoint estimate of \$2,300,000. However, costs are expected to lessen over time with adoption of alternative methods such as surrogate and water equivalency testing and using replacement foams that do not contain PFAS.

2. Summary of the data sources used to measure the Rule's impact on Small Businesses

Emails and calls were made to industry experts and facilities with fixed foam systems to determine foam amounts; any existing containment, storage, treatment, and disposal activities; testing activities; and current and potential costs. Industry sectors were also contacted for comments on draft emergency rule language earlier in rule development.

Additional comments on an EIA for the permanent rule will be solicited from potentially affected parties, which include three main types of sectors: municipal firefighting entities; foam and foam equipment manufacturing, installation, and testing entities; and public and private facilities that have installed fixed foam systems or that store firefighting foam to be used for fire suppression.

3. Did the agency consider the following methods to reduce the impact of the Rule on Small Businesses?

- ☒ Less Stringent Compliance or Reporting Requirements
- ☐ Less Stringent Schedules or Deadlines for Compliance or Reporting
- ☒ Consolidation or Simplification of Reporting Requirements
- ☐ Establishment of performance standards in lieu of Design or Operational Standards
- ☐ Exemption of Small Businesses from some or all requirements
- ☐ Other, describe:

4. Describe the methods incorporated into the Rule that will reduce its impact on Small Businesses

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This rule is self-implementing and allows entities to choose containment, storage, treatment, and disposal methods that fit best with their facility designs and needs, while at the same time providing standards that will prevent discharge of foam to the environment. The provided standards and methods for the prevention of discharge of foam to the environment can help business avoid more costly cleanup procedures. The reporting and recordkeeping requirements provided in the rule impact all entities and increased associated costs are estimated to be minimal to none.

5. Describe the Rule's Enforcement Provisions

Under authorization in ch. 299, Wis. Stats., the rule shall be enforced by the attorney general (s. 299.95) and penalties and remedies may be assessed under s. 299.97, Wis. Stats.

6. Did the Agency prepare a Cost Benefit Analysis (if Yes, attach to form)

☐ Yes ☒ No

July 22, 2020

The statement of scope for this rule, SS 015-20, was approved by the Governor on March 20, 2020, published in Register No. 771B on March 30, 2020, and approved by the Natural Resources Board on June 24, 2020. This rule was approved by the Governor on insert date.

ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD
CREATING RULES

The Wisconsin Natural Resources Board adopts an order to **create** NR 159 relating to regulating firefighting foam that contains certain contaminants and affecting small business.

WA-06-20 (E)

Analysis Prepared by the Department of Natural Resources

- 1. Statutes Interpreted:** Sections 299.48 and 227.11(2)(a), Wis. Stats.; 2019 Wisconsin Act 101 (s. 2, nonstatutory provisions directing rulemaking)
- 2. Statutory Authority:** Sections 299.48, and 227.11(2)(a), Wis. Stats.; 2019 Wisconsin Act 101 (s. 2, nonstatutory provisions directing rulemaking)
- 3. Explanation of Agency Authority:** Section 299.48, Wis. Stats., regulates the use of firefighting foam that contains intentionally added PFAS and grants rule-making authority to the department. Specifically, s. 299.48 (5), Wis. Stats., states that the department shall promulgate rules to implement and administer the section, including to determine appropriate containment, treatment, and disposal or storage measures for testing facilities.

Section 2 of 2019 Wisconsin Act 101 states that the department shall promulgate rules under s. 299.48 (5), Wis. Stats., no later than the first day of the 7th month beginning after the effective date of the subsection. Emergency rules promulgated under this subsection remain in effect until 3 years after the effective date, or the date on which permanent rules take effect. Notwithstanding s. 227.24 (1) (a) and (3), Wis. Stats., the department is not required to provide evidence that promulgating a rule under this subsection as an emergency rule is necessary for the preservation of public peace, health, safety, or welfare and is not required to provide a finding of emergency for a rule promulgated under this subsection. Section 2(1) of Act 101 took effect on the day after publication, which was February 6, 2020. Therefore, the emergency rules are expected to be promulgated by September 1, 2020.

The department also has authority to promulgate rules under s. 227.11 (2)(a), Wis. Stats., necessary to effectuate the purpose of s. 299.48, Wis. Stats., requirements.
- 4. Related Statutes or Rules:** Additional authority for pollution prevention activities is under s. 299.13, Wis. Stats.; and authority to require notification of a discharge of a hazardous substance, including firefighting foam that contains certain contaminants, under s. 292.11, Wis. Stats.
- 5. Plain Language Analysis:** PFAS (perfluoroalkyl and polyfluoroalkyl substances) are a group of synthetic chemicals used in industry and consumer products worldwide since the 1950s. They do not break down in the environment for extremely long periods of time and they accumulate in the human body. Exposure to certain PFAS may cause adverse health effects.

2019 Wisconsin Act 101, codified in s. 299.48, Wis. Stats., prohibits the use of Class B and dual action Class A and B firefighting foams that contain intentionally added PFAS as of September 1, 2020, except in the following two situations:

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- When used as part of an emergency firefighting or fire prevention operation; or
- When used for testing purposes at a testing facility that has implemented appropriate containment, treatment and disposal or storage measures to prevent discharges of the foam to the environment, and does not flush, drain or otherwise discharge the foam into a storm or sanitary sewer.

Section 299.48 (3m), Wis. Stats., requires notification to the department when PFAS-containing foams are discharged to the environment in the following two situations:

- When PFAS-containing firefighting foam is used as part of an emergency firefighting or fire prevention operation, notify DNR immediately or as soon as practicable without hindering firefighting or fire prevention operations.
- When PFAS-containing firefighting foam is used for testing purposes, notify DNR immediately of any discharge of the foam to the environment.

This rule creates ch. NR 159 to implement the legislature's directive to the department to promulgate rules to implement and administer s. 299.48, Wis. Stats. The proposed emergency rule contains the following summarized requirements:

“Foam” is defined as Class B firefighting foam with intentionally added PFAS in all forms, including:

- (a) In concentrate.
- (b) Mixed with or diluted in water or other liquids.
- (c) Wastewater containing foam unless sufficiently treated in accordance with NR 159.08(1).

Prohibitions and use:

The use of Class B firefighting foams with intentionally added PFAS, including for training exercises, is prohibited. The use of foams is allowed for emergency firefighting, fire prevention operations, and testing purposes so long as certain requirements are met.

Notification and recordkeeping:

The proposed emergency rule contains notification requirements for persons who use foam for firefighting operations or who discharge foam to the environment as part of testing operations. Any person in possession of foam must maintain records of the amounts of foam kept on site and its safety data sheets.

Storage:

Any person handling or storing foam shall manage the foam in accordance with safety data sheets and in a manner that will prevent discharges to the environment. This includes self-inspection and spill containment plans, use of leak-proof, closed and labeled containers, and provisions for cleanup of spills and discharges.

Containment:

Any person testing foam, including testing foam effectiveness and fire suppression systems, foam delivery systems and associated equipment or vehicles, must contain the foam in a manner that will prevent discharge of a hazardous substance to the environment. This includes: containment that meets industry and national association testing standards; testing and flushing of equipment, systems, and facilities using a containment system capable of capturing, diverting, and storing generated foam; measures to prevent foam that escapes containment from entering surface waters, groundwater, storm sewers or sanitary sewers; and a containment system design that takes into account location and use of the foam, the risk to the environment, the automatic or manually activated design of a foam system, and any other applicable local, state, or federal regulations.

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Treatment:

Any person choosing to treat foam in Wisconsin shall ensure treatment is conducted in a manner that will prevent a discharge of foam to the environment, i.e. air, lands or waters of the state. One option for treatment is incineration or thermal destruction, which must be able to destroy PFAS. Other treatment options include treating foam to effluent concentrations specified in the rule by using a treatment technology that is equal to or better than the treatment technologies specified in the rule. Specifically, the rule states that before a testing facility may discharge treated foam directly to waters of the state or to a sanitary sewer, a facility must employ a treatment technology that reduces PFAS concentrations in the foam for the listed PFAS parameters to numeric effluent standards or the testing laboratory's monitoring detection limit, whichever is higher. Design of treatment systems requires department approval.

Disposal:

In Wisconsin, foam must be treated in accordance with this rule or effectively immobilized through solidification or a comparable process prior to disposal. Foam may only be disposed of at a licensed solid waste facility.

Additional measures for appropriate containment, treatment, and disposal or storage will be considered during the development of a permanent rule. Regarding the prevention of a discharge of air contaminants from the use of foam with intentionally added PFAS for testing purposes, the department has a process under s. 285.27 (2) (b), Wis. Stats., which may be used to further assess appropriate measures to be implemented in the permanent rule. The department's work on the permanent rule is ongoing.

6. Summary of, and Comparison with, Existing or Proposed Federal Statutes and Regulations:

The federal Defense Authorization Act of 2020 included several PFAS-related provisions, largely because PFAS contamination of water supplies has been identified at or around several military installations. The Act specifies in section 323 that PFAS-containing firefighting foam may only be released for purposes of an emergency response. A non-emergency release of PFAS foam may be made for the purposes of testing of equipment or training of personnel, if complete containment, capture, and proper disposal mechanisms are in place to ensure no foam is released into the environment. The Act requires the military to develop a fluorine-free foam specification by January 31, 2023 and sets a deadline for banning the use on military bases in the future.

The Defense Authorization Act also establishes guidelines for the proper disposal of firefighting foam at military sites and directs the military to develop guidance to address these issues. Specifically, all incineration of firefighting foam containing PFAS chemicals must be conducted at a temperature range adequate to break down PFAS chemicals, while also ensuring the maximum degree of reduction in emission of PFAS chemicals and must be conducted in accordance with the Clean Air Act at a facility permitted to receive the waste. The Act requires the Environmental Protection Agency (EPA) to publish interim guidance on the destruction and disposal of PFAS substances and materials, which is expected before the end of 2020.

The Federal Aviation Administration (FAA) Reauthorization Act of 2018 was passed on October 5, 2018 and states that no later than three years after the date of enactment, the FAA shall no longer require the use of fluorinated chemicals (found in PFAS) to meet the performance standards accepted under federal regulations. As a result of this change, the FAA and FAA-regulated facilities will no longer be required to use firefighting foams that contain PFAS.

State definitions of "environmental pollution" and "discharge" of a "hazardous substance" are not the same as the definition of a hazardous substance in the federal Superfund law and in some other states'

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laws. When discharged to the environment in Wisconsin, certain PFAS meet the definitions of a hazardous substance and/or environmental pollution under state statutes (s. 292.01, Wis. Stats.). There is no comparative federal law that specifically prohibits the use or discharge of firefighting foam that contains intentionally added PFAS.

7. Comparison with Similar Rules in Adjacent States: Illinois has legislation pending, SB3154, that would, on and after January 1, 2021, prohibit the knowing manufacture, sale, offering for sale, distribution for sale, or distribution for use of a Class B firefighting foam containing intentionally added PFAS. This legislation would also require manufacturers of Class B firefighting foam containing PFAS to register with the Illinois EPA and pay to the EPA an annual registration fee of \$5,000. There is also separate legislation pending that would require the creation of groundwater quality standards to limit two PFAS, PFOA (perfluorooctanoic acid) and PFOS (perfluorooctanesulfonic acid) to 70 ppt combined or individually; and that directs the Dept. of Public Health to establish maximum contaminant levels (MCLs) in public water systems for PFOA and PFOS, and other PFAS.

Indiana's House Bill 1189 was signed into law on March 30, 2020 that prohibits the use of Class B firefighting foam containing an intentionally added PFAS: (1) for training purposes; and (2) for testing purposes, unless the testing facility has implemented appropriate measures to prevent releases of the firefighting foam to the environment. Indiana also has non-binding guidance that sets screening levels for three PFAS per EPA's health advisory level of 70 ppt.

As of January 2020, Iowa has a non-binding guidance "action plan" to identify and minimize PFAS exposures, prevent future releases, and provide education and outreach. HF 2241 failed to pass last session that would have prohibited the manufacture and sale of firefighting foam containing PFAS, prohibit the use of PFAS foam for training purposes, and require manufacturers of firefighter protective equipment to disclose the inclusion of PFAS in their products. Iowa DNR is developing a plan to assess risk to public water supplies from PFAS and may sample the higher risk facilities in the future.

Michigan has created by executive order a PFAS action team to identify, recommend, and implement responses to PFAS contamination. Three bills focused on fire departments and fire fighter activities have moved through the MI legislature: House Bill 4389 establishes a PFAS firefighting foam collection program at the Department of Environment, Great Lakes, and Energy (EGLE), and requires reporting of the use of firefighting foams within 48 hours including the following information: the purpose for the PFAS foam use, where it was used, how much was used, how much water was used, the brand and manufacturer of the product used, and the proposed process for cleanup and disposal. House Bill 4390 bars the use of PFAS firefighting foam in firefighting training, and requires proper training for the emergency use, handling, storage, disposal and cleanup of PFAS foam. House Bill 4391 calls for rulemaking to be promulgated by the Department of Labor to establish best practices for handling and storing PFAS foam by emergency responders, ban the use of PFAS foam for training purposes, and to end the use of PFAS foam for equipment calibration unless certain stringent conditions have been met.

Michigan recently announced it had collected and disposed of over 30,000 gallons of PFAS-containing firefighting foam through a clean sweep type program. Michigan recommends that fire departments use only Class A foam unless Class B foam is needed to protect human life or critical infrastructure, and that they train only with Class A foams.

Minnesota passed legislation that took effect July 1, 2020 requiring that any Class B firefighting foam containing PFAS that is used on a fire must be reported to the State Fire Reporting System within 24 hours. It also prohibits use of PFAS-containing firefighting foam for testing and training unless appropriate containment, treatment, and disposal measures are implemented to prevent releases of foam to

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the environment. Minnesota has not created additional guidance or rules to describe appropriate containment, treatment, and disposal measures. Minnesota also has non-binding guidance identifying maximum levels of PFBS, PFHxS, PFOS, and PFOA in drinking water.

Ohio has created a PFAS drinking water action plan and is testing all 1,500 public water systems for six PFAS and will notify residents about exposure risks.

8. Summary of Factual Data and Analytical Methodologies Used and How Any Related Findings Support the Regulatory Approach Chosen: The department is required by statute to promulgate rules to implement and administer s. 299.48, Wis. Stats., including to determine appropriate containment, treatment, and disposal or storage measures for foam testing facilities.

The department reviewed extensive information from the Interstate Technology Regulatory Council (<https://pfas-1.itrcweb.org/>) that has developed fact sheets about PFAS and firefighting foam. Additional information was used from foam and PFAS guidance documents created by the U.S. Department of Defense, the National Fire Protection Association, the Commonwealth of Australia, and other states, including the Michigan PFAS Action Response Team. The department also discussed foam management issues with the WI State Fire Chiefs Association, WI Technical College staff (related to fire fighter and inspector training), the WI Airport Management Association, the WI Department of Safety and Professional Services staff, and colleagues in other states.

Ancillary to this rule, existing statute and administrative code requires any person that causes the discharge of a hazardous substance to the environment, subject to s. 292.11 (9), Wis. Stats., shall take the actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands or waters of this state as required by s. 292.11 (3), Wis. Stats. Persons responsible under s. 292.11 (3), Wis. Stats., for discharges of a hazardous substance to the environment shall follow the applicable requirements in chs. NR 700 to 754, Admin. Code, for remedial action sites.

9. Analysis and Supporting Documents Used to Determine the Effect on Small Business or in Preparation of an Economic Impact Report: In an effort to develop a conservative estimate, the department assumed a majority, if not all business entities affected by the rule, are small businesses. Emails and calls were made to industry experts and facilities with fixed foam systems to determine foam amounts; any existing containment, storage, treatment, and disposal activities; testing activities; and current and potential costs. Industry sectors were also contacted for comments on draft emergency rule language during rule development.

Additional comments on an EIA for the permanent rule will be solicited from potentially affected parties, which include three main types of sectors: municipal firefighting entities; foam and foam equipment manufacturing, installation, and testing entities; and public and private facilities that have installed fixed foam systems or that store firefighting foam to be used for fire suppression.

10. Effect on Small Business (initial regulatory flexibility analysis): Small businesses impacted by this rule would be various facilities that use Class B firefighting foam in their fixed fire suppression systems. These would be facilities that have a need for suppression of possible liquid (gasoline, oil) fires.

Storage: minimal additional economic impact expected; new requirements for facilities may lead to the purchase of additional storage/containers needed for foam, additional labor costs associated with labeling and inspection, and the purchase of materials to prevent discharge to the environment. There will be additional costs associated with these requirements but these costs are not anticipated to be significant. Direct economic estimates based on the types of storage, the expected storage volume, and labor costs

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will be solicited and evaluated by the department in advance of the permanent rule.

Containment, treatment and disposal: moderate economic impact expected, additional estimates under solicitation and evaluation by the department. It is estimated that there are approximately 150-200 fixed fire suppression systems within public and private facilities that utilize Class B firefighting foam. A limited survey of facilities with fixed foam systems indicated that these fixed systems are primarily in areas with existing containment, resulting in minimal to no economic impact. Industry experts estimated that system testing and resultant foam disposal costs will increase for these facilities, and cost approximately \$3,000 to \$20,000 per facility. Assuming 200 facilities in the State, the statutory and rule requirements would range in impact from approximately \$600,000 to \$4,000,000 per year, with the midpoint estimate of \$2,300,000. However, costs are expected to lessen over time with adoption of alternative methods such as surrogate and water equivalency testing and using replacement foams that do not contain PFAS.

Estimated costs for management, containment and proper disposal of firefighting foams with intentionally added PFAS, are anticipated to be less than the cost to clean and remediate uncontrolled discharges to the environment and subsequent remediation. This rule does not prohibit the manufacture, sale, or distribution of Class B firefighting foam that contains intentionally added PFAS.

11. Agency Contact Person: Kate Strom Hiorns; Department of Natural Resources, PO Box 7921, Madison, WI 53707-7921; KathrynM.StromHiorns@wisconsin.gov; (608) 261-8449

12. Place where comments are to be submitted and deadline for submission:

Written comments may be submitted at the public hearings, by regular mail, or by email to:

Kate Strom Hiorns – WA/5
Department of Natural Resources
PO Box 7921
Madison, WI 53707-7921
(608) 261-8449
KathrynM.StromHiorns@wisconsin.gov

Written comments may also be submitted to the department at
DNRAdministrativeRulesComments@wisconsin.gov.

Hearing dates and the comment submission deadline are to be determined.

SECTION 1. NR 159 is created to read:

CHAPTER NR 159
MANAGEMENT OF CLASS B FIREFIGHTING FOAM

NR 159.01 Purpose. The purpose of this chapter is to establish the appropriate containment, treatment, and disposal and storage measures when testing Class B firefighting foam with intentionally added perfluoroalkyl or polyfluoroalkyl substances (PFAS); to establish

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consistent, uniform standards and procedures to limit the discharge of Class B firefighting foams, unless the foam is used in emergency firefighting or fire prevention operations; and to clarify recordkeeping and notification requirements. This chapter is adopted under s. 299.48, Stats.

NR 159.02 Applicability. (1) This chapter applies to any person conducting testing of Class B firefighting foam with intentionally added PFAS, including calibration testing, conformance testing, or fixed-system testing, to evaluate its effectiveness or testing of a firefighting foam delivery system or equipment.

(2) This chapter applies to any person that uses or discharges Class B firefighting foam containing intentionally added PFAS including use as part of an emergency firefighting or fire prevention operation.

(3) A person that discharges foam shall manage foam in accordance with this chapter and in accordance with all other applicable environmental regulations, including chs. NR 500 to 538 and 700 to 754.

(4) This chapter may not be construed as prohibiting the manufacture, sale, or distribution of a Class B firefighting foam that contains intentionally added PFAS.

NR 159.03 Definitions. In this chapter:

(1) “Calibration testing” means the comparison of measurement values delivered by a device under testing with those of a calibration standard of known accuracy. These testing activities are typically associated with the installation, maintenance, and repair of emergency fire suppression and firefighting equipment.

(2) “Class B firefighting foam” has the meaning specified in s. 299.48 (1) (a), Stats.

Note: Under s. 299.48 (1) (a), Stats., “Class B firefighting foam” means a foam designed for use on a flammable liquid fire, which may include a dual action Class A and B foam.

(3) “Conformance testing” means testing or other activities that determine whether a process, product, or service complies with the requirements of a specification, technical standard, contract, or regulation.

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(4) “Container” means any device in which a material is stored, transported, treated, disposed of, or otherwise handled.

(5) “Containment” means use of a container or secondary containment structure or device to keep foam under control or within boundaries.

(6) “Department” means the department of natural resources.

(7) “Discharge” has the meaning specified in s. 292.01 (3), Stats.

Note: Under s. 292.01 (3), Stats., “discharge” means, but is not limited to, spilling, leaking, pumping, pouring, emitting, emptying or dumping.

(8) “Dispose” or “disposal” means the discharge, deposit, injection, dumping or placing of any solid waste into or on any land or water.

(9) “Emergency firefighting” means the act of attempting to prevent the spread of and extinguish unwanted fires.

(10) “Environment” has the meaning specified in s. NR 700.03 (18).

Note: Under s. NR 700.03 (18), “environment” means any plant, animal, natural resource, surface water (including underlying sediments and wetlands), groundwater, drinking water supply, land surface and subsurface strata, and ambient air within the state of Wisconsin or under the jurisdiction of the state of Wisconsin.

(11) “Fire prevention operations” means measures and practices directed toward the prevention and suppression of unwanted fires.

(12) “Fire suppression system” means a system used to extinguish or prevent the spread of fire through the application of a substance.

(13) “Fixed system” means a permanently installed fire suppression system designed for use on the specific fire hazards they are expected to control or extinguish.

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(14) “Foam” means Class B firefighting foam with intentionally added PFAS in all forms, including any of the following:

- (a) In concentrate.
- (b) Mixed with or diluted in water or other liquids.
- (c) Wastewater containing foam unless sufficiently treated in accordance with s. NR 159.08 (1).

(15) “Intentionally added PFAS” means PFAS is a constituent of the foam added during the manufacturing process.

(16) “Material containing PFAS” means any material that contains PFAS that is generated as a result of foam containment or treatment, including treatment media, equipment used to clean up firefighting foams, booms, filters, infrastructure, or other debris.

(17) “Method detection limit” means the minimum measured concentration of a substance that can be reported with 99 percent confidence that the measured concentration is distinguishable from method blank results. The method detection limit is generated as defined in s. NR 149.03 (46).

(18) “Person” has the meaning specified in s. 299.01 (10), Stats.

Note: Under s. 299.01 (10), Stats., “person” means an individual, owner, operator, corporation, limited liability company, partnership, association, municipality, interstate agency, state agency or federal agency.

(19) “PFAS” has the meaning specified in s. 299.48 (1) (b), Stats.

Note: Under s. 299.48 (1) (b), Stats., “PFAS” means a perfluoroalkyl or polyfluoroalkyl substance.

(20) “Safety data sheet” means documents that contain safety and safe handling information in respect of the product, including protection information regarding human health and may include information on protection of the environment.

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(21) “Secondary containment” means a structure or device that is designed to contain the entire volume of a discharge of foam from a container and accumulated liquids.

(22) “Storage” means storing on a temporary basis for future use or future disposal in such a manner as not to constitute ultimate disposal.

(23) “Testing” has the meaning specified in s. 299.48 (1) (c), Stats.

Note: Under s. 299.48 (1) (c), Stats., “testing” means the testing of a firefighting foam to evaluate its effectiveness and testing of a firefighting foam delivery system or equipment.

(24) “Training” has the meaning specified in s. 299.48 (1) (d), Stats.

Note: Under s. 299.48 (1) (d), Stats., “training” means providing first-hand field experience to a person who may use a firefighting foam as part of an emergency firefighting or fire prevention operation.

(25) “Treatment” means any method, technique or process, including thermal destruction, that changes the physical, chemical or biological character or composition of a contaminant so as to immobilize, remove, or destroy the contaminant.

NR 159.04 Prohibition and exemptions. (1) Except as provided under sub. (2), no person may use or otherwise discharge, including for training purposes, a Class B firefighting foam that contains intentionally added PFAS.

(2) All of the following actions are exempt from the prohibition under sub. (1):

(a) The use or discharge by any person of a Class B firefighting foam that contains intentionally added PFAS as part of an emergency firefighting or fire prevention operation.

(b) The use by any person of Class B firefighting foam that contains intentionally added PFAS for testing purposes, including calibration testing, conformance testing, or fixed system testing, if the testing facility has implemented appropriate containment, treatment, and disposal or storage measures, as specified in ss. NR 159.06 to 159.08, to prevent discharges of the foam to the environment.

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Note: Under s. 299.48 (3) (b), Stats., appropriate containment, treatment, and disposal or storage measures may not include flushing, draining, or otherwise discharging foam into a storm or sanitary sewer.

Note: A person responsible under s. 292.11 (3), Stats., for discharges of PFAS to the environment shall follow the applicable requirements in chs. NR 700 to 754 for remedial action sites.

NR 159.05 Notification and recordkeeping. (1) NOTIFICATION. A person that uses or discharges foam shall do all of the following:

(a) Notify the department, according to ch. NR 706, of the use or discharge of foam as part of an emergency firefighting or fire prevention operation immediately or as soon as practicable without hindering emergency firefighting or fire prevention operations.

(b) Notify the department immediately, according to ch. NR 706, of any discharge of foam to the environment resulting from testing purposes.

Note: A person responsible under s. 292.11 (3), Stats., for discharges of PFAS to the environment are subject to the applicable requirements in chs. NR 700 to 754, including notification requirements in ch. NR 706 and immediate action responsibilities to contain, treat, remove or halt the discharge in accordance with ch. NR 708.

(2) RECORDKEEPING. Any person in possession of foam shall retain foam safety data sheets and make them available to the department for examination upon request.

NR 159.06 Storage. A person that uses foam for testing purposes shall store foam in accordance with manufacturer instructions, safety data sheets, and in a manner that shall prevent discharge of foam to the environment. Appropriate storage of foam by a person shall include all of the following:

(1) A quarterly inspection program for detecting leaks in storage containers and a plan to undertake response measures to halt, contain, remove and treat or dispose of foam discharges.

(2) Posting of safety data sheets in a visible location in the storage area.

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(3) Containers shall be clearly labeled to indicate the contents of the container and be kept in a manner that allows easy detection of signs of leakage.

(4) Containers for storage and transport shall be fabricated from or lined with materials compatible with foam and designed to prevent evaporation of foam, including containers direct from the manufacturer.

(5) Material for absorbing any discharges of foam shall be maintained onsite.

(6) Any drains in a storage area shall be blocked from any connection to a sanitary or storm sewer.

NR 159.07 Containment. A person that uses foam for testing purposes shall ensure that appropriate containment is in place during testing of foam or testing of fire suppression systems, foam delivery systems, or foam equipment to prevent discharge of foam to the environment. Appropriate containment shall include all of the following:

(1) Use of water or surrogate solutions, testing equipment indoors, spraying into drums, lined pits, or other containment equipment, and testing with closed-loop systems, where consistent with industry standards and other regulations governing foam testing.

Note: Other regulations may include chs. SPS 314 and 361 to 366, which incorporate standards of the National Fire Protection Association, Federal Aviation Administration requirements, and other applicable industry and national association standards.

(2) Testing and flushing of foam testing equipment, systems, and facilities conducted with a containment system capable of capturing, diverting, and storing generated foam.

(3) Testing that employs measures to prevent foam that escapes containment from entering surface waters, groundwater, storm sewers or sanitary sewers.

(4) Containment system design that takes into account location and use of the foam, the risk to the environment, the automatic or manually activated design of a foam system, and any other applicable local, state, or federal regulations.

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NR 159.08 Treatment and disposal. A person that uses foam for testing purposes may implement on-site or off-site measures for treatment, disposal, or a combination of treatment and disposal for foam and any material containing PFAS. Treatment and disposal in the state of Wisconsin of foam used for testing purposes shall be conducted in a manner that prevents discharge of foam to the environment under all of the following requirements:

(1) TREATMENT. (a) *Incineration or thermal destruction.* Incineration or thermal destruction of foam or material containing PFAS shall be conducted at a temperature range and residence time sufficient to destroy PFAS while also ensuring the maximum degree of reduction in emission of PFAS, including elimination of such emissions when achievable.

(b) *Other treatment.* 1. 'Effluent standards.' If treatment other than that specified in par. (a) is proposed, foam shall be treated to reduce the daily maximum concentrations of parameters listed in Table 1 to concentrations less than or equal to the effluent standards listed in Table 1 or the testing laboratory's method detection limit, whichever is higher, prior to discharge to the sanitary sewer or waters of the state. PFAS concentrations reported as non-detect at a laboratory's method detection limit shall be considered compliant with requirements in this subdivision even if the method detection limit is greater than the effluent standard listed in Table 1. The treatment technology used shall meet or exceed the design requirements associated with the best available technology specified in subd. 2.

Note: Any discharge of treated foam to a sanitary sewer will require the approval from the owner of the publicly owned treatment works and may be subject to additional limitations. Any discharge of treated foam to waters of the state, including a discharge of treated foam through a storm sewer, requires Wisconsin pollutant discharge elimination system permit coverage under ch. 283, Stats., and may also be subject to monitoring and limitations for PFAS and other parameters pursuant to the requirements of ch. 283, Stats., and regulations promulgated under that chapter. The department has authority to require monitoring for PFAS parameters, including those not listed in Table 1, under s. 283.55 (1), Stats.

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Table 1
Foam Effluent Standards

Parameter	Effluent Standard (ng/L)
4:2 Fluorotelomer Sulfonic Acid (4:2 FTS)	2.1
6:2 Fluorotelomer Sulfonic Acid (6:2 FTS)	2.4
8:2 Fluorotelomer Sulfonic Acid (8:2 FTS)	2.3
Perfluorobutanoic Acid (PFBA)	960
Perfluorobutanesulfonic Acid (PFBS)	1.8
Perfluoropentanoic Acid (PFPeA)	197
Perfluoropentanesulfonic Acid (PFPeS)	2.4
Perfluorohexanoic Acid (PFHxA)	2.4
Perfluorohexanesulfonic Acid (PFHxS)	1.7
Perfluoroheptanoic Acid (PFHpA)	3.2
Perfluoroheptanesulfonic Acid (PFHpS)	2.0
Perfluorooctanoic Acid (PFOA)	2.1
Perfluorooctanesulfonic Acid (PFOS)	1.3
Perfluorooctanesulfonamide (PFOSA / FOSA)	4.9

2. 'Best available technology.' The treatment shall, at a minimum, satisfy the following design and operational standards:

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a. Treatment shall include preliminary treatment to reduce PFAS concentrations prior to granular activated carbon adsorption and to preserve adsorption capacity of granular activated carbon vessels for PFAS removal. The preliminary treatment system may include clarifiers, bag filter units, clay filter units, or other similar treatment.

b. Following preliminary treatment under subd. 2. a. and prior to granular activated carbon adsorption under subd. 2. c., the treatment shall include cloth filtration, ultrafiltration, or filtration of a finer pore size.

c. Following filtration under subd. 2. b., the treatment shall include a minimum of 3 granular activated carbon adsorption units in series. Granular activated carbon adsorption units shall be optimized for PFAS removal. Each granular activated carbon adsorption unit shall have a minimum empty bed contact time of 10 minutes. The lead granular activated carbon adsorption unit's media shall be replaced at a minimum frequency of once per treatment of each 10,000 bed volumes. Following media replacement, the lead unit shall be moved to the lag unit position, with each of the other units moved forward one position in the series. The granular activated carbon media shall be derived from bituminous coal unless the discharger utilizes a more frequent media replacement schedule appropriate for that media and receives approval under subd. 3.

d. Treatment shall include at least one anion-exchange resin polishing unit to remove trace PFAS compounds.

e. Sampling ports shall be provided immediately after each treatment unit, including between granular activated carbon adsorption units.

f. If any sludges or solids are produced during any stages of treatment, they shall be immobilized through solidification or a comparable process prior to disposal at a licensed solid waste facility. Sludges or solids generated during the treatment process may not be disposed of via land application.

3. 'Alternative requirements.' The department may, on a case-by-case basis, approve an alternative treatment technology to any of the treatment, design, and operation requirements in subd. 2., if the applicant can demonstrate that the proposed alternative treatment system will

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achieve treatment equivalent to or better than a system specified in subd. 2., and it is demonstrated that the limitations in subd. 1. will be achieved. Requests for approval of alternative requirements shall be made in writing and accompanied by written justification including performance data from pilot installations if requested by the department.

4. 'Treatment systems.' Construction or modification of any treatment system subject to this paragraph requires plan review and approval prior to commencement of construction, in accordance with ch. NR 108 and s. 281.41, Stats.

(2) DISPOSAL. Appropriate foam disposal chosen by a person shall comply with all of the following requirements:

(a) Unless treated in accordance with sub. (1), PFAS in foam shall be effectively immobilized through solidification or a comparable process prior to disposal.

(b) Foam treated in accordance with sub. (1) or managed in accordance with sub. (2) (a) shall be disposed of at a licensed solid waste facility.

NR 159.09 Lab analyses and samples for PFAS in foam. (1) Laboratory analyses of any foam samples collected shall evaluate the PFAS listed in s. NR 159.08 (1) (b) Table 1 and report results to the testing laboratory's method detection limit. Laboratories shall use procedures suitable for the matrix, potential interferences, and expected level of PFAS in the sample. All chemical and physical analyses for which accreditation is available under ch. NR 149 shall be conducted by a laboratory accredited under ch. NR 149.

(2) Upon request of the department, persons or testing facilities subject to this chapter shall provide the department with any foam safety data sheets, sampling, and analyses of the foam stored, tested, treated, disposed of, contained, or used at the facility or treated or disposed of at another facility.

SECTION 2. STATEMENT OF EMERGENCY. Section 2 (1) of 2019 Wisconsin Act 101 states that the department shall promulgate rules under s. 299.48 (5), Stats., no later than the first day of the 7th month beginning after the effective date of the subsection. Emergency rules promulgated under this subsection remain in effect until 3 years after the effective date, or the date on which

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permanent rules take effect. Notwithstanding s. 227.24 (1) (a) and (3), Stats., the department is not required to provide evidence that promulgating a rule under this subsection as an emergency rule is necessary for the preservation of public peace, health, safety, or welfare and is not required to provide a finding of emergency for a rule promulgated under this subsection.

SECTION 3. EFFECTIVE DATE. This rule takes effect upon publication in the official state newspaper, as provided in s. 227.24(1)(c), Stats., and shall remain in effect until 3 years after the effective date of 2019 Wisconsin Act 101, s. 2 (1) or the date on which permanent rules take effect, whichever is sooner.

SECTION 4. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on [DATE].

Dated at Madison, Wisconsin _____.

STATE OF WISCONSIN

DEPARTMENT OF NATURAL RESOURCES

BY _____

Preston D. Cole, Secretary

(SEAL)