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[July 9, 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) - DRAFT**

**Analysis Prepared by the Department of Natural Resources**

**1. Statutes Interpreted:** Sections 292.11, 299.13, 299.48, and 227.11(2)(a), Stats.

**2. Statutory Authority:** Sections 292.11, 299.13, 299.48, and 227.11(2)(a), Stats.

**3. Explanation of Agency Authority:**

Section 299.48, Stats., directs the department to regulate firefighting foam that contains certain contaminants and grants rule-making authority to the department. Specifically, s. 299.48 (5), 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.

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 7<sup>th</sup> 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), 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 administer the specific statutory requirements.

**4. Related Statutes or Rules:**

Additional authority for pollution prevention activities is under s. 299.13, Stats.; authority to require department notification of firefighting foam use is under s. 299.48(3m), Stats.; and authority to require notification of a discharge of a hazardous substance, including firefighting foam that contains certain contaminants, under s. 292.11, 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.

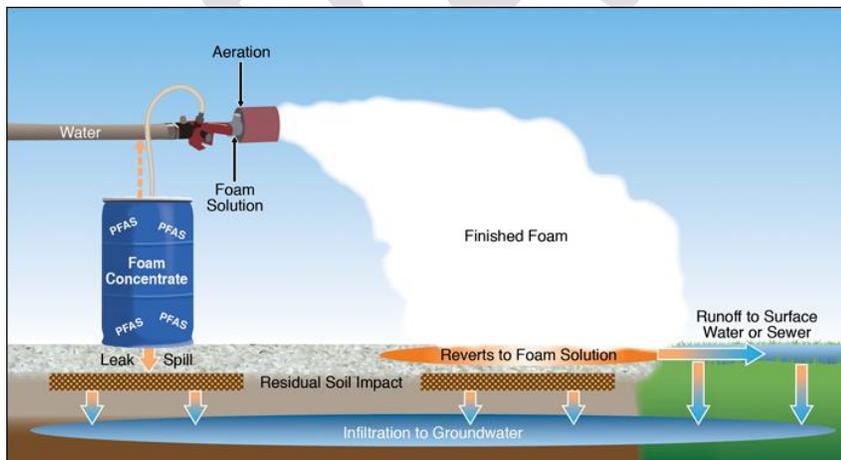
Some firefighting foams currently used to extinguish flammable liquid fires, such as Class B and Class A/B foams, include intentionally added PFAS, meaning PFAS is a constituent of the foam added during the manufacturing process. This rule is primarily concerned with preventing the discharge of these foams to the environment. Uses that may result in a discharge include:

- Manual firefighting or fire prevention operations (emergency event);
- Training for firefighting activities;
- Performance testing of foams;
- Performance testing of foam delivery systems by system manufacturers;
- Regular testing of foam delivery systems and associated equipment, including vehicle tests and fixed systems; and
- Fixed fire suppression system discharges (emergency event).

These scenarios include events occurring at such places as aircraft facilities, fire fighter training facilities, and special hazards facilities, such as flammable/hazardous warehouses, bulk flammable liquid storage facilities, and hazardous waste treatment and storage facilities.

“Foam” in this document means and includes class B firefighting foam with intentionally added PFAS in the following forms: in concentrate; concentrate mixed with water, including rinse water; used, discharged, or subsequently diluted in wastewater, and treated on site and subsequently discharged.

The figure below illustrates the use of firefighting foam, how it may be released to the environment, and potentially affected media. Once discharged to the environment, foam can contaminate soil, surface water, air, sediment, fish, wildlife, humans and groundwater. (Information and figure from the Interstate Technology Regulatory Council [https://pfas-1.itrcweb.org/3-firefighting-foams/#figure\\_3\\_4](https://pfas-1.itrcweb.org/3-firefighting-foams/#figure_3_4) )



Firefighting foam concentrate is a commercial product available from manufacturers in containers ranging from 5-gallon buckets to 5,000-gallon tanker trucks. The most common method of shipping is in 5-gallon buckets, 55-gallon drums, or 265-gallon intermediate bulk containers. Firefighting foams may be discharged directly into the environment through various practices and mechanisms such as:

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- low-volume discharges of foam concentrate during storage, transfer, or operational requirements that mandate periodic equipment calibration,
- moderate-volume discharge of foam solution for equipment testing and episodic discharge of fire suppression systems within aircraft hangars and buildings,
- occasional, high-volume, broadcast discharge of foam solution for firefighting and fire suppression/prevention for emergency response,
- periodic, high-volume, broadcast discharge for fire training, and
- accidental leaks from foam distribution piping between storage and pumping locations, and from storage tanks and railcars.

2019 Wisconsin Act 101, codified in s. 299.48, 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; and
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.

Use of firefighting foams with intentionally added PFAS is explicitly prohibited in s. 299.48, Stats., for training purposes. 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.

The existing s. 292.11(2), Stats., requires immediate notification to the department of a discharge of hazardous substances to the environment. In addition, the newly enacted s. 299.48 (3m), 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.

Firefighting foam spills and discharges can be reported by calling the 24-hour emergency hotline at 1-800-943-0003. Fire departments will be required to retain manufacturers' safety data sheets (SDS) for all firefighting foams they possess with intentionally added PFAS. When reporting foam discharges, fire departments must make these SDS available to DNR for examination.

This rule creates ch. NR 159 and contains the following summarized requirements:

Prohibitions and use:

The use of firefighting foams with intentionally added PFAS, including for training exercises, is prohibited except for emergency firefighting, fire prevention operations, and testing purposes.

Discharge to the environment:

Any person who uses firefighting foams with intentionally added PFAS that results in a hazardous substance discharge to the environment 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 ch. 292, Stats.

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**Notification and recordkeeping:**

Any person who discharges firefighting foams with intentionally added PFAS must immediately notify the department. Any person in possession of firefighting foams with intentionally added PFAS must maintain records of the amounts of foam kept on site and its safety data sheets.

**Storage:**

Any person handling or storing firefighting foams with intentionally added PFAS shall manage the foam in accordance with safety data sheets and in a manner that will prevent losses 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 firefighting foams with intentionally added PFAS, including testing foam effectiveness and fire suppression systems, foam delivery systems and associated equipment or vehicles, shall contain the foam in a manner that will prevent discharge of a hazardous substance to the environment. This includes: tests done according to standards in Department of Safety and Professional Services safety and buildings administrative code and other required industry standards; testing that incorporates designs or provisions for collection and containment of foam; and use of containment designed to manage the maximum potential discharge of all materials associated with the event, including the foam.

**On-site treatment:**

Any person choosing to treat foams with intentionally added PFAS on site shall conduct treatment in accordance with available control technology and in a manner that will prevent a discharge of hazardous substances to the environment. PFAS concentration in foam for the PFAS provided in the EPA's CWA 1600 series method (laboratory procedure for the detection of PFAS), and for any additional PFAS as requested by the department, shall be treated to non-detect levels at the testing laboratory's method detection limits before discharging foam to a storm or sanitary sewer.

**Off-site treatment and disposal:**

Any person choosing to send foams with intentionally added PFAS off-site for treatment and disposal shall ensure that treatment is conducted with available control technology and in a manner that will prevent a discharge of hazardous substances to the environment. Disposal of foams with intentionally added PFAS shall be conducted at a facility licensed to receive the waste in a manner that will prevent a discharge of hazardous substances to the environment.

**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. 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 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

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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 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, 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

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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 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.

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, Stats., including to determine appropriate containment, treatment, and disposal or storage measures for foam testing facilities. Certain prohibitions on foam use were already in the statute, but the department used additional data to develop this emergency rule.

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.

Based on the definitions, prohibitions, and related exemptions on foam use in statute, the department's regulatory approach in this rule incorporates all PFAS at any level of concentration in firefighting foam. It also includes that any determination of appropriate containment, treatment, and disposal or storage measures associated with the testing of firefighting foam may not include flushing, draining, or otherwise discharging the foam into a storm or sanitary sewer prior to treatment. The department's interpretation of s. 299.48, Stats., is that any foam produced from a testing activity, such as to evaluate foam effectiveness or to test delivery systems or equipment, must be disposed of appropriately or must be treated to reduce

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PFAS concentrations for the PFAS provided in the EPA's CWA 1600 series method, and for any additional PFAS as requested by the department, to non-detect levels at the testing laboratory's method detection limits before flushing, draining, or otherwise discharging the foam into a storm or sanitary sewer.

**9. Analysis and Supporting Documents Used to Determine the Effect on Small Business or in Preparation of an Economic Impact Report:**

To be determined as of 7/9/20

**10. Effect on Small Business (initial regulatory flexibility analysis):**

**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, fax or 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](mailto:KathrynM.StromHiorns@wisconsin.gov)

Written comments may also be submitted to the Department at [DNRAdministrativeRulesComments@wisconsin.gov](mailto:DNRAdministrativeRulesComments@wisconsin.gov).

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

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**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 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 or testing facility 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 or testing facility that discharges foam shall manage foam in accordance with this chapter and as a solid waste in accordance with chs. NR 500 to 538, Wis. Admin. Code.
- (4) This chapter shall 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) “Commercial testing facility” means a facility that is conducting testing of foam for commercial purposes to confirm the effectiveness of foam or to demonstrate to other persons the effectiveness of equipment, foam equipment or foam systems which they manufacture or offer for sale. This definition does not apply to facilities that conduct routine, calibration testing, conformance testing, or fixed-system testing to confirm the effectiveness of their fire suppression equipment that is otherwise routinely required or recommended by state or federal law, or industry or national association standards.
- (4) “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.
- (5) “Container” means any device in which a material is stored, transported, treated, disposed of, or otherwise handled.
- (6) “Containment” means use of a container or secondary containment structure or device to keep foam under control or within limits.
- (7) “Department” means the department of natural resources.
- (8) “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.
- (9) “Dispose” or “disposal” means the discharge, deposit, injection, dumping or placing of any solid waste into or on any land or water.
- (10) “Emergency firefighting” means the act of attempting to prevent the spread of and extinguish unwanted fires.

- (11) “Environment” has the meaning specified in s. NR 700.03(18), Wis. Admin. Code.

Note: Under s. NR 700.03(18), Wis. Admin. Code, “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.

- (12) “Fire prevention operations” means measures and practices directed toward the prevention and suppression of unwanted fires.
- (13) “Fire suppression system” means a system used to extinguish or prevent the spread of fire through the application of a substance.
- (14) “Fixed system” means a permanent fire suppression system typically installed within a building or facility.
- (15) “Foam” means and includes class B firefighting foam with intentionally added PFAS in the following forms: in concentrate; concentrate mixed with water, including rinse water; used, discharged, or subsequently diluted in wastewater; and treated and subsequently discharged as wastewater.
- (16) “Hazardous substance” has the meaning specified in s. 292.01 (5), Stats.  
Note: Under s. 292.01 (5), Stats., “hazardous substance” means any substance or combination of substances including any waste of a solid, semisolid, liquid or gaseous form which may cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness or which may pose a substantial present or potential hazard to human health or the environment because of its quantity, concentration or physical, chemical or infectious characteristics. This term includes, but is not limited to, substances which are toxic, corrosive, flammable, irritants, strong sensitizers or explosives as determined by the department.

- (17) “Material containing PFAS” means any material that contains PFAS that is generated as a result of foam treatment, including treatment media, equipment used to clean up firefighting foams, infrastructure, or other debris.
- (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” or “SDS” 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.
- (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) “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.
- (23) “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.
- (24) “Treatment” means any method, technique or process, including thermal destruction, which 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. (3), no person may use or otherwise discharge, including for training purposes, a class B firefighting foam that contains intentionally added PFAS.
- (2) The following actions are exempt from the prohibition in sub. (1):
  - a. The use or discharge of a class B firefighting foam that contains intentionally added PFAS by any person as part of an emergency firefighting or fire prevention operation.
  - b. The use of class B firefighting foam that contains intentionally added PFAS by any person or testing facility 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.
- (3) Appropriate containment, treatment, and disposal or storage measures may not include flushing, draining, or otherwise discharging foam into a storm or sanitary sewer.

Note: Any person or testing facility that uses class B firefighting foam with intentionally added PFAS and causes the discharge of foam to the environment, subject to s. 292.11 (9), 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), Stats.  
Note: Persons responsible under s. 292.11(3), Stats., for discharges of PFAS to the

environment shall follow the applicable requirements in chs. NR 700 to 799, Wis. Admin. Code, for remedial action sites.

**NR 159.05 Notification and recordkeeping.**

(1) NOTIFICATION. Any person or testing facility that uses or discharges foam shall:

(a) Notify the department, according to ch. NR 706, Wis. Admin. Code, 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 firefighting or fire prevention operations.

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

Note: Persons or testing facilities responsible under 292.11(3) for discharges of PFAS to the environment are subject to the applicable requirements in Wis. Admin. Code chs. NR 700 to 799, including notification requirements in Wis. Admin. Code ch. NR 706 and immediate action responsibilities to contain, treat, remove or halt the discharge in accordance with Wis. Admin. Code ch. NR 708.

(2) RECORDKEEPING. Any person or testing facility in possession of foam shall record the amount of foam in possession as of January 1 of each year and request and retain foam safety data sheets and make them available to the department for examination upon request.

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

(1) A monthly 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.

- (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 puncture resistant and fabricated from or lined with materials compatible with foam and designed to minimize evaporation of foam.
- (5) Material for absorbing any discharges of foam shall be maintained onsite.
- (6) Proper disposal of containers within 3 months of the expiration date of the foam.
- (7) Secondary containment shall be maintained to prevent discharges of foam to the environment that include use of impervious floors, curbs, berms, and sumps. Drains in the secondary containment area shall be blocked from any connection to a sanitary or storm sewer.
- (8) Secondary containment shall be maintained by a person or testing facility that stores more than 100 gallons of foam or stores foam in an above ground storage tank. The secondary containment system shall prevent discharges of any volume of foam stored from entering the environment, that includes use of impervious floors, curbs, berms, and sumps. Drains in the secondary containment area shall be blocked from any connection to a sanitary or storm sewer.

**NR 159.07 Containment.** A person or testing facility shall ensure that appropriate containment systems are in place during testing of foam or testing of fire suppression systems, foam delivery systems, or foam equipment that shall prevent discharge of a hazardous substance to the environment. Appropriate containment shall include all of the following:

- (1) Testing of fire suppression systems, foam delivery systems, or equipment shall be conducted in accordance with chs. SPS 314 and 361 to 366, Wis. Admin. Code, Federal Aviation Administration requirements, and other industry and national association standards as applicable. As allowed under industry testing standards and

**Commented [SHKM1]:** Question for public comment: Do you have a recommendation for secondary containment for storage of foam? Something like 7 or 8 or other?  
  
Should it apply to testing containment rather than storage containment?  
  
If based on volume, what volume should that be?

**Commented [SHKM2]:** Need public input: DSPS, Airport Management Association, or others: what is the proper wording in this section? Do we need to include any other suppression systems or regulations that would apply?

regulations, alternative testing methods may include using water or surrogate solutions, testing equipment indoors, spraying into drums or other containers, testing within lined pits or spill containment equipment, and testing with closed-loop testing systems to eliminate discharge.

Note: Department of Safety and Professional Services administrative code incorporates standards of the National Fire Protection Association.

- (2) The amount of foam being generated during testing shall be kept to the minimum quantity sufficient to meet testing purposes and controlled by the design of the system for proper reuse, treatment, or disposal.
- (3) Foam testing equipment, systems, and facilities shall incorporate collection, containment, and runoff components in the event of system discharge, including:
  - (a) Foam containment and collection mechanisms such that foam and liquid used to rinse foam generated during testing is not discharged to the environment and all foam and liquid used to rinse foam generated can be captured and contained for treatment and reuse or disposal.
  - (b) Testing and flushing of vehicles and mobile firefighting equipment shall be conducted with a containment system capable of capturing, diverting, and storing generated foam and run-off.
- (4) Commercial testing facilities shall utilize technologies to contain to the extent possible air emissions from foam during testing to prevent direct discharge to the environment.
- (5) Any person or testing facility that uses or discharges foam for other than testing under exemptions listed in s. NR 159.04 (3) shall obtain provisions to contain foam and prevent potential discharge of the foam to the environment. Provisions may include materials to block drains or inlets leading to storm or sanitary sewers, portable dikes or booms, material for absorbing any spills, and storage containers. Design of the containment system shall take into account location and use of the foam, the risk to

**Commented [SHKM3]:** Requesting public comment and additional input from department staff on #4

**Commented [SHKM4]:** For public comment: The previous parts of this section deal with containment when testing foam. This includes for emergency firefighting - all allowed uses/users would be required to have some provisions for containment. OK?

the environment, the automatic or manually activated design of a foam system, and any other applicable local, state, or federal regulations.

**NR 159.08 Treatment and disposal.** A person or testing facility may implement on-site or make arrangements for appropriate measures for treatment, disposal, or a combination of treatment and disposal for foam and any material containing PFAS. Any treatment and disposal shall be conducted in a manner that shall prevent discharge of a hazardous substance to the environment.

(1) TREATMENT. Appropriate foam treatment chosen by a person or testing facility shall comply with the following requirements:

(a) *Incineration or Thermal Destruction.* Incineration shall be conducted at a temperature range adequate to break down and destroy PFAS while also ensuring the maximum degree of reduction in emission of PFAS, including elimination of such emissions where achievable.

(b) *Other Treatment.* If other treatment is proposed or treatment of the foam is required by state or federal law, foam shall be treated to prevent a discharge of foam to the environment by reducing the PFAS provided in the EPA's CWA 1600 series method, and any additional PFAS as requested by the department, to non-detect levels of the testing laboratory's method detection limits. The treatment technology used shall meet or exceed the design requirements associated with the best available technology specified in sub. 1., and the discharge shall be subject to the discharge authorization requirements in sub. 2.

1. 'Best Available Technology.' The treatment system shall satisfy the following design and operational standards, at a minimum:

a. Preliminary Treatment. The treatment system shall include a preliminary treatment system to reduce PFAS concentrations prior to granular activated carbon adsorption.

The preliminary treatment system may include clarifier(s), bag filter unit(s), clay filter unit(s), or other similar treatment.

b. Filtration. Following preliminary treatment and prior to granular activated carbon adsorption, the treatment system shall include ultrafiltration or filtration of a finer pore size.

c. Granular Activated Carbon. Following filtration, the treatment system shall include a minimum of three granular activated carbon adsorption (GAC) units in series. GAC units shall be optimized for PFAS removal. Each GAC unit shall have a minimum empty bed contact time of 10 minutes. The lead GAC 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 the second unit and lag unit moved to the lead and second positions, respectively.

d. Polishing Unit. The treatment system shall include at least one anion-exchange resin polishing unit to remove trace PFAS compounds.

e. Sampling Ports. Sampling ports shall be provided immediately after each stage of the treatment system, including between GAC units.

f. Side Stream Management. If a side stream is created from any of the stages of treatment, it shall be redirected to the head of the treatment system at a point preceding the preliminary treatment unit or collected and solidified prior to final disposal in accordance with sub. (2).

g. Sludge Management. If any sludges or solids are produced during any stages of treatment, they shall be disposed of in accordance with sub. (2). Such sludges may not be disposed of via land application.

h. Alternative Requirements. The department may, on a case-by-case basis, approve alternative requirements to any of the above design and operation standards if the applicant can demonstrate that the proposed treatment system will meet the intent of

this chapter and achieve similar or better treatment than a system fulfilling the requirements of this subdivision. Requests for alternative requirements shall be made in writing and accompanied by written justification.

2. 'Discharge Authorization.' Any discharge resulting from the treatment of foam shall be subject to the following provisions.

a. Direct discharge to waters of the state, including discharges to a storm sewer, is prohibited unless authorized under a WPDES permit that includes limitations and monitoring reflective of par. b. of this section.

b. A facility discharging treated foam effluent to a sanitary sewer shall be considered a significant industrial user under s. NR 211.03 (19m). Discharge to a sanitary sewer draining to a POTW that implements an approved Pretreatment Program under s. NR 211.20 is prohibited unless authorized by a pretreatment permit that includes limitations and monitoring reflective of par. (b) of this section. The department shall notify dischargers to any other sanitary sewers of their pretreatment limitations and monitoring and reporting requirements, in writing.

Note: Discharges to sanitary sewers are subject to local ordinances and local limits developed pursuant to s. NR 211.10 (3).

(2) DISPOSAL. Appropriate foam disposal chosen by a person or testing facility shall comply with the following requirements:

(a) PFAS in foam shall be effectively immobilized or treated to prevent a discharge of foam to the environment by reducing the PFAS provided in the EPA's CWA 1600 series method, and any additional PFAS as requested by the department, to non-detect levels of the testing laboratory's method detection limits prior to disposal.

(b) Foam shall be disposed of at a licensed solid or hazardous waste disposal facility.

**NR 159.09 Lab Analyses and Samples for PFAS in foam.**

- (1) Laboratory analyses of any foam samples collected shall evaluate the PFAS provided in the EPA's CWA 1600 series method, and any additional PFAS as requested by the department, and report results to the testing laboratory's method detection limit. Laboratories shall use analytical methods suitable for the matrix, potential interferences, and expected level of PFAS in the sample. Laboratories shall attempt to achieve lowest practical method detection limits. 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), Wis. Stats., no later than the first day of the 7<sup>th</sup> 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 3. EFFECTIVE DATE.** This rule shall take effect on [DATE] 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.

Draft  
[July 9, 2020]

**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)

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