



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

INFORMATION SESSION

Proposed Administrative Rule Revisions

Rule Set # 2019 – 35 EG

PFAS Amendment to *Supplying Water to the Public Rule*

TODAY'S AGENDA

- 5:00 PM Information Session
Meet one-on-one with technical experts.
Resources tables will remain open throughout the hearing.
- 5:30 PM Presentation
Overview of Proposed PFAS Rule Changes
- 6:00 PM Public Hearing
EGLE staff will take comments on the DRAFT rules for the record. This is not an interactive session.
- 8:00 PM Wrap-up and Adjourn



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Proposed PFAS MCLs and Rules

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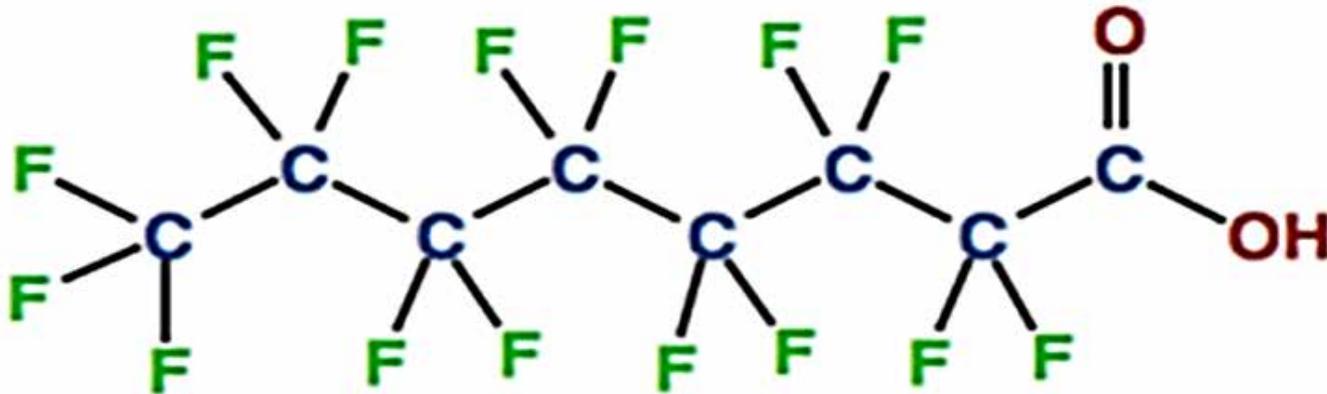


Presentation Agenda

- How Did We Get Here? A Timeline
- How Were the Maximum Contamination Levels (MCLs) and Rules Developed?
- Overview of Proposed Rule and How it Works
- Impact: How Much Will it Cost?
- Going Forward

Per- and Polyfluoroalkyl Substances (PFAS)

- Strong carbon-fluorine bonds
- Surfactants
- Repel water, oil, fat, and grease
- Began developing in 1940s
- 5,000+ compounds today



PFOA - perfluorooctanoic acid



Some Common PFAS Abbreviations

- Perfluorooctanoic acid (PFOA)
- Perfluorooctane sulfonate (PFOS)
- Perfluorononanoic acid (PFNA)
- Perfluorobutane sulfonic acid (PFBS)
- Perfluorohexane sulfonic acid (PFHxS)
- Hexafluoropropylene oxide dimer acid
a.k.a. GenX (HFPO-DA)



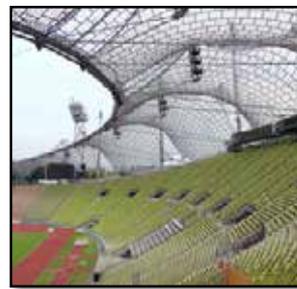
PFAS Uses



Aerospace



Apparel



**Building and
Construction**



**Chemicals and
Pharmaceuticals**



Electronics



Oil & Gas



Energy



**Healthcare and
Hospitals**



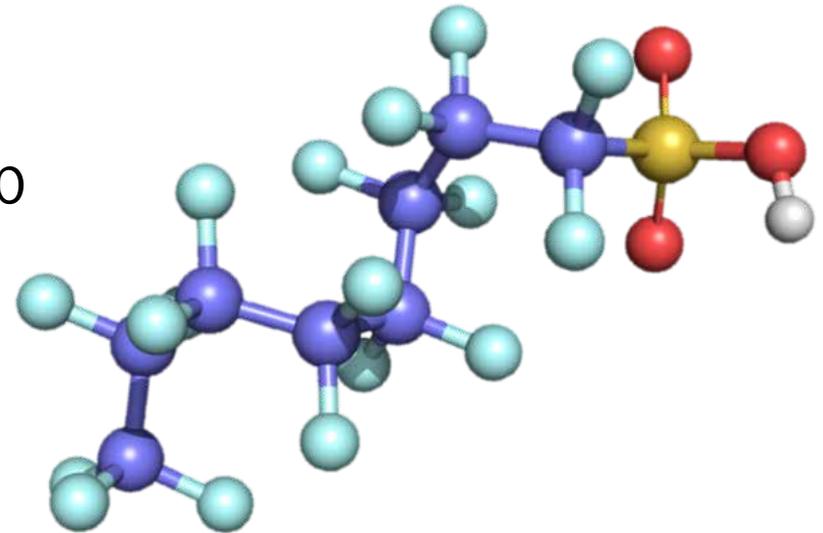
**Aqueous Film
Forming Foam**

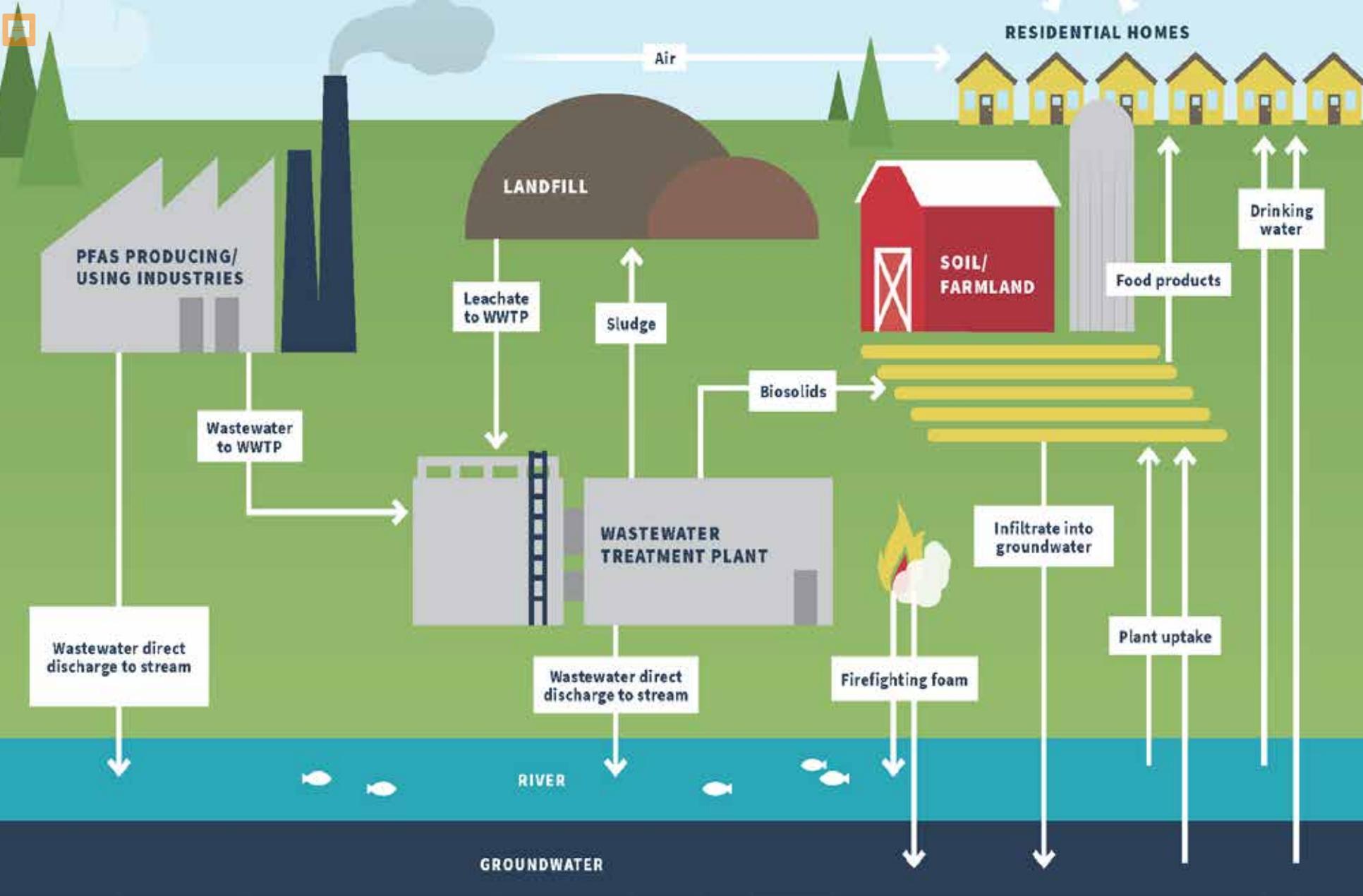


Semiconductors

Why the Concern?

- Widespread
- Don't break down easily - hard to get rid of
- Bioaccumulative – build up in our bodies
- Some PFAS may affect health
- Lack of information
- Lack of standards







Background

- 2017 - Wolverine Worldwide Site
 - November 2017 -Michigan PFAS Action Response Team (MPART) Established
- 2018 - Statewide Drinking Water Sampling
 - 3-Year Program Executed in 8 Months
 - Follow-up Efforts
 - Data Summary
- 2019 – Executive Directive Create MCLs/Rules

MI Public Water Supplies

Survey Results*

Community Water Supply (CWS) Analysis Results (Type I)

- 996 had no PFAS compounds detected
- 83 had total PFAS detected at less than 10 ppt
- 36 had total PFAS detected at or above 10 ppt

Noncommunity Water Supply Analysis Results (Type II)

- 1,236 had no PFAS compounds detected
- 57 had total PFAS detected at less than 10 ppt
- 48 had total PFAS detected at or above 10 ppt

EPA Regulated Tribal Community Water Supplies

- 17 sampled: all had no PFAS compounds detected

*Results current as of 11/8/2019



MCL Process

Step 1: Listening Session with Stakeholders

Step 2: Craft Draft Rules/MCLs and RIS

Step 3: Stakeholder Input on Draft Rules

Step 4: Finalize Draft Rules Based on Input

Step 5: Present Rules for Consideration

Step 6: Public Hearing/Comment

Timeline

PFAS MCL Process

DATE (2019)	EVENT
March	Governor Whitmer's Directive to Promulgate Rules
April - June	MPART Science Advisory Workgroup Develops Health Based Values
July	Stakeholder Listening Sessions
August	EGLE Drafts Rule
September	Stakeholder Meetings
September	EGLE Revises Rule
November	Environmental Rules Review Committee approves draft rules for public hearing

Stakeholders Involved

- Industrial Group
- Health Group
- Environmental Group
- Municipalities Group
- Citizens Group

Stakeholders Involved (cont.)

- Industrial Group
 - MI Manufactured Housing Association
 - Michigan Chamber of Commerce
 - Michigan Chemistry Council
 - Michigan Groundwater Association
 - Michigan Manufacturers Association
 - Michigan Waste and Recycle Association
- Health Group
 - District Health Departments 2 and 4
 - Ionia County Health Department
 - Kent County Health Department
 - Michigan Department of Health and Human Services
 - Michigan Association for Local Public Health
 - Michigan Association of Local Environmental Health Administrators

Stakeholders Involved (cont.)

- Environmental Group
 - Clean Water Action
 - Environment Michigan
 - Great Lakes Environmental Law Center
 - Huron River Watershed Council
 - League of Conservation Voters
 - Michigan Environmental Council
 - National Resource Defense Council
 - Nature Conservancy
 - Sierra Club

Stakeholders Involved (cont.)

- Municipalities Group
 - American Water Works Association
 - Consultant – Prein and Newhoff
 - Contractor Operations/Consultant - Fleis & VandenBrink Engineering, Inc.
 - MELA (Michigan Environmental Laboratory Association)
 - Michigan Chapter of American of Public Works Administration
 - Michigan Municipal League
 - Michigan Rural Water Association
 - Michigan Townships Association
 - Michigan Water Environment Association
 - Safe Water Engineering
 - Southeast Michigan Council of Governments
 - Water Utility – Plainfield Township
 - Water Utility – City of Ann Arbor

Stakeholders Involved (cont.)

- Citizens Group
 - Held 2 Webinars with Citizens in Affected Communities
 - Utilized MPART Citizens Advisory Council List
 - One Listening Session
 - One Session to Present Draft Rules and Get Input

How Does the Rule Work?

- Applicability
- Sampling Requirements
- Reporting
- Proposed MCLs
- Compliance Calculation
- Public Notification
- Treatment Technologies
- Laboratory Certification

Who Must Follow the New Rule (Applicability)

- 1,400 Community Water Supplies
- 1,300 Non-transient Noncommunity Water Supplies
- Other regulated supplies as may be required by EGLE
-

Sampling Requirements

- General Requirements:
 - Sample where treated water enters the distribution system
 - EGLE may require confirmation sampling
 - EGLE may require more frequent sampling (variations in system)

Sampling Requirements (cont.)

- Initial Sampling:
 - Modeled to ensure those with least amount of data sample first
 - Must sample immediately
 - Systems with data sample within 6 months
- Ongoing Sampling:
 - Quarterly: Supplies with detections
 - Annually: Supplies with no detections or consistently below proposed MCLs

When are Results Reported to EGLE?

- In accordance with existing requirements:
 - Within first 10 days of the month following the month in when results are received, or
 - Within 10 days of the end of the monitoring period
 - Whichever is sooner

Proposed MCLs

Contaminant	MCL (ng/L)*	Chemical Abstract Services Registry Number (CASRN)
PERFLUORONONANOIC ACID (PFNA)	6	375-95-1
PERFLUOROOCTANOIC ACID (PFOA)	8	335-67-1
PERFLUOROOCTANE SULFONIC ACID (PFOS)	16	1763-23-1
PERFLUOROHEXANE SULFONIC ACID (PFHxS)	51	355-46-4
HEXAFLUOROPROPYLENE OXIDE DIMER ACID (HFPO-DA) (a GenX compound)	370	13252-13-6
PERFLUOROBUTANE SULFONIC ACID (PFBS)	420	375-73-5
PERFLUOROHEXANOIC ACID (PFHxA)	400,000	307-24-4

*ng/L = Nanogram/liter

Compliance Calculation

- Compliance based on annual average at each sampling point
- One point/sample can cause the supply to be out of compliance (exceed MCL)
- Positive detections result in quarterly sampling
- If confirmation sampling is required, the confirmation result(s) will normally be averaged with the first result
- EGLE may exclude results of obvious sampling errors

Public Notification

- Required if a supply is in noncompliance. To be conducted consistent with existing public notification requirements for similar contaminants
 - If a water supply is out of compliance with an MCL, a 30-day public notification is required
 - Notice requires mandatory language about the source of each contaminant in drinking water and mandatory health effects language
 - For community water supplies, violations must also be referenced in annual water quality reports (consumer confidence reports)

Treatment Technology

- Best Available: Granular Activated Carbon
 - Cost used for Regulatory Impact Statement
 - Capable of treating to MCLs
 - Waste Stream/Regeneration
- Filtration
 - Produces Concentrated Waste Stream to ?
- Ion Exchange



Laboratory Certification

- Requires an EPA Certified Method
- Minimum Detection Capability Required
- Third Party Proficiency Testing





Regulatory Impact Statement

- Cost for Sampling and Analysis: \$6.4M
- Treatment Installation: \$11M
- Treatment O&M: \$326K annually
- Benefits addressed qualitatively

Going Forward

- 3 Public Hearings, January 2020
 - In Grand Rapids, Ann Arbor, and Roscommon
- Comment Period through the End of January
- Review all Comments
- Revise Rule if Warranted
- Present Comments/Revised Rule to Environmental Rules Review Committee
- Submit to the Joint Committee on Administrative Rules (JCAR)

Michigan Department of
Environment, Great Lakes, and Energy

Public Comment
by 5:00 pm Friday, January 31, 2020

EGLE-PFAS-Rulemaking@Michigan.gov



Michigan Department of
Environment, Great Lakes, and Energy



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MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

PUBLIC HEARING

Begins at 6:00 PM



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Public Hearing

Proposed Administrative Rule Revisions

Rule Set # 2019-35 EG
Supplying Water to the Public

Michigan Safe Drinking Water Act, Public Act 399 of 1976

- Proposed Revisions:
 - Supply Water to the Public, Parts 1 - 28
 - Michigan.gov/MOAHR
 - Notable Rule Revisions:
 - Establishment of Maximum Contaminant Levels (MCL) for 7 PFAS
 - Establishment of sampling requirements for community and nontransient noncommunity water supplies
 - Public notification requirements for water supplies that exceed an MCL or do not monitor as required
 - Criteria for certifying drinking water laboratories for PFAS analysis

Public Hearing Process

- Rule Making Process
 - Receive Input on the proposed rule changes through the Public Hearing and comment period
- Today's Procedures
 - Procedures set forth in the Administrative Procedures Act of 1969
- How the Information will be Used
 - Agency Report to the ERRC, and if approved they move forward to JCAR



MICHIGAN DEPARTMENT OF
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Public Comments

Thank You and Next Steps

- Comment Period ends January 31, 2020 at 5:00 pm (EGLE-PFAS-Rulemaking@Michigan.gov)
- Review all Comments & Revise Rule if Warranted
- Present Agency Report/ Revised Rule to Environmental Rules Review Committee (ERRC)
- ERRC holds meetings open to the public (last Thursday of the month)
- Submit to the Joint Committee on Administrative Rules (JCAR)

Michigan Department of
Environment, Great Lakes, and Energy

800-662-9278

Michigan.gov/EGLE

Public Comment

by 5:00 pm Friday, January 31, 2020

EGLE-PFAS-Rulemaking@Michigan.gov



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