The statement of scope for this rule, SS 089-19, was approved by the Governor on August 27, 2019, published in Register No. 765A1 on September 3, 2019, and approved by the Natural Resources Board on January 22, 2020. This rule was approved by the Governor on insert date.

ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD
RENUMBERING AND AMENDING, AMENDING AND CREATING RULES

The Wisconsin Natural Resources Board proposes an order to **renumber and amend** NR 809.205 (3) (4) and (5); to **amend** NR 809.20 (1) Table, 809.203 (2) Table CM and (4) Table D, 809.205 (2) (title), (intro.), (a), (b) and 1., and (6) (c), Appendix A to Subchapter V and Appendix A to Subchapter VII; and to **create** NR 809.04 (59h), 809.20 (2) (d), and 809.205 (1g) and (1r), relating to the promulgation of new drinking water maximum contaminant levels for Per- and Polyfluoroalkyl Substances (PFAS) including Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) and affecting small business.

DG-24-19

Analysis Prepared by the Department of Natural Resources

1. Statute Interpreted: Chapters 280 and 281, Wis. Stats.

2. Statutory Authority: Chapters 280 and 281, Wis. Stats., including sections 280.11 and 281.17(8), Wis. Stats.

3. Explanation of Agency Authority: Section 280.11, Wis. Stats. – The department shall, after a public hearing, prescribe, publish, and enforce minimum reasonable standards and rules and regulations for methods to be pursued in the obtaining of pure drinking water for human consumption and the establishing of all safeguards deemed necessary in protecting the public health against the hazards of polluted sources of impure water supplies intended for human consumption.

Section 281.17(8), Wis. Stats. – The department may establish, administer, and maintain a safe drinking water program no less stringent than the requirements of the safe drinking water act, 42 USC 300f to 300j-26.

4. Related Statutes or Rules: Chapter NR 809, Wis. Adm. Code – Safe Drinking Water, establishes minimum standards and procedures for the protection of the public health, safety and welfare in the obtaining of safe drinking water.

5. Plain Language Analysis: The objective of the proposed rule is to amend ch. NR 809, Wis. Adm. Code, to establish drinking water standards, referred to as Maximum Contaminant Levels (MCLs), for certain Per- and Polyfluoroalkyl substances (PFAS) including the contaminant compounds perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS). The MCL standards for PFOS and PFOA are based on recommendations from the Wisconsin Department of Health Services (DHS) and are set at 0.000002 mg/L (20 parts per trillion (ppt)) for PFOA and PFOS individually and a combined standard of 0.000002 mg/L (20 ppt).

The proposed rule establishes initial and routine monitoring cycles for community and non-transient non-community public water systems to test for PFOA and PFOS and establishes approved methodology for PFOA and PFOS sampling. The proposed rule also creates a waiver application process for systems to waive routine monitoring under certain conditions. Systems that exceed the MCL standards for PFOA and

PFOS will be required to take measures to return to compliance, which may include drilling a new well or installing a treatment system.

PFAS contaminants have been identified as emerging contaminants by the U.S. Environmental Protection Agency (EPA) and numerous states, including Wisconsin, due to their persistence in and threats to the environment, including surface water and groundwater resources. The impacts to surface water and groundwater sources are threats to public health, welfare and safety in obtaining drinking water. Establishing drinking water standards for certain PFAS contaminants in this rule will protect public health by setting MCLs that may not be exceeded. If MCLs are exceeded, a corrective action plan must be implemented to maintain protection of public health, welfare and safety in drinking water.

6. Summary of, and Comparison with, Existing or Proposed Federal Statutes and Regulations: The process for the proposed amendment to ch. NR 809, Wis. Adm. Code, to establish certain MCLs for PFAS, including PFOA and PFOS standards, is consistent with the process for establishing rules for other drinking water contaminants regulated under the federal EPA Safe Drinking Water Act, specifically Title 40 - Protection of the Environment; Chapter 1 - Environmental Protection Agency; Subchapter D - Water Programs. The department has a primacy agreement with the EPA to implement the Safe Drinking Water Act.

As a result of the PFOA and PFOS findings from EPA's Unregulated Contaminant Monitoring Rule 3 (UCMR 3) national monitoring of public water supply systems, the EPA issued a PFOA and PFOS Health Advisory Level (HAL) in 2016. The PFOA and PFOS HAL was established based upon laboratory animal and epidemiological human studies indicating adverse health effects related to PFOA and PFOS exposure. Adverse health effects included developmental effects of fetuses during pregnancy or to breastfed infants, cancer, liver effects, immune effects and thyroid effects and other health effects.

In February 2019, the EPA released a Per- and Polyflouralkyl Substances (PFAS) Action Plan. One of the four primary actions in the PFAS Action Plan is initiating steps to evaluate the need for an MCL as part of the Safe Drinking Water Act. The EPA is evaluating criteria to propose a national drinking water regulatory determination for PFOA and PFOS. The EPA is highlighting key PFOA and PFOS information gathered to date and additional data needs. The EPA issued a final determination in January, 2021 that they will establish an MCL for PFOA and PFOS, a federal regulatory process that will take several years and would not take effect in Wisconsin until three years after the federal MCL is established.

7. If Held, Summary of Comments Received During Preliminary Comment Period and at Public Hearing on the Statement of Scope:

Commenter	Sentiment	Notes
Al Bock, citizen	Support	
American Forest and Paper Association	Oppose	
Bill and Cindy Verschay, citizens	Support	
Bob and Anne Maley, citizens	Support	
Capital Area Regional Planning Commission	Support	
Casey Hicks, citizen	Support	

Christine Simpson, citizen	Support	
Cindy and Chuck Boyle Jr., citizens	Support	
Citizens for Safe Water Around Badger	Mixed	Support but expresses disagreements including need for regulation of PFAS as a class
Clean Wisconsin	Support	
Danika Brubaker, citizen	Support	
Darcy Lanz-Sage, citizen	Support	
Earl Witte, citizen	Support	
Fay Johnson-Lau, citizen	Support	
Gerald Peterson, citizen	Support	
Jeffrey Lamont, citizen	Support	
Kayla and Dean Furton, citizens	Support	
Lee Lamers, citizen	Support	
Louise Petering, citizen	Support	
Mark Sethne, citizen	Support	
Midwest Environmental Advocates	Support	
Midwest Food Products Association	Oppose	
Milwaukee Riverkeeper	Support	
Municipal Environmental Group (MEG)	Mixed	Supports regulation but wants front-end regulation of sources, involvement in advisory groups, and alternative compliance options
National Council for Air and Stream Improvement, Inc.	Mixed	Supports science-based effort but has technical issues with DHS toxicity value
Patrick Meyer, citizen	Support	
Ralph Kerler, citizen	Support	
Richard Upton, citizen	Support	
River Alliance of Wisconsin	Support	
Robert Elwell, citizen	Support	

Sam Warp, citizen	Mixed	Comment title is "I support PFAS rules" but comment body discusses regulating the source, not the "back end"
Sandy Gillum, citizen	Support	
Satya Rhodes-Conway, Mayor of the City of Madison	Support	
Vi Lamers, citizen	Support	
Virginia Geraghty, citizen	Support	
Water Quality Coalition	Oppose	
William Evans, citizen	Support	
Wisconsin Civil Justice Council, Inc.	Oppose	
Wisconsin Conservation Voters	Support	
Wisconsin Conservation Voters' members	Support	Letter includes support from 1103 individual members
Wisconsin Lakes	Support	
Wisconsin Manufacturers and Commerce	Oppose	
Wisconsin Paper Council	Oppose	
Wisconsin Rural Water Association	Oppose	
American Chemistry Council	Mixed	Supports some aspects and opposes others
Columbus Water and Light	Mixed	Supports MEG letter/comments
Glory Adams, citizen	Support	
La Crosse Water Utility	Mixed	Supports MEG letter/comments
MEG - Water Division	Oppose	
League of Wisconsin Municipalities	Mixed	Supports MEG letter/comments

8. Comparison with Similar Rules in Adjacent States: Other surrounding states have promulgated or proposed PFAS maximum contaminant levels (MCLs) or established Health Based Guidance Levels.

Illinois has proposed PFAS maximum contaminant levels for the following contaminants:

- PFBS - 140,000 parts per trillion

- PFHxS - 140 parts per trillion
- PFNA - 21 parts per trillion
- PFOA - 21 parts per trillion
- PFOS - 14 parts per trillion
- Total PFOA and PFOS - 21 parts per trillion

Iowa implements EPA's PFAS Health Advisory Level (HAL) for combined PFOA and PFOS at 70 parts per trillion.

Michigan has promulgated PFAS maximum contaminant levels for the following contaminants:

- PFOA - 8 parts per trillion
- PFOS - 16 parts per trillion
- PFNA - 6 parts per trillion
- PFHxS - 51 parts per trillion
- PFBS - 420 parts per trillion
- PFHxA - 400,000 parts per trillion
- GenX - 370 parts per trillion

Minnesota has established the health based guidance levels for the following PFAS contaminants:

- PFOA - 35 parts per trillion
- PFOS - 15 parts per trillion
- PFHxS - 47 parts per trillion

9. Summary of Factual Data and Analytical Methodologies Used and How Any Related Findings Support the Regulatory Approach Chosen: The proposed MCLs (20 ppt for PFOA and PFOS individually and combined) are based on the recommendations of DHS. An analysis of the available research informed the decision to recommend groundwater enforcement standards to be promulgated into ch. NR 140, Wis. Adm. Code. Generally, these standards are the same as the drinking water standards in ch. NR 809, Wis. Adm. Code.

An evaluation of the costs associated with the EPA HAL of 70 ppt was also studied and is presented in the economic impact analysis (EIA) for this proposed rule. The majority of states that are or have promulgated MCLs for PFOA and PFOS are similar or lower than the 20 ppt proposed in Wisconsin.

The proposed monitoring frequency and types of public drinking water systems subject to the proposed MCLs are consistent with the requirements of other Synthetic Organic Contaminants in the Safe Drinking Water Act and ch. NR 809, Wis. Adm. Code.

10. Analysis and Supporting Documents Used to Determine the Effect on Small Business or in Preparation of an Economic Impact Report: The department used data from Michigan's 2017 – 2019 study of over 1,700 public water systems as a proxy for PFOS/PFOA data that are not yet available in Wisconsin. We also used national data from EPA's Unregulated Contaminant Monitoring Rule (UCMR3) program to estimate an average number of systems that might exceed the proposed MCLs in Wisconsin. The average of these two data sets produced an estimate of 1.35% of systems in Wisconsin exceeding an MCL. Small business effects were determined by assuming that all entities that are not large community wells in the Wisconsin estimates in this analysis are potential small business. Detailed assessment of costs are in the economic impact analysis form attached. Sources of factual data used in the analysis include the following:

1. Data from Michigan Environment, Great Lakes and Energy on PFOS/PFAS testing at public water systems between 2017 and 2019. The percentage of wells found to have detections of these compounds, and the percentage of systems with results above 20 ppt.
2. Data from the EPA UCMR3 sampling between 2013 and 2015. The percentage of systems with results above 20 ppt.
3. The analysis cost of PFAS at the Wisconsin State Laboratory of Hygiene.
4. The average cost of drilling a new well in Wisconsin at Non-Community systems.
5. The average cost of drilling a new well in Wisconsin at small community systems.
6. The average cost of treatment for the control of PFAS in other states at municipal water systems.
7. The number of wells in Wisconsin that would be subject to the proposed standards.

11. Effect on Small Business (initial regulatory flexibility analysis): After removing large community water systems from the data set, the remaining small community water systems and Non-Transient Non-Community systems were considered to be small business entities for the purpose of this analysis. The department estimated the compliance cost of these entities to be 70% of the total public water systems that may be subject to these MCLs. Thus, the monitoring costs for this subgroup are also expected to be approximately 70% of the total. On average, monitoring costs for small community water systems and Non-transient Community systems are estimated to be $1 Million in the first year.

The department will allow for monitoring waivers to reduce the frequency of required monitoring at public water systems with no detection levels of PFAS. A detailed assessment of regulatory flexibility is presented in Attachment A of the economic impact analysis, question #4. This includes waivers and staggered monitoring schedules.

12. Agency Contact Person: Adam DeWeese; 101 S. Webster Street, Madison, WI 53703; Adam.DeWeese@wisconsin.gov; (608) 264-9229

13. Place where comments are to be submitted and deadline for submission:
Written comments may be submitted at the public hearings, by regular mail, or email to:

Adam DeWeese – DG/5
Department of Natural Resources
101 S. Webster Street
PO Box 7921
Madison, WI 53707
Adam.DeWeese@wisconsin.gov

Comments may be submitted to the department contact person listed above or to DNRAdministrativeRulesComments@wisconsin.gov until the deadline given in the upcoming notice of public hearing. The notice of public hearing and deadline for submitting comments will be published in the Wisconsin Administrative Register and on the department's website, at https://dnr.wi.gov/calendar/hearings/. Comments may also be submitted through the Wisconsin Administrative Rules Website at https://docs.legis.wisconsin.gov/code/chr/active.

RULE TEXT

SECTION 1. NR 809.04 (59h) is created to read:

NR 809.04 (59h) "Perfluoroalkyl and polyfluoroalkyl substances" or "PFAS" means a large group of human-made chemicals that are part of the synthetic organic contaminants classification.

SECTION NR 809.20 (1) Table is amended to read:

NR 809.20 (1) Table

Contaminant	MCL (mg/L)
Alachlor	0.002
Atrazine	0.003
Benzo[a]pyrene	0.0002
Carbofuran	0.04
Chlordane	0.002
2,4-D	0.07
Dalapon	0.2
Dibromochloropropane	0.0002
Di(2-ethylhexyl)adipate	0.4
Di(2-ethylhexyl)phthalate	0.006
Dinoseb	0.007
Diquat	0.02
Endothall	0.1
Endrin	0.002
Ethylene Dibromide	0.00005
Glyphosate	0.7
Heptachlor	0.0004
Heptachlor epoxide	0.0002

Hexachlorobenzene	0.001
Hexachlorocyclopentadiene	0.05
Lindane	0.0002
Methoxychlor	0.04
Oxamyl	0.2
Pentachlorophenol	0.001
PFOS and PFOA	0.000020
Picloram	0.5
Polychlorinated biphenyls (PCBs)	0.0005
Simazine	0.004
2,3,7,8-TCDD (Dioxin)	$3x10^{-8}$
Toxaphene	0.003
2,4,5-TP	0.05

SECTION 2. NR 809.20 (2) (d) is created to read:

NR 809.20 (2) (d) Granular activated carbon, powdered activated carbon, ion exchange resins, nanofiltration, and reverse osmosis for PFOS and PFOA.

SECTION 3. NR 809.203 (1) Table is amended to read:

NR 809.203 (1) Table

Contaminant	Detection Limit (mg/L)
1. Alachlor	0.0002
2. Aldicarb	0.0005
3. Aldicarb sulfoxide	0.0005
4. Aldicarb sulfone	0.0008
5. Atrazine	0.0001
6. Benzo[a]pyrene	0.00002
7. Carbofuran	0.0009

8. Chlordane	0.0002
9. 2,4-D	0.0001
10. Dalapon	0.001
11. Dibromochloropropane	0.00002
12. Di(2-ethylhexyl)adipate	0.0006
13. Di(2-ethylhexyl)phthalate	0.0006
14. Dinoseb	0.0002
15. Diquat	0.0004
16. Endothall	0.009
17. Endrin	0.00001
18. Ethylene dibromide	0.00001
19. Glyphosate	0.006
20. Heptachlor	0.00004
21. Heptachlor epoxide	0.00002
22. Hexachlorobenzene	0.0001
23. Hexachlorocyclopentadiene	0.0001
24. Lindane	0.00002
25. Methoxychlor	0.0001
26. Oxamyl	0.002
27. Picloram	0.0001
28. Polychlorinated biphenyls (PCBs as decchlorobiphenyls)	0.0001
29. Pentachlorophenol	0.00004
~~30. Simazine~~	~~0.00007~~
~~31. Toxaphene~~	~~0.001~~
~~32. 2,3,7,8-TCDD (Dioxin)~~	~~0.000000005~~
~~33. 2,4,5-TP (Silvex)~~	~~0.0002~~
30. Perfluorooctane Sulfonic Acid (PFOS)	0.000002
31. Perfluorooctanoic Acid (PFOA)	0.000002

32. Simazine	0.00007
33. Toxaphene	0.001
34. 2,3,7,8-TCDD (Dioxin)	0.000000005
35. 2,4,5-TP (Silvex)	0.0002

SECTION 4. NR 809.203 (2) Table CM and (4) Table D are amended to read:

NR 809.203 (2) Table CM

Table CM **SDWA Approved Methodology for Synthetic Organic Contaminants**					
Contaminant	**EPA Methods[1]**	**SM[9]**	**SM Online[10]**	**ASTM**	**Other**
Regulated Parameters:					
Synthetic Organic Chemicals					
2,3,7,8-TCDD (dioxin)	1613				
2,4-D [2] (as acids, salts and esters)	515.2, 555, 515.1, 515.3, 515.4			D5317-93, 98 (Reapproved 2003)	
2,4,5-TP [2] (Silvex)	515.2, 555, 515.1, 515.3, 515.4	6640 B,	6640 B-01, B-06[11]	D5317-93, 98 (Reapproved 2003)	
Alachlor	507, 525.2, 525.3[2] 508.1, 505[8], 551.1				
Atrazine [3]	507, 525.2, 525.3 508.1, 505[8], 551.1, 536				Syngenta[4] AG-625
Benzo(a)pyrene	525.2, 525.3, 550, 550.1				
Carbofuran	531.1, 531.2	6610[5] 6610 B	6610 B-04		
Chlordane	508, 525.2, 525.3, 508.1, 505				

Dalapon	552.1 515.1, 552.2, 515.3, 515.4, 552.3, 557	6640 B	6640 B-01, 06		
Di(2-ethylhexyl)adipate	506, 525.2, 525.3				
Di(2-ethylhexyl)phthalate	506, 525.2, 525.3				
Dibromochloropropane (DBCP)	504.1, 551.1, 524.3[9]				
Dinoseb	515.2, 555, 515.1, 515.3, 515.4	6640 B	6640 B-01, 06		
Diquat	549.2				
Endothall	548.1				
Endrin	508, 525.2, 525.3, 508.1, 505, 551.1				
Ethylene dibromide (EDB)	504.1, 551.1, 524.3				
Glyphosate	547	6651[6] 6651 B	6651 B-01, B-06		
Heptachlor	508, 525.2, 525.3, 508.1, 505, 551.1				
Heptachlor Epoxide	508, 525.2, 525.3, 508.1, 505, 551.1				
Hexachlorobenzene	508, 525.2, 525.3, 508.1, 505, 551.1				
Hexachlorocyclopentadiene	508, 525.2, 525.3, 508.1, 505, 551.1				
Lindane	508, 525.2, 525.3, 508.1, 505, 551.1				
Methoxychlor	508, 525.2, 525.3, 508.1, 505, 551.1				
Oxamyl	531.1, 531.2	6610[5] 6610 B	6610 B-04		
PCBs (as decachlorobiphenyl)	508A[7]				
(as Aroclors)	508.1, 508, 525.2, 525.3, 505				

Pentachlorophenol	515.2, 525.2, 525.3, 555, 515.1, 515.3, 515.4			D5317-93, 98 (Reapproved 2003)	
Picloram [2]	515.2, 555, 515.1, 515.3, 515.4	6640 B	6640 B-01	D5317-93, 98 s (Reapproved 2003)	
Perfluorooctane Sulfonic Acid (PFOS)	537, 537.1, 533				Wis. PFAS Method
Perfluorooctanoic Acid (PFOA)	537, 537.1 533				Wis. PFAS Method
Simazine	507, 525.2, 525.3, 523, 536, 508.1, 505[8], 551.1				
Toxaphene	508, 508.1, 525.2, 525.3, 505				
Unregulated Parameters:					
Aldicarb	531.1, 531.2	6610[5] 6610 B	6610 B-04		
Aldicarb sulfone	531.1, 531.2	6610[5] 6610 B	6610 B-04		
Aldicarb Sulfoxide	531.1 , 531.2	6610[5] 6610 B	6610 B-04		
Aldrin	505, 508, 525.2, 525.3, 508.1				
Butachlor	507, 525.2, 525.3				
Carbaryl	531.1, 531.2	6610[5] 6610 B	6610 B-04		
Dicamba	515.1, 555, 515.2, 515.3, 515.4	6640 B	6640 B-01, B-06		
Dieldrin	505, 508, 525.2, 525.3, 508.1				
3-Hydroxcarbofuran	531.1, 531.2	6610[5] 6610 B	6610 B-04		
Methomyl	531.1, 531.2	6610[5] 6610 B	6610 B-04		
Metolachlor	507, 525.2, 525.3, 508.1				
Metribuzin	507, 525.2, 525.3, 508.1				

Propachlor	507, 525.2, 525.3, 508.1				

(4) Table D

Table D
Sample Preservation, Holding Times, and Sampling Containers for Organic Parameters

Method	Preservative[2]	Sample Holding Time	Extract Holding Time and Storage Conditions	Suggested Sample Size	Type of Container
502.2[2]	Sodium Thiosulfate or Ascorbic Acid, 4°C, HCl pH<2	14 days	NA	40 – 120 mL	Glass with PTFE[1] Lined Septum
504.1	Sodium Thiosulfate, Cool, 4°C	14 days	4°C, 24 hours	40 mL	Glass with PTFE[1] Lined Septum
505	Sodium Thiosulfate, Cool, 4°C	14 days (7 days for Heptachlor)	4°C, 24 hours	40 mL	Glass with PTFE[1] Lined Septum
506	Sodium Thiosulfate, Cool, 4°C, Dark	14 days	4°C, Dark 14 days	1 L	Amber Glass with PTFE[1] Lined Septum
507	Sodium Thiosulfate, Cool, 4°C, Dark	14 days (See method for exceptions.)	4°C, Dark 14 days	I L	Amber Glass with PTFE[1] Lined Cap
508	Sodium Thiosulfate, Cool, 4°C, Dark	7 days (See method for exceptions.)	4°C, Dark 14 days	I L	Glass with PTFE[1] Lined Cap
508A	Cool, 4°C	14 days	30 days	I L	Amber Glass with PTFE[1] Lined Cap
508.1	Sodium Sulfite, HCl pH<2, Cool, 4°C	14 days (See method for exceptions.)	30 days	I L	Glass with PTFE Lined Cap
515.1	Sodium Thiosulfate, Cool, 4°C, Dark	14 days	4°C, Dark 28 days	I L	Amber Glass with PTFE[1] Lined Cap
515.2	Sodium Thiosulfate or Sodium Sulfite, HCl pH<2 Cool, 4°C, Dark	14 Days	≤4°C, Dark 14 Days	I L	Amber Glass with PTFE[1] Lined Cap

515.3	Sodium Thiosulfate, Cool, 4°C, Dark	14 days	≤4°C, Dark 14 Days	50 mL	Amber Glass with PTFE[1] Lined Cap
515.4	Sodium Sulfite, Dark, Cool ≤10°C for First 48 hrs, ≤6°C thereafter	14 days	≤0°C 21 days	40 mL	Amber Glass with PTFE[1] Lined Cap
524.2[2]	Ascorbic Acid or Sodium Thiosulfate, HCl pH<2, Cool 4°C	14 days	NA	40 – 120 mL	Glass with PTFE[1] Lined Septum
524.3[2]	Maleic and Ascorbic Acids pH<2, ≤10°C for first 48 hrs., ≤6 thereafter. If only analyzing TTHM: Sodium Thiosulfate pH<2, ≤10°C for first 48 hrs., ≤6 thereafter	14 days	NA	40 – 120 mL	Amber Glass with PTFE[1] Lined Septum
525.2	Sodium Sulfite, Dark, Cool, 4°C, HCl pH<2	14 days (See method for exceptions)	≤4°C 30 days	1 L	Amber Glass with PTFE[1] Lined Cap
531.1, 6610	Sodium Thiosulfate, Monochloroacetic Acid pH<3, Cool, 4ºC	Cool 4°C from collection until storage at laboratory; <-10°C at the laboratory; 28 days	NA	60 mL	Glass with PTFE[1] Lined Septum
531.2	Sodium Thiosulfate, Potassium Dihydrogen Citrate Buffer pH<4, Dark ≤10°C for first 48 hrs., ≤6ºC thereafter	28 days	NA	40 mL	Glass with PTFE[1] Lined Septum
537, 537.1	Trizma – 5.0 g/L	Cool < 10° during first 48 hours after collection. 28 days	< 6° at the laboratory until extraction. 28 days	250 mL	250- mL polypropylene bottle

533	Ammonium acetate 1.0 g/L	Cool < 10° during first 48 hours after collection. 28 days	< 6° at the laboratory until extraction. 28 days	250 mL	250- mL polypropylene bottle
Wis. PFAS	Trizma – 5.0 g/L	Cool < 10° during first 48 hours after collection. 28 days	< 6° at the laboratory until extraction. 28 days	250 mL	250- mL polypropylene bottle
547	Sodium Thiosulfate, Cool, 4°C	14 days; 18 mos. Frozen	NA	60 mL	Glass with PTFE[1] Lined Septum
548.1	Sodium Thiosulfate, HCl pH 1.5 -2 if High Biological Activity, Cool, 4°C, Dark	7 days	≤4°C 14 days	≥ 250 mL	Amber Glass with PTFE[1] Lined Septum
549.2	Sodium Thiosulfate, H_2SO_4 pH<2, if Biologically Active, Cool 4°C, Dark	7 days	21 days	≥ 250 mL	High Density Amber Plastic or Silanized Amber Glass
550	Sodium Thiosulfate, Cool, 4°C, HCl pH<2	7 days	4°C, Dark 30 days	1 L	Amber Glass with PTFE[1] Lined Septum
550.1	Sodium Thiosulfate, Cool, 4°C, HCl pH<2	7 days	4°C, Dark 40 days	1 L	Amber Glass with PTFE[1] Lined Septum
551.1	Sodium Sulfite, Ammonium Chloride, pH 4.5-5.0 with Phosphate Buffer, Cool, 4°C	14 days	14 days <-10°C	≥ 40 mL	Glass with PTFE[1] Lined Septum
552.1	Ammonium Chloride, Cool, 4°C, Dark	28 days	≤4°C, Dark 48 hrs.	250 mL	Amber Glass with PTFE[1] Lined Cap
552.2	Ammonium Chloride, Cool, 4°C, Dark	14 days	≤4°C, Dark, 7 days ≤-10°C, 14 days	50 mL	Amber Glass with PTFE[1] Lined Cap

555	Sodium Sulfite,HCl pH ≤2,Dark, Cool, 4°C	14 days	NA	≥ 100 mL	Glass wit PTFE[1] Lined Cap
1613	Sodium Thiosulfate,Cool, 0 - 4°C, Dark	1 year	40 days recommended	1 L	Amber Glass with PTFE[1] Lined Cap

SECTION 5. NR 809.205 (1g) and (1r) are created to read:

NR 809.205 (1g) SCHEDULE FOR PERFLUOROOCTANE SULFONIC ACID AND PERFLUOROOCTANOIC ACID MONITORING. Community and non-transient non-community public water systems shall comply with initial monitoring requirements under sub. (1r) (a) for perfluorooctane sulfonic acid and perfluorooctanoic acid beginning on the following dates:

(a) Public water systems serving a population greater or equal to 50,000 [3 months after the rule becomes effective – LRB inserts date].

(b) Public water systems serving a population 10,000 to 49,999 [6 months after the rule becomes effective – LRB inserts date].

(c) Public water systems serving a population less than 10,000 [9 months after the rule becomes effective – LRB inserts date].

(1r) MONITORING FREQUENCY FOR PERFLUOROOCTANE SULFONIC ACID AND PERFLUOROOCTANOIC ACID. Water suppliers shall monitor to determine compliance with the maximum contaminant level for perfluorooctane sulfonic acid and perfluorooctanoic acid at the following frequencies:

(a) *Initial monitoring.* Water suppliers for new community public water systems or for community public water systems with new sources shall demonstrate compliance with the MCLs prior to initiating water service. Water suppliers for each community and non-transient, non-community water system shall take 4 consecutive quarterly samples for perfluorooctane sulfonic acid and perfluorooctanoic acid beginning on the dates specified under sub. (1g) or beginning

with the year the public water system initiates water service, or a new source is put into service, and every compliance period thereafter unless the requirements of pars. (b) and (c) are met.

(b) *Initial Waiver Evaluation* For perfluorooctane sulfonic acid and perfluorooctanoic acid the department may waive the final 2 quarters of initial monitoring for a sampling point if the results of the samples from the previous 2 quarters are below the detection limit.

(c) *Routine monitoring*. Sampling may be reduced to routine monitoring after the initial monitoring period as follows:

1. 'Public water systems serving greater than 3,300.' Public water systems serving more than 3,300 persons that do not detect a contaminant in the initial compliance period or during 3 consecutive years of annual monitoring may reduce the sampling frequency to a minimum of 2 quarterly samples in one year during each repeat compliance period.

2. 'Public water systems serving 3,300 or less.' Public water systems serving 3,300 persons or less that do not detect a contaminant in the initial compliance period or during 3 consecutive years of annual monitoring may reduce the sampling frequency to a minimum of one sample during each repeat compliance period.

(d) *Waiver Request.* Water suppliers for community and non-transient non-community system may apply to the department for a waiver from the requirements under pars. (a) and (c) for perfluorooctane sulfonic acid and perfluorooctanoic acid. A water supplier shall reapply for a waiver for each compliance period. The waiver period shall not exceed 2 compliance periods.

(e) *Waiver Evaluation.* The department may grant a waiver from the requirements under par. (c) after evaluating all of the following factors:

1. 'Waiver evaluation when the department determines a contaminant has not been used.' The department may grant a waiver when the department determines a contaminant has not been used based on a system's previous use information, including transport, storage, or disposal of the contaminant within the watershed or zone of influence of the public water system, or the results of analysis of a system's water source.

2. 'Waiver evaluation when a contaminant has been used or its use is unknown.' If previous use of the contaminant is unknown or it has been used previously, all of the following factors shall be used to determine whether a waiver is granted:

a. Previous analytical results.

b. The proximity of the public water system to a potential point source of contamination. Point sources include spills and leaks of chemicals at or near a water treatment facility or at manufacturing, distribution, or storage facilities, or from hazardous and municipal waste landfills and other waste handling or treatment facilities; or at airports, military bases, and fire training facilities.

(f) *Waiver conditions and monitoring assessments*. As a condition of the waiver under par. (e), the water supplier for a groundwater system shall update the monitoring assessment considering the factors listed under par. (e). Based on this updated monitoring assessment, the department shall reconfirm that the public water system is non-vulnerable. If the department does not make this reconfirmation within 3 years of the initial determination or each subsequent determination, then the waiver is invalidated, and the public water system is required to sample during each compliance period as specified under par. (c).

SECTION 6. NR 809.205 (2) (title), (intro.), (a), (b) and 1. are amended to read:

NR 809.205 (2) MONITORING FREQUENCY FOR SYNTHETIC ORGANIC CONTAMINANTS OTHER THAN PERFLUOROOCTANE SULFONIC ACID AND PERFLUOROOCTANOIC ACID. Water suppliers shall monitor to determine compliance with the maximum contaminant level for synthetic organic contaminants ~~specified in~~ other than perfluorooctane sulfonic acid and perfluorooctanoic acid listed under s. NR 809.20 at the following frequencies:

(a) *Initial monitoring.* Water suppliers for new community public water systems or for community public water systems with new sources shall demonstrate compliance with the MCLs listed under s. NR 809.20 for synthetic organic contaminants other than perfluorooctane sulfonic acid and perfluorooctanoic acid prior to initiating water service. Water suppliers for each community and non-transient, non-community water system shall take 4 consecutive quarterly samples for each contaminant listed ~~in~~under s. NR 809.20, other than perfluorooctane sulfonic

acid and perfluorooctanoic acid, beginning with the year the public water system initiates water service, or a new source is put into service, and every compliance period after that unless they meet the requirements ~~of~~under par. (b).

(b) *Routine monitoring*. ~~Sampling~~Initial quarterly sampling under sub. (4) (a) may be reduced to routine monitoring after the initial monitoring period as follows:

1. 'Public water systems serving greater than 3,330.' Public water systems serving more than 3,300 persons ~~which~~that do not detect a contaminant in the initial compliance period or during 3 consecutive years of annual monitoring may reduce the sampling frequency to a minimum of 2 quarterly samples in one year during each repeat compliance period.

SECTION 7. NR 809.205 (3) (4) and (5) are renumbered (2) (c), (d) (intro.) and (e) and amended to read:

NR 809.205 ~~(3)~~ ~~WAIVER REQUEST~~**(2)** (c) *Waiver Request.* Water suppliers for community and non-transient non-community systems or groundwater systems with new sources may apply to the department for a waiver from the requirements of ~~sub. (2)~~ pars. (a) and (b) for the synthetic organic contaminants other than perfluorooctane sulfonic acid and perfluorooctanoic acid listed under s. NR 809.20. A water supplier shall reapply for a waiver for each compliance period.

~~(4) WAIVER EVALUATION~~(d)*Waiver Evaluation*. The department may grant a waiver from the requirements of ~~sub. (2)~~this subsection after evaluating all of the following factors ~~listed in this subsection~~:

~~(a) *Waiver evaluation when the department determines a contaminant has not been used.*~~ 1. 'Waiver evaluation when the department determines a contaminant has not been used.' The department may grant a waiver ~~as described in subds. 1. to 3. of this paragraph~~ under the following circumstances when the department determines a contaminant has not been used based on a system's previous use information, including transport, storage or disposal of the contaminant within the watershed or zone of influence of the public water system, or the results of analysis of a system's water source~~.~~:

~~1~~a. When a groundwater system can demonstrate that a synthetic organic contaminant has not been used, the department may grant waivers for the contaminant based on results of the analysis of a minimum of one sample at the water source, except as noted ~~in~~under this subd. ~~2 of this paragraph~~1. b.

~~2~~b. The department may grant waivers to ground water systems for dioxin, PCBs, di(2-ethylhexyl)adipate, and di(2-ethylhexyl)phthalate without requiring analysis of the water source, if the system can demonstrate lack of use of the contaminant.

~~3~~c. The department may grant waivers for benzo(a)pyrene to ground water, surface water, and GWUDI systems without requiring analysis of the water source, if the system can demonstrate a lack of use of coal tar to line or seal a system's tanks or pipes.

~~(b) *Waiver evaluation when a contaminant has been used or its use is unknown.*~~ 2. 'Waiver evaluation when a contaminant has been used or its use is unknown.' If previous use of the contaminant is unknown or it has been used previously, then all of the following factors shall be used to determine whether a waiver is granted:

~~1~~a. Previous analytical results.

~~2~~b. The proximity of the public water system to a potential point or non-point source of contamination. Point sources include spills and leaks of chemicals at or near a water treatment facility or at manufacturing, distribution, or storage facilities, or from hazardous and municipal waste landfills and other waste handling or treatment facilities. Non-point sources include the use of pesticides to control insect and weed pests on agricultural areas, forest lands, home and gardens, and other land application uses.

~~3~~c. The environmental persistence and transport of the pesticide or PCBs.

~~4~~d. How well the water source is protected against contamination due to such factors as depth of the well and the type of soil and the integrity of the well casing.

~~5~~e. Elevated nitrate levels at the water supply source.

~~6~~f. Use of PCBs in equipment used in the production, storage or distribution of water such as pumps and transformers.

~~(5) WAIVER CONDITIONS AND MONITORING ASSESSMENTS~~(e) *Waiver conditions and monitoring assessments*. As a condition of the waiver under ~~sub. (4)~~par. (d), the water supplier for a groundwater system shall update the monitoring assessment considering the factors listed ~~in sub. (4)~~under par. (d). Based on this monitoring assessment, the department shall reconfirm that the public water system is non-vulnerable. If the department does not make this reconfirmation within 3 years of the initial determination or each subsequent determination, then the waiver is invalidated and the public water system is required to sample during each compliance period as specified ~~in sub. (2) (b)~~ under par. (b).

SECTION 8. NR 809.205 (6) (c) is amended to read:

NR 809.205 (6) (c) Water suppliers for public water systems ~~which~~that have 3 consecutive annual samples with no detection of a contaminant may apply to the department for reduced routine monitoring ~~under sub. (2) (a) or (b)~~ as specified under sub. (2) (b) or a waiver as specified ~~in sub. (3)~~ under sub. (2) (c) and (d).

SECTION 9. NR 809 Appendix A to Subchapter V is amended to read:

NR 809 Appendix A to Subchapter V

Appendix A to Subchapter V
Consumer Confidence Report Information

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR; multiply by	MCL in CCR units	MCLG	Major sources in drinking water	Health effects language
Microbiological contaminants:						

Total Coliform Bacteria	TT	N/A	TT	NA	Naturally present in the environment.	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.
E. coli	Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli.*		Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.	0	Human and animal fecal waste.	*E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
Total organic carbon (ppm)	TT	N/A	TT	N/A	Naturally present in the environment.	Total organic carbon has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. Their byproducts include trihalomethanes and haloacetic acids. Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

Turbidity (NTU)	TT	N/A	TT	N/A	Soil runoff.	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
Fecal Indicators: enterococci or coliphage	TT		TT	N/A	Human and animal fecal waste	Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems
Radioactive contaminants:						
Beta/photon emitters (mrem/yr)	4 mrem/yr	N/A	4	N/A	Decay of natural and man-made deposits.	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Alpha emitters (pCi/l)	15 pCi/l	N/A	15	N/A	Erosion of natural deposits.	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Combined radium (pCi/l)	5 pCi/l	N/A	5	N/A	Erosion of natural deposits.	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
Uranium (ug/1)	30 ug/1	N/A	30	0	Erosion of natural deposits.	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer or kidney toxicity.
Inorganic contaminants:						

Antimony (ppb)	.006	1000	6	6	Discharge from petroleum refineries, fire retardants, ceramics, electronics, solder.	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
Arsenic (ppb)	0.010[1]	1000	10[1]	0[1]	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
Asbestos (MFL)	7 MFL	N/A	7	7	Decay of asbestos cement water; Erosion of natural deposits.	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
Barium (ppm)	2	N/A	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
Beryllium (ppb)	.004	1000	4	4	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries.	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
Bromate (ppb)	.010	1000	10	0	By-product of drinking water disinfection.	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.

Cadmium (ppb)	.005	1000	5	5	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints.	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
Chloramines (ppm)	MRDL = 4	N/A	MRDL = 4	MRDLG = 4	Water additive used to control microbes.	Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
Chlorine (ppm)	MRDL = 4	N/A	MRDL = 4	MRDLG = 4	Water additive used to control microbes.	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort or anemia.
Chlorine dioxide (ppb)	MRDL = .8	1000	MRDL = 800	MRDLG = 800	Water additive used to control microbes.	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.
Chlorite (ppm)	1	N/A	1	0.8	By-product of drinking water disinfection.	Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
Chromium (ppb)	.1	1000	100	100	Discharge from steel and pulp mills; Erosion of natural deposits.	Some people who drink water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.

Copper (ppm)	AL = 1.3	N/A	AL = 1.3	1.3	Corrosion of household plumbing systems; Erosion of natural deposits.	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
Cyanide (ppb)	.2	1000	200	200	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories.	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
Fluoride (ppm)	4	N/A	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than 9 years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.
Lead (ppb)	AL = .015	1000	AL = 15	0	Corrosion of household plumbing system; Erosion of natural deposits.	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attentions span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
Mercury [inorganic] (ppb)	.002	1000	2	2	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland.	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.

Nitrate (ppm)	10	N/A	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	Infants below the age of 6 months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome. Females who are or may become pregnant should not consume water with nitrate concentrations that exceed the MCL. There is some evidence of an association between exposure to high nitrate levels in drinking water during the first weeks of pregnancy and certain birth defects.
Nitrite (ppm)	1	N/A	1	1	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	Infants below the age of 6 months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Selenium (ppb)	.05	1000	50	50	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail loss, numbness in fingers or toes, or problems with their circulation.
Thallium (ppb)	.002	1000	2	0.5	Leaching from ore-processing sites; Discharge from electronic, glass, and drug factories.	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.
Synthetic organic contaminants including pesticides and herbicides:						
2,4-D (ppb)	.07	1000	70	70	Runoff from herbicide used on row crops.	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.
2,4,5-TP [Silvex] (ppb)	.05	1000	50	50	Residue of banned herbicide.	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.

Acrylamide	TT	N/A	TT	0	Added to water during sewage/waste water treatment.	Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.
Alachlor (ppb)	.002	1000	2	0	Runoff from herbicide used on row crops.	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
Atrazine (ppb)	.003	1000	3	3	Runoff from herbicide used on row crops.	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.
Benzo(a)-pyrene [PAH] (nanograms/l)	.0002	1,000,000	200	0	Leaching from lining of water storage tanks and distribution lines.	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
Carbofuran (ppb)	.04	1000	40	40	Leaching of soil fumigant used on rice and alfalfa.	Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.
Chlordane (ppb)	.002	1000	2	0	Residue of banned termiticide.	Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.
Dalapon (ppb)	.2	1000	200	200	Runoff from herbicide used on rights of way.	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
Di(2-ethylhexyl) adipate (ppb)	.4	1000	400	400	Discharge from chemical factories.	Some people who drink water containing di (2-ethylhexyl) adipate well in excess of the MCL over many years could experience toxic effects such as weight loss, liver enlargement or possible reproductive difficulties.

Di(2-ethylhexyl) phthalate (ppb)	.006	1000	6	0	Discharge from rubber and chemical factories.	Some people who drink water containing di (2-ethylhexyl) phthalate well in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.
Dibromo-chloropropane (ppt)	.0002	1,000,000	200	0	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive problems and may have an increased risk of getting cancer.
Dinoseb (ppb)	.007	1000	7	7	Runoff from herbicide used on soybeans and vegetables.	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
Diquat (ppb)	.02	1000	20	20	Runoff from herbicide use.	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
Dioxin [2,3,7,8-TCDD] (ppq)	.00000003	1,000,000,000	30	0	Emissions from waste incineration and other combustion; Discharge from chemical factories.	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
Endothall (ppb)	.1	1000	100	100	Runoff from herbicide use.	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
Endrin (ppb)	.002	1000	2	2	Residue of banned insecticide.	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
Epichloro-hydrin	TT	N/A	TT	0	Discharge from industrial chemical factories; An impurity of some water treatment chemicals.	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.

Ethylene dibromide (ppt)	.00005	1,000,000	50	0	Discharge from petroleum refineries.	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive systems, or kidneys, and may have an increased risk of getting cancer.
Glyphosate (ppb)	.7	1000	700	700	Runoff from herbicide use.	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
Heptachlor (ppt)	.0004	1,000,000	400	0	Residue of banned pesticide.	Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
Heptachlor-epoxide (ppt)	.0002	1,000,000	200	0	Breakdown of heptachlor.	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.
Hexachlorobenzene (ppb)	.001	1000	1	0	Discharge from metal refineries and agricultural chemical factories.	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.
Hexachlorocyclopentadiene (ppb)	.05	1000	50	50	Discharge from chemical factories.	Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.
Lindane (ppt)	.0002	1,000,000	200	200	Runoff/leaching from insecticide used on cattle, lumber and gardens.	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
Methoxychlor (ppb)	.04	1000	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa and livestock.	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.

Oxamyl [Vydate] (ppb)	.2	1000	200	200	Runoff/leaching from insecticide used on apples, potatoes and tomatoes.	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
PCBs [Polychlorinated biphenyls] (ppt)	.0005	1,000,000	500	0	Runoff from landfills; Discharge of waste chemicals.	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
PFOS and PFOA	.000020	1,000,000	20	0	Discharges at manufacturing, distribution, or storage facilities, or from hazardous and municipal waste landfills and other waste handling or treatment facilities; or at airports, military bases and fire training facilities.	Some people who drink water containing PFOS in excess of the MCL over many years could experience health issues including fetal development, thyroid and liver effects, and increase risk of certain cancers.
Pentachlorophenol (ppb)	.001	1000	1	0	Discharge from wood preserving factories.	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
Picloram (ppb)	.5	1000	500	500	Herbicide runoff.	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
Simazine (ppb)	.004	1000	4	4	Herbicide runoff.	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.

Toxaphene (ppb)	.003	1000	3	0	Runoff/leaching from insecticide used on cotton and cattle.	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.
Volatile organic contaminants:						
Benzene (ppb)	.005	1000	5	0	Discharge from factories; Leaching from gas storage tanks and landfills.	Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.
Carbon tetrachloride (ppb)	.005	1000	5	0	Discharge from chemical plants and other industrial activities.	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
Chlorobenzene (ppb)	.1	1000	100	100	Discharge from chemical and agricultural chemical factories.	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.
0-Dichlorobenzene (ppb)	.6	1000	600	600	Discharge from industrial chemical factories.	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.
p-Dichlorobenzene (ppb)	.075	1000	75	75	Discharge from industrial chemical factories.	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
1,2-Dichlorobenzene (ppb)	.005	1000	5	0	Discharge from industrial chemical factories.	Some people who drink water containing 1,2-dichlorobenzene in excess of the MCL over many years may have an increased risk of getting cancer.
1,1,-Dichlorobenzene (ppb)	.007	1000	7	7	Discharge from industrial chemical factories.	Some people who drink water containing 1,1-dichlorobenzene in excess of the MCL over many years could experience problems with their liver.

cis-1,2-Dichloroethylene (ppb)	.07	1000	70	70	Discharge from industrial chemical factories.	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
trans-1,2-Dichloroethylene (ppb)	.1	1000	100	100	Discharge from industrial chemical factories.	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
Dichloro-methane (ppb)	.005	1000	5	0	Discharge from pharmaceutical and chemical factories.	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
1,2-Dichloropropane (ppb)	.005	1000	5	0	Discharge from industrial chemical factories.	Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
Ethylbenzene (ppb)	.7	1000	700	700	Discharge from petroleum refineries.	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
Haloacetic Acids (pbb)	.060	1000	60	N/A	By-product of drinking water disinfection.	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
Styrene (ppb)	.1	1000	100	100	Discharge from rubber and plastic factories; Leaching from landfills.	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.
Tetrachloroethylene (ppb)	.005	1000	5	0	Discharge from factories and dry cleaners.	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
1,2,4-Trichlorobenzene (ppb)	.07	1000	70	70	Discharge from textile-finishing factories.	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.

1,1,1-Trichloroethane (ppb)	.2	1000	200	200	Discharge from metal degreasing sites and other factories.	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
1,1,2-Trichloroethane (ppb)	.005	1000	5	3	Discharge from industrial chemical factories.	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.
Trichloroethylene (ppb)	.005	1000	5	0	Discharge from metal degreasing sites and other factories.	Some people who drink water containing trichoroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
TTHMs [Total trihalomethanes] (ppb)	0.10/0.80	1000	100/80	N/A	By-product of drinking water disinfection.	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
Toluene (ppm)	1	N/A	1	1	Discharge from petroleum factories.	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
Vinyl Chloride (ppb)	.0002	1000	.2	0	Leaching from PVC piping; Discharge from plastics factories.	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
Xylenes (ppm)	10	N/A	10	10	Discharge from petroleum factories; Discharge from chemical factories.	Some people who drink water containing xylenes in excess of the MCL over many years could experience damages to their nervous system.

SECTION 10. NR 809 Appendix A to Subchapter VII is amended to read:

NR 809 Appendix A to Subchapter VII

Appendix A to Subchapter VII
NPDWR Violations and Other Situations Requiring Public Notice[1]

Contaminant	MCL/MRDL/TT violations[2]		Monitoring & testing procedure violations	
	Tier of public notice required	Citation (Wis. Adm. Code)	Tier of public notice required	Citation (Wis. Adm. Code)
I. Violations of National Primary Drinking Water Regulations:[3]				
A. Microbiological Contaminants				
1. Total coliform: Monitoring or TT violations resulting from failure to perform assessments or corrective actions	2	NR 809.314	3	NR 809.31 (9)
1m. Total coliform: Seasonal system failure to follow department-approved start-up plan prior to serving water to the public	2	NR 809.314 (2)	3	Xx
2. *E. Coli* MCL	1	NR 809.30	1[4], 3	NR 809.31 (9)
2m. *E. coli*: TT violations resulting from failure to perform Level 2 assessments or corrective action	1	NR 809.30	3	Xx
3. Turbidity MCL	2	NR 810.29 (1)	3	NR 810.38 (1) b) NR 810.38 (2) (a), NR 810.38 (2) (b) NR 810.29
4. Turbidity MCL (average 2 days' samples >5 NTU)	2[5], 1	NR 810.29 (1)	3	NR 810.38 (1) (b) NR 810.38 (2) (a), NR 810.38 (2) (b), NR 810.29
5. Turbidity (for TT violations resulting from a single exceedance of maximum allowable turbidity level)	2[6], 1	NR 810.29 (1), NR 810.29 (2), NR 810.29 (3), NR 810.29 (4), NR 810.30 (1), NR 810.30 (4) (a), NR 810.30 (4) (b)	3	NR 810.38 (1) (b) NR 810.38 (2) (a), NR 810.38 (2) (b), NR 810.29
6. Surface Water Treatment Rule violations, other than violations resulting from single exceedance of max. allowable turbidity level (TT)	2	NR 810.27 – 810.33	3	NR 810.38
7. Interim Enhanced Surface Water Treatment Rule violations, other than violations resulting from single exceedance of max. turbidity level (TT)	2	NR 810 subch. 2	3	NR 810.29, NR 810.38
8. Filter Backwash Rule (FBWR)	2	NR 809.333 (3) NR 811.860 NR 811.862	3	NR 810.29
9. Long Term 2 Enhanced Surface Water Treatment Rule violations	2	NR 810.34 - 810.45	2[15],3	NR 809.331- NR 809.335 NR 810.32 (1) and (2)
10. Source water sample positive for Groundwater Rule (GWR) fecal indicators: *E. coli*, enterococci, or coliphage	1	NR 809.325(6)	3	NR 809.325 (5) NR 809.327 (6)
B. Inorganic Chemicals (IOCs)				
1. Antimony	2	NR 809.11 (2)	3	NR 809.115 (1) to (3) and (6) (a) and (c)
2. Arsenic	2	NR 809.11 (2)	3	NR 809.115 (1) to (3) and (6) (a) and (c)
3. Asbestos (fibers >10 μm)	2	NR 809.11 (2)	3	NR 809.115(1) to (3) and (6)(a)and (c)

4. Barium	2	NR 809.11 (2)	3	NR 809.115 (1) to (3) and (6) (a) and (c)
5. Beryllium	2	NR 809.11 (2)	3	NR 809.115 (1) to (3) and (6) (a) and (c)
6. Cadmium	2	NR 809.11 (2)	3	NR 809.115 (1) to (3) and (6) (a) and (c)
7. Chromium (total)	2	NR 809.11 (2)	3	NR 809.115 (1) to (3) and (6) (a) and (c)
8. Cyanide	2	NR 809.11 (2)	3	NR 809.115 (1) to (3) and (6) (a) and (c)
9. Fluoride	2	NR 809.11 (2)	3	NR 809.115 (1) to (3) and (6) (a) and (c)
10. Mercury (inorganic)	2	NR 809.11 (2)	3	NR 809.115 (1) to (3) and (6) (a) and (c)
11. Nitrate	1	NR 809.11 (2)	1[8], 3	NR 809.115 (4), (5) and (6) (b)
12. Nitrite	1	NR 809.11 (2)	1[8], 3	NR 809.115 (4), (5) and (6) (b)
13. Total Nitrate and Nitrite	1	NR 809.11 (2)	3	NR 809.115 (4) and (5)
14. Selenium	2	NR 809.11 (2)	3	NR 809.115 (1) to (3) and (6) (a) and (c)
15. Thallium	2	NR 809.11 (2)	3	NR 809.115 (1) to (3) and (6) (a) and (c)
C. Lead and Copper Rule (Action Level for lead is 0.015 mg/L, copper is 1.3 mg/L)				
1. Lead and Copper Rule (TT)	2	NR 809.541 – NR 809.55	3	NR 809.541 – NR 809.55
D. Synthetic Organic Chemicals (SOCs)				
1. 2,4-D	2	NR 809.20 (1)	3	NR 809.205
2. 2,4,5-TP (Silvex)	2	NR 809.20 (1)	3	NR 809.205
3. Alachlor	2	NR 809.20 (1)	3	NR 809.205
4. Atrazine	2	NR 809.20 (1)	3	NR 809.205
5. Benzo(a)pyrene (PAHs)	2	NR 809.20 (1)	3	NR 809.205
6. Carbofuran	2	NR 809.20 (1)	3	NR 809.205
7. Chlordane	2	NR 809.20 (1)	3	NR 809.205
8. Dalapon	2	NR 809.20 (1)	3	NR 809.205
9. Di (2-ethylhexyl) adipate	2	NR 809.20 (1)	3	NR 809.205
10. Di (2-ethylhexyl) phthalate	2	NR 809.20 (1)	3	NR 809.205
11. Dibromochloropropane	2	NR 809.20 (1)	3	NR809.205
12. Dinoseb	2	NR 809.20 (1)	3	NR 809.205
13. Dioxin (2, 3, 7, 8-TCDD)	2	NR 809.20 (1)	3	NR809.205
14. Diquat	2	NR 809.20 (1)	3	NR 809.205
15. Endothall	2	NR 809.20 (1)	3	NR 809.205
16. Endrin	2	NR 809.20 (1)	3	NR 809.205
17. Ethylene dibromide	2	NR 809.20 (1)	3	NR 809.205
18. Glyphosate	2	NR 809.20 (1)	3	NR 809.205
19. Heptachlor	2	NR 809.20 (1)	3	NR 809.205
20. Heptachlor epoxide	2	NR 809.20 (1)	3	NR 809.205
21. Hexachlorobenzene	2	NR 809.20 (1)	3	NR 809.205

22. Hexachlorocyclo-pentadiene	2	NR 809.20 (1)	3	NR 809.205
23. Lindane	2	NR 809.20 (1)	3	NR 809.205
24. Methoxychlor	2	NR 809.20 (1)	3	NR 809.205
25. Oxamyl (Vydate)	2	NR 809.20 (1)	3	NR 809.205
26. Pentachlorophenol	2	NR 809.20 (1)	3	NR 809.205
~~27. Picloram~~	~~2~~	~~NR 809.20 (1)~~	~~3~~	~~NR 809.205~~
~~28. Polychlorinated biphenyls~~	~~2~~	~~NR 809.20 (1)~~	~~3~~	~~NR 809.205~~
~~29. Simazine~~	~~2~~	~~NR 809.20 (1)~~	~~3~~	~~NR 809.205~~
~~30. Toxaphene~~	~~2~~	~~NR 809.20 (1)~~	~~3~~	~~NR 809.205~~
27. Perfluorooctane sulfonic acid (PFOS)	2	NR 809.20 (1)	3	NR 809.205
28. Perfluorooctanoic Acid (PFOA)	2	NR 809.20 (1)	3	NR 809.205
29. Picloram	2	NR 809.20 (1)	3	NR 809.205
30. Polychlorinated biphenyls	2	NR 809.20 (1)	3	NR 809.205
31. Simazine	2	NR 809.20 (1)	3	NR 809.205
32. Toxaphene	2	NR 809.20 (1)	3	NR 809.205
E. Volatile Organic Chemicals (VOCs)	2	NR 809.24 (1)	3	NR 809.245
1. Benzene	2	NR 809.24 (1)	3	NR 809.245
2. Carbon tetrachloride	2	NR 809.24 (1)	3	NR 809.245
3. Chlorobenzene (monochlorobenzene)	2	NR 809.24 (1)	3	NR 809.245
4. o-Dichlorobenzene	2	NR 809.24 (1)	3	NR 809.245
5. p-Dichlorobenzene	2	NR 809.24 (1)	3	NR 809.245
6. 1,2-Dichloroethane	2	NR 809.24 (1)	3	NR 809.245
7. 1,1-Dichloroethylene	2	NR 809.24 (1)	3	NR 809.245
8. cis-1,2-Dichloroethylene	2	NR 809.24 (1)	3	NR 809.245
9. trans-1,2-Dichloroethylene	2	NR 809.24 (1)	3	NR 809.245
10. Dichloromethane	2	NR 809.24 (1)	3	NR 809.245
11. 1,2-Dichloropropane	2	NR 809.24 (1)	3	NR 809.245
12. Ethylbenzene	2	NR 809.24 (1)	3	NR 809.245
13. Styrene	2	NR 809.24 (1)	3	NR 809.245
14. Tetrachloroethylene	2	NR 809.24 (1)	3	NR 809.245
15. Toluene	2	NR 809.24 (1)	3	NR 809.245
16. 1,2,4-Trichlorobenzene	2	NR 809.24 (1)	3	NR 809.245
17. 1,1,1-Trichloroethane	2	NR 809.24 (1)	3	NR 809.245
18. 1,1,2-Trichloroethane	2	NR 809.24 (1)	3	NR 809.245
19. Trichloroethylene	2	NR 809.24 (1)	3	NR 809.245
20. Vinyl chloride	2	NR 809.24 (1)	3	NR 809.245
21. Xylenes (total)	2	NR 809.24 (1)	3	NR 809.245
F. Radioactive Contaminants				
1. Beta/photon emitters	2	NR 809.51	3	NR 809.52 (1), NR 809.53 (2)
2. Alpha emitters	2	NR 809.50 (2)	3	NR 809.52 (1), NR 809.53 (1)
3. Combined radium (226 & 228)	2	NR 809.50 (1)	3	NR 809.52 (1), NR 809.53 (1)
G. Disinfection Byproducts (DBPs), Byproduct Precursors, Disinfectant Residuals. Where disinfection is used in the treatment of drinking water, disinfectants combine with organic and inorganic matter present in water to form chemicals called disinfection byproducts. EPA sets standards for controlling the levels of disinfectants and disinfection byproducts in drinking water, including trihalomethanes and haloacetic acids. [9]				
1. Total trihalomethanes	2	NR 809.561 (1)	3	NR 809.565(1)-(2)
2. Haloacetic Acids	2	NR 809.561 (1)	3	NR 809.565(1)-(2)
3. Bromate	2	NR 809.561 (2)	3	NR 809.565(1), (3)
4. Chlorite	2	NR 809.561 (2)	3	NR 809.565(1), (3)

5. Chlorine (MRDL)	2	NR 809.561 (2) NR 809.566 (3) (a)	2	NR 809.565(1), (4) NR 809.566(3)(a)
6. Chloramine (MRDL)	[2]	NR 809.561 (2) NR 809.566 (3) (a)	3	NR 809.565(1), (4) NR 809.566(3)(a)
7. Chlorine dioxide (MRDL), where any 2 consecutive daily samples at entrance to distribution system only are above MRDL	2	NR 809.566(1), (3) (b)	2, 3[11]	NR 809.565(1), (4)
8. Chlorine dioxide (MRDL), where samples in distribution system the next day are also above MRDL	1[10]	NR 809.566 (1), (3) (b)	1	NR 809.565(1), (4)
9. Control of disinfection byproducts precursors – TOC (TT)	2	NR 809.569	3	NR 809.565(1),(5)
10. Bench marking and disinfection profiling	N/A	N/A	3	NR 810.32
11. Development of monitoring plan	N/A	N/A	3	NR 809.565 (6)
H. Other Treatment Techniques				
1. Acrylamide (TT)	2	NR 809.25 (4)	N/A	N/A
2. Epichlorohydrin (TT)	2	NR 809.25 (4)	N/A	N/A
II. Unregulated Contaminant Monitoring:[12]				
A. Unregulated contaminants	N/A	N/A	3	NR 809.25; 40 CFR Part 141, Section 141.40
B. Nickel	N/A	N/A	3	NR 809.115 (3) Table A
III. Public Notification for Conditional Waivers and Variances				
A. Operation under a conditional waiver or variance	3	NR 809.90, NR 809.91	N/A	N/A
B. Violation of a conditional waiver or variance	2	NR 809 Subch. VI	N/A	N/A

Contaminant	MCL/MRDL/TT violations[2]		Monitoring & testing procedure violations	
	Tier of public notice required	Citation (Wis. Adm. Code)	Tier of public notice required	Citation (Wis. Adm. Code)
IV. Other Situations Requiring Public Notification:				
A. Fluoride secondary maximum contaminant level exceedance	3	NR 809.70	N/A	N/A
B. Exceedance of nitrate MCL for non-community systems, as allowed by the department	1	NR 809.11 (3)	N/A	N/A
C. Availability of unregulated contaminant monitoring data	3	NR 809.956	N/A	N/A
D. Waterborne disease outbreak	1	NR 809.04 (90) NR 809.80 (6) (e), NR 809.951 (1) (b) 7.	N/A	N/A
E. Other waterborne emergency[13]	1	NR 809.951 (1) (b) 8.	N/A	N/A
F. Other situations as determined by the department	1, 2, 3[14]	N/A	N/A	N/A
G. Groundwater Rule TT violations for failure to complete corrective actions according to a state approved schedule	2	NR 809.328(2)	N/A	N/A

SECTION 11. EFFECTIVE DATE. This rule takes effect on the first day of the month following publication in the Wisconsin Administrative Register as provided in s. 227.22 (2) (intro.), Stats.

SECTION 12. 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 _____

For Preston D. Cole, Secretary