

New England Waste Management Officials (NEWMOA) Board Meeting



Implementing PFAS Legislation in Maine

June 16, 2022

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MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

Protecting Maine's Air, Land and Water

Presentation Overview

Focus on 5 laws from Maine's 130th legislature (2021-2022)

Interim Drinking Water Standard	Resolve 2021, Chapter 82
Soil and Groundwater Investigation	Public Law 2021, Chapter 478
Sludge and sludge-derived products ban	Public Law 2022, Chapter 641
PFAS in food packaging	32 M.R.S. § 1733 (3-B)
PFAS in products	38 M.R.S. § 1614



Key PFAS Guidelines/Regulations

Public Resolve, 2021, Chapter 82, Effective June 21, 2021:
Resolve to Protect Consumers of Public Drinking Water by Establishing MCLs for Certain Substances and Contaminants

**Maine's Interim
Drinking Water Standard
= 20 ppt
for the sum of six PFAS:
PFOA, PFOS, PFNA, PFDA, PFHpA & PFHxS**

Final Rule to be developed by Maine Drinking Water Program by
June 1, 2024



Key PFAS Guidelines/Regulations

- Screening levels
 - Soils
 - Recreational fishing
 - Milk
 - Beef
 - Dairy (to hay, to corn)
- Developed in coordination with Maine CDC and Maine DACF
- Updating soon

MAINE PFAS SCREENING LEVELS

June 2021

Compound	Soil Remedial Action Guidelines ¹ (mg/kg)					
	Leaching to Groundwater	Residential	Commercial Worker	Park User	Recreator Sediment	Construction Worker
PFBS	7.1	1,700	22,000	4,900	5,700	51,000
PFOS	0.0036	1.7	22	4.9	5.7	5.1
PFOA	0.0017	1.7	22	4.9	5.7	5.1

Soil Beneficial Use (ng/g, dry weight)	
Compound	Beneficial Use
PFBS	1,900
PFOS	5.2
PFOA	2.5

Recreational Angler RAGs (mg/kg wet weight)	
Compound	Fish Tissue
PFBS	52
PFOS	0.052
PFOA	0.052

Interim Drinking Water Standard (ng/l or ppt)	
Compound	Residential
PFOS + PFOA + PFHpA + PFNA + PFHxS + PFDA	20

Milk (ng/l or ppt)	
Compound	Action Level
PFOS	210

Beef (ng/g)	
Compound	Action Level
PFOS	3.4

Dairy ² - PFOS Crop-Specific Soil Screening Levels (ng/g dry weight)			
	Soil to Hay to Milk Screening Level	Soil to Corn-Silage to Milk Screening Level	Soil to Hay and Corn-Silage to Milk Screening Level
Grass-Based Farm	6.8	120.0	6.4
Average Maine Farm	13.8	54.8	11.0

Helpful Conversions: 0.000001 ppm = 0.001 ppb = 1 ppt

Parts Per Million (ppm)	Parts Per Billion (ppb)	Parts Per Trillion (ppt)
1 milligram/kilogram (mg/kg) = 1 ppm	1 microgram/kilogram (µg/kg) = 1 ppb	1 nanogram/kilogram (ng/kg) = 1 ppt
1 milligram/liter (mg/l) = 1 ppm	1 microgram/liter (µg/l) = 1 ppb	1 nanogram/liter (ng/l) = 1 ppt
1 microgram/gram (µg/g) = 1 ppm	1 nanogram/gram (ng/g) = 1 ppb	1 picogram/gram (pg/g) = 1 ppt

¹ Maine Department of Environmental Protection (Maine DEP), [Maine Remedial Action Guidelines \(RAGs\) for Contaminated Sites](#), effective May 1, 2021.

² Maine DEP, [Maine Solid Waste Management Rules: Beneficial Use of Solid Wastes, 06-096 C.M.R. ch. 418](#), Appendix A, last amended July 8, 2018.

³ Maine DEP, [Maine RAGs for Contaminated Sites](#), effective May 1, 2021.

⁴ Resolve 2021, ch. 82, [Resolve To Protect Consumers of Public Drinking Water by Establishing Maximum Contaminant Levels for Certain Substances and Contaminants: Emergency](#), effective June 21, 2021.

⁵ Maine Center for Disease Control and Prevention (CDC), [Action Levels for PFOS in cow's milk](#), Memorandum to Rachael Fiske, Maine Department of Agriculture, Conservation and Forestry (DACF), from Andrew Smith, SM, ScD and Thomas Simones, PhD, Maine CDC, March 28, 2017.

⁶ Maine CDC, [Action Levels for PFOS in beef for use in determining whether beef at a farm is adulterated](#), Memorandum to Nancy McBrady, Maine DACF, from Andrew Smith, SM, ScD and Thomas Simones, PhD, Maine CDC, August 4, 2020.

⁷ Maine CDC, [Derivation of PFOS soil screening levels for a soil-to-fodder-to-cow's milk agronomic pathway](#), September 16, 2020.



MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

www.maine.gov/dep

Soil and Groundwater Investigation

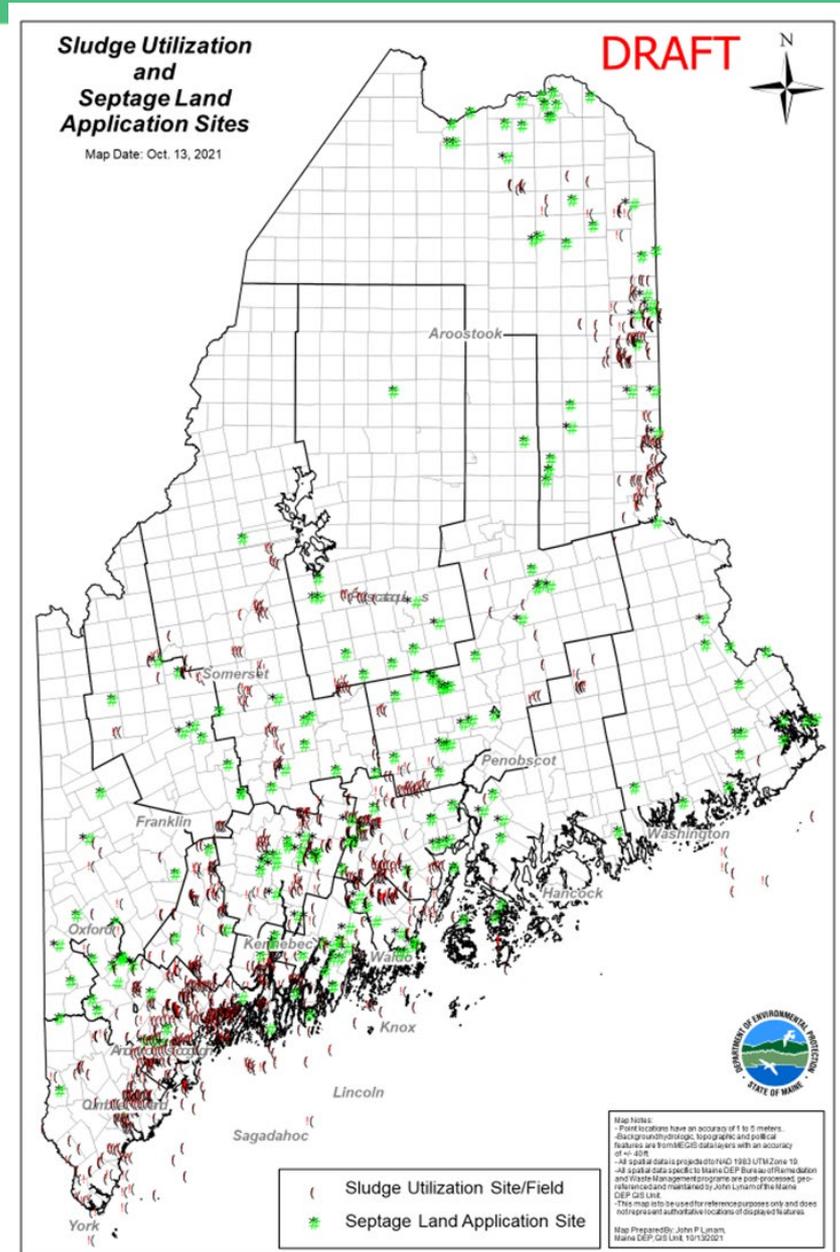
Public Law, 2021, Chapter 478, Effective October 18, 2021: *An Act To Investigate Perfluoroalkyl and Polyfluoroalkyl Substance Contamination of Land and Groundwater*

- Requires DEP to:
 - Conduct PFAS soil & water investigation for contamination derived from application of both sludge & septage
 - Half of all sites must be sampled by end of 2024; all by end of 2025
 - In addition to sampling – DEP provides water treatment systems for impacted private drinking water wells



PFAS Investigation

- Over 700 sludge and septage application sites estimated in early 2021 (likely more)
- Sites often include multiple fields/locations crossing municipal boundaries
- Some sites were used by multiple generators – and sludge from multiple sources may have been applied to one location
- Thousands of data points, several decades of licensing information
- Current land ownership often different than from decades ago



Prioritizing Sampling Locations

- Septage sites are managed separately
- Sludge sites are grouped into four Tiers:
 - Volume of sludge land applied
 - Anticipated presence of PFAS in sludge
 - Proximity of known receptors
- Many sludge land applications sites are active agricultural operations
- Significant interagency coordination required



PFAS Investigation Process

- Review licenses/annual reports
- Develop site sampling and analysis plans (SAP)
- Schedule sampling events – coordinate with landowners
- Conduct sampling event/deliver samples to lab
- Obtain/review lab results
- Communicate results to landowner
- Evaluate need for treatment/bottled water
- Determine whether need stepped out investigation



Lessons Learned

- It takes time to:
 - Create program structure
 - Understand staff roles and responsibilities
 - Clarify partner agency roles and responsibilities
 - Ensure consistency in direction of the program
 - Find and locate home and landowners
 - Get permission to access property and obtain data
 - Schedule sampling events, installation events, monitoring events
 - Develop data collection/user friendly information (maps)
 - Obtain and review lab data
 - Get contracts through the state process
 - Determine how to manage self-testers



Lessons Learned ctd.

- Communication is critical
 - Towns/communities, media, groups, agencies, homeowners, landowners
 - Type of communication is important (phone, writing)
 - Public expectations high and not always realistic
 - Not having answers to questions; how to explain what soil results mean?
- The unexpected will come up
 - Changing landscape of regulation and technology
 - Public and legislative reactions
 - Nonstop information requests and inquiries – including FOAA
 - Unintended impacts to agriculture and basic infrastructure (wastewater, waste, drinking water), hunting, fishing, and perhaps more



2022 Sludge Ban

Public Law, 2022, Chapter 641, Effective August 8, 2022: *An Act To Prevent the Further Contamination of the Soils and Waters of the State with So-called Forever Chemicals*

- Prohibits the land application of sludge or sludge derived products as well as the sale and distribution of sludge derived products (e.g., composts and fertilizers)
- Report on feasibility of enacting a ban on land application of septage (which occurs in Maine) – due January 2023



Early challenges

- Unanticipated impacts:
 - Where to put the sludge?
 - Lack of landfill capacity or other disposal options
 - Technology still in infancy regarding treatment, concentration and destruction
 - Impacts to landscapers, some farmers, and home gardeners, other states
 - Wastewater operators perceived as problem
- Stakeholder participation underway



PFAS in food Packaging

- **32 M.R.S. § 1733 (3-B)**, effective June 13, 2019: *An Act To Protect the Environment and Public Health by Further Reducing Toxic Chemicals in Packaging*
- DEP rules may prohibit use of packaging with intentionally introduced PFAS if: safer alternative available in sufficient quantity and at comparable cost.
- Following the initial WA study – Maine rule proposed to focus on wraps & liners, food boats, plates, and pizza boxes
- Rulemaking this year – major substantive
- Stakeholder meetings upcoming
- Will be in front of BEP by end of year



Intentionally Added PFAS in *all* products

- **38 M.R.S. § 1614 effective July 15, 2021: *An Act to Stop PFAS Substances Pollution***
- These products with intentionally added PFAS are banned from sale/distribution starting 1/1/2023
 - Carpets & rugs
 - Fabric treatments
- Manufacturers of *all* products with intentionally added PFAS must notify the DEP by 1/1/2023
- Notifications will be collected and integrated into the Interstate Chemicals Clearinghouse (IC2) www.theic2.org
- This information will be available to ALL states! No need to recreate data collection efforts if adopted by your state.



Intentionally Added PFAS in *all* products

- All products with intentionally added PFAS (unless the PFAS is determined by rule to be unavoidable) will be banned for sale/distribution starting 1/1/2030
- Rules will be developed to determine what is unavoidable use
- Rulemaking this year - major substantive; Stakeholder input – June 30, 2022
- DEP website FAQs online
- Still need to hire program manager





[Contact us at: pfas.dep@maine.gov](mailto:pfas.dep@maine.gov)

www.maine.gov/dep/spills/topics/pfas/index.html

