

All Hands On Deck!

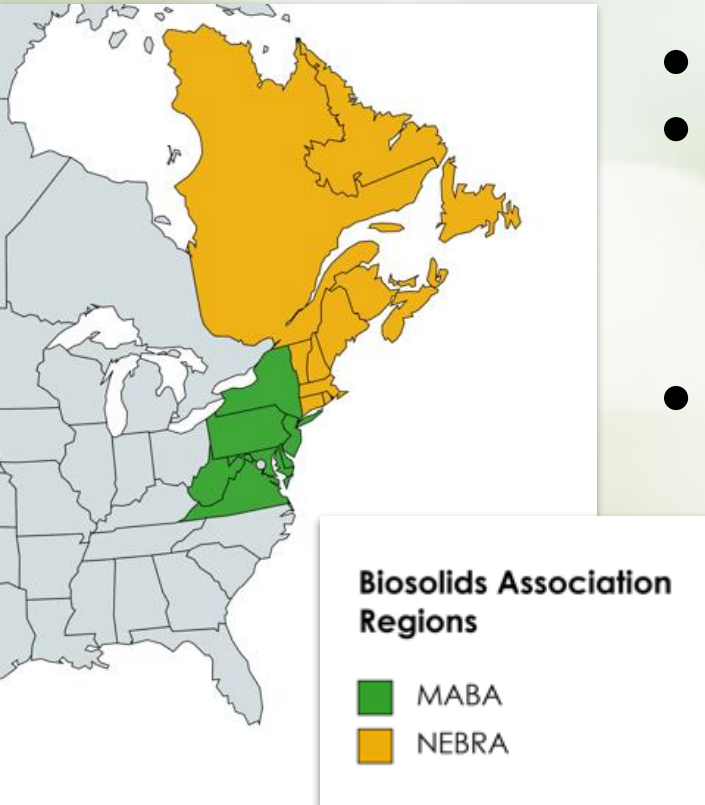
How Biosolids Associations Are Helping Members Manage PFAS Challenges

Janine Burke-Wells, North East Biosolids & Residuals Association
Mary Firestone, Mid-Atlantic Biosolids Association



Mid-Atlantic
Biosolids
Association

North East Biosolids & Residuals Association (NEBRA) Mid-Atlantic Biosolids Association (MABA)

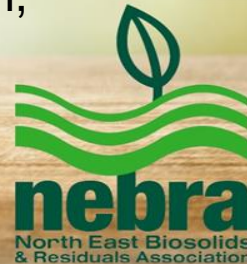


- Both organizations were founded in 1997
- **NEBRA's Mission:** To cooperatively promote sustainable diversion, recycling and beneficial use of biosolids and residuals from the municipal and industrial sectors
- **MABA's Mission:** Communicate the benefits of biosolids resources within the biosolids community and the communities we serve.



Why are Biosolids Associations Needed?

- It's good to be focused just on the solids – not to mention sustainability, soil health, greenhouse gas reductions, and all those resources to recover!
- There are many challenges with sludges and biosolids – it's where all the pollutants removed by WRRFs end up.
- Everyone involved with managing biosolids needs help with communications, sharing of accurate information, building trust, talking to the press
- Access to best management practices, research, and advocacy for smart laws, regulations, and policies
- Two new associations within the last year: Midwest and Southeast



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NEBRA & MABA Leadership & Committees

- **Boards:** NEBRA's 13 board members meet once a month. MABA's 21 board members meet every other month.
- **Committees:** NEBRA and MABA's standing committees meet on a monthly basis, and include Regulatory/Legislative committees. NEBRA has a Research Committee and a new Carbon & Nutrient Trading Committee. MABA has a Communications Committee and a Young Professionals



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NEBRA Member Services & Benefits

- NEBRAMail newsletter
- Monthly Research Abstracts
- Monthly Lunch & Learns
- Website full of PFAS information (www.nebiosolids.org/resources#/pfas-biosolids/)
- Legislative/regulatory tracking
- Forums for collaboration on Advocacy, Education, Outreach, and more!



The screenshot shows the NEBRA website header with the logo and tagline "Recycled organics: Tools for sustainability." Below the header is a navigation menu with links for HOME, NEBRA, BIOSOLIDS, RESIDUALS, RESOURCES, NEWS, EVENTS, BLOG, CONTACT, and MEMBERS ONLY. The main content area features a section titled "PFAS in Biosolids ('sludge') and Residuals" with a sub-heading "Recycling organic 'wastes' benefits society and the environment." The text describes how organic residuals are recycled to soils and lists three benefits: enhancing soil health, recycling nutrients, and sequestering carbon. A quote from Dr. Linda Lee is also present, along with a small image of green plants.

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Recycled organics: Tools for sustainability.

HOME NEBRA BIOSOLIDS RESIDUALS RESOURCES NEWS EVENTS BLOG CONTACT MEMBERS ONLY


PFAS in Biosolids ("sludge") and Residuals

Recycling organic "wastes" benefits society and the environment.

Throughout the U. S. and Canada, biosolids (treated and tested sewage sludge), septage, paper mill residuals, composts, and other organic residuals are commonly recycled to soils. This recycling does amazing things:

- enhances soil health
- recycles nutrients
- sequesters carbon (mitigating climate change)

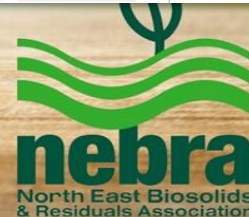
"Let's move fast to stop non-essential uses of PFAS. Then let's work carefully and more slowly on research and balanced regulation."
— Dr. Linda Lee, Professor of Agronomy, Purdue University, MI WEA Biosolids Conference, Aug. 2020



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MABA Member Services & Benefits

- **Biosolids Advocacy:** Identifies, advocates, and responds to legislation and regulations that affect wastewater treatment and biosolids sector in the region.
- **Biosolids in the News:** Encourages open dialogue with media, including features in local publications.
- **Education & Networking:** Hosts regular webinars on wastewater treatment and biosolids-related topics. Summer Symposium with a wide range of technical topics and networking opportunities.
- **Biosolids Communications & Research:** Shares information from across the biosolids sector regularly via email, social media, and the MABA website.



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PFAS: MABA & NEBRA's "All Hands On Deck" Approach

- **Advocacy:** MABA, NEBRA, and other regional and national organizations meet regularly to share information, experiences and opportunities to work together to review and respond to regulatory and legislative developments.



April 24, 2023

The Honorable Tom Carper
Chairman
U.S. Senate Committee on Environment and Public Works
410 Dirksen Senate Office Building
Washington, D.C. 20510

The Honorable Shelley Moore Capito
Ranking Member
U.S. Senate Committee on Environment and Public Works
410 Dirksen Senate Office Building
Washington, D.C. 20510


Dear Chairman Carper and Ranking Member Capito:

The undersigned organizations represent local governments and private entities responsible for safeguarding public health and the environment, including drinking water, wastewater treatment, storm water management, and water recycling facilities, municipal solid waste landfills, and composting facilities. We write to urge that any legislation on per- and polyfluorinated substances (PFAS) that the U.S. Senate Committee on Environment and Public Works (EPW) considers include a specific provision to ensure that the organizations we represent are explicitly recognized as "innocent recipients" of PFAS and afford those essential public services a narrow exemption from liability under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Absent such relief, designation of certain PFAS as CERCLA hazardous substances would shift the "polluter pay" principle of the law to that of a "victim pay" model placing the burden of compliance and cleanup onto entrepreneurs and the public at large.

The U.S. Environmental Protection Agency (EPA) has stated often, including during Assistant Administrator Elizabeth Fox's testimony to EPW, that the agency would act in "discretionary authority" in pursuing CERCLA enforcement actions against certain parties. However, this commitment often leads conflict to our sector given the expansive rights of Potentially Responsible Parties under CERCLA to bring contribution litigation against other entities that are alleged to be additional sources of hazardous substances at a cleanup site.

EPA has stated that it has insufficient existing legal authority to provide relief to public service providers from the impact of CERCLA contribution litigation. Claims for contribution against passive receiver groups thus would generate significant litigation costs for lawful operations going back decades – costs that would lead to significant cost increases on essential public service providers and the communities and residents they serve.

It is important to highlight that our members deliver essential public services that do not involve the manufacture or use of PFAS. We are positive recipients of media containing PFAS that are ubiquitous in the



Deep Dive Library Events Topics

DIVE BRIEF

Senate legislation aims to protect waste and compost industry from PFAS liability claims

Published May 4, 2023

Megan Quinn
Senior Reporter

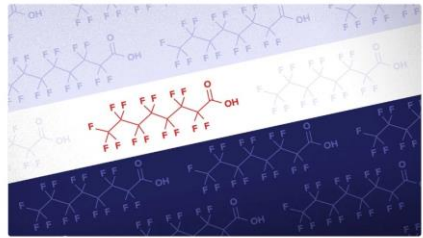


Photo illustration by Brian Tucker/Waste Dive/Waste Dive



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LUMMIS INTRODUCES LEGISLATION TO PROTECT INDUSTRIES FROM FRIVOLOUS LAWSUITS

May 4, 2023

WASHINGTON, D.C. – U.S. Senator Cynthia Lummis (R-WY) introduced five bills to ensure industries and municipalities are not subject to liability claims if the Environmental Protection Agency (EPA) designates per- and polyfluorinated substances (PFAS) compounds as hazardous substances. The covered entities in these bills either do not contribute to PFAS contamination or are required to use PFAS-containing substances through regulations. Lummis introduced this legislation in response to an August 2022 proposed EPA rule to designate two PFAS compounds as a hazardous substances under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), also known as Superfund. This would subject any entity with PFAS contamination to potential CERCLA liability from the EPA and third parties.

Should this rule be finalized, entities such as water treatment plants, landfills, farms and ranches would be held liable for PFAS contamination they are not responsible for and entities such as airports, fuel depots and refineries that are required to test use fire suppression foam that contain PFAS would be at risk for litigation.



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PFAS: MABA & NEBRA's "All Hands On Deck" Approach

- **Research & Information Sharing:** MABA and NEBRA continue to take part in and gather extensive research and information related to PFAS and share this via PFAS specific webpages for their members.

Cost Analysis of the Impacts on Municipal Utilities and Biosolids Management to Address PFAS Contamination

NACWA
nebra
Water Environment Federation

October 2020
October 27 Revised version 2021
CDM Smith

Mid-Atlantic Biosolids Association

Per- and Polyfluorinated Substances (PFAS)

The per and polyfluoroalkyl substances (PFAS) are a group of chemicals used to make fluoropolymer coatings and products that resist heat, oil, stains, grease, and water. Fluoropolymer coatings can be in a variety of products. These include clothing, furniture, adhesives, food packaging, heat-resistant non-stick cooking surfaces, and the insulation of electrical wire. Many PFAS, including perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA), are a concern because they:

- do not break down in the environment,
- can move through soils and contaminate drinking water sources,
- build up (bioaccumulate) in fish and wildlife.

PFAS are found in rivers and lakes and in many types of animals on land and in the water. (Center for Disease Control & Prevention)

The Mid-Atlantic Biosolids Association (MABA) recommends that regulatory and legislative groups work to contain PFAS releases at their source, through use of the industrial pretreatment program, product bans, and other preventive measures, and after their escape into sewers. The US Environmental Protection Agency (EPA) is driving development of PFAS analysis protocols in wastewater and biosolids, which currently are not approved for regulatory use, and will be using new risk assessment tools to establish standards and limits for concentrations. Regulatory and legislative groups should avoid these protocols and federal guidance before obligating biosolids generators to spend public money.

Additionally, MABA recommends that disclosure of PFAS chemicals in product content should be made mandatory in all states within the mid-atlantic region.

The "polluter pays" principle that guides many environmental protections in the state of the mid-atlantic region should be applied to reducing human and environmental risks from PFAS.

Download the complete [MABA PFAS Position Statement](#).
Download the [March 2022 MABA PFAS Focus Release](#).

MABA is dedicated to assisting its members with handling this difficult subject matter and growing issue in the biosolids community. The PFAS Focus Group has created an extensive repository for PFAS related information on MABA's members only section of the website. We invite you to visit the specific PFAS related

Quick Links

- FAQ
- Become a Member
- Become a Sponsor
- Search for Biosolids Organizations
- Search for Biosolids Practitioners

Upcoming Events

- Wed Nov 10, 2022
2022 Annual Education Seminar
- Fri Feb 18, 2023
NEBRA Residuals and Biosolids Conference 2023
- Fri Feb 18, 2023
2022 CDEA Collaborative Biosolids Conference Series
- Fri Jun 3, 2023
2023 NEBRA and NECA Joint Group Technical Conference and Exhibition

Our Sponsors

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TaxPayers count on saFe and responsible recycling of water and organic matter using cost effective, sustainable practices that support drinking water, recreation, business use, And improved Soil quality.

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PFAS:

MABA & NEBRA's "All Hands On Deck" Approach

- **New & Emerging Technologies:** MABA and NEBRA identify and showcase the latest innovations in PFAS removal technologies with their members and the biosolids community.

nebra Recycled organics. Toxic for sustainability.

WELCOME TO OUR WEBINAR!

NEBRA Lunch & Webinar Series
May 20, 2022
Presented by:
John Ross, P.E., Brown & Caldwell

Brown AND Caldwell

PFAS Fate Studies Through Advanced Thermal Treatment Technologies

25th Anniversary 1997-2022

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Lunch & Learn About the Fate of PFAS Through Thermal Treatment Processes

**Tuesday, March 14
12 - 1:30 p.m. ET**

**Webinar:
Innovative Solutions
for Smaller Utilities**

*Join us to learn about
unique and innovative solutions
to meet the needs of
smaller utilities.*

Featuring presenters:
Valentino Villa, Wade Yankey,
Robert Christy & Albert Robert
(Bob) Rubin

25th Anniversary 1997-2022

There's still time to register!

LUNCH & LEARN FRIDAY
February 24th, Noon to 1 pm EST

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**Sewage sludge disposal using Hydrothermal
Liquefaction**

At this month's Lunch and Learn webinar, you will get to know a little bit about NULIFE GreenTech (Essex-Chewar, Canada), a technology innovator in the biosolids space. Specifically, NULIFE GreenTech has a solution for sludge management using Hydrothermal Liquefaction (HTL). Although HTL processes have been around for a while, they have only recently been adapted and fine-tuned for wastewater biosolids. You will find out how NULIFE GreenTech got introduced to the clean water field, how the technology works, how it fits into the market for biosolids, ongoing investigations into PFAS removal with HTL, and NULIFE GreenTech's plans for scaling up its HTL technology.

Please join us to learn about hydrothermal liquefaction for wastewater solids!

Presented by: Jerry Kristian
and Michael Cota

NULIFE GreenTech
zero waste solutions

Mid-Atlantic Biosolids Association

PFAS

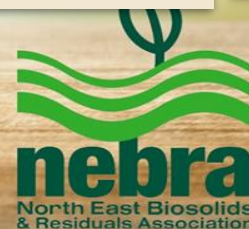
What we know, what we're learning, and what's to come

Webinar | Tuesday, March 15, 2022 | 12:00 PM - 1:30 PM EST

Ian Pepper
University of Arizona

Dorin Bogdan
AECOM

Mohamed Ateia Ibrahim
US Environmental Protection Agency



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PFAS: MABA & NEBRA's "All Hands On Deck" Approach

- Communications:** NEBRA and MABA stay abreast of the latest information within their respective regions and across the country, and share this information, as well as understanding related resources, with their members.



Proposed PFAS National Primary Drinking Water Regulation

On March 14, 2023, EPA announced the proposed National Primary Drinking Water Regulation (NPDWR) for six PFAS including perfluorooctanoic acid (PFOA), perfluorooctane sulfonic acid (PFOS), perfluorononanoic acid (PFNA), hexafluoropropylene oxide dimer acid (HFPO-DA, commonly known as GenX Chemicals), perfluorohexane sulfonic acid (PFHxS), and perfluorobutane sulfonic acid (PFBS). The proposed PFAS NPDWR does not require any actions until it is finalized. EPA anticipates finalizing the regulation by the end of 2023. EPA expects that if fully implemented, the rule will prevent thousands of deaths and reduce tens of thousands of serious PFAS-attributable illnesses.

EPA is requesting public comment on the proposed regulation. The public comment period will open following the proposed rule publishing in the Federal Register. Public comments can be provided at that time at www.regulations.gov under Docket ID: EPA-HQ-OHW-2022-0114. Information on submitting comments to EPA dockets can be found [here](https://www.epa.gov/dockets).

EPA will be holding two informational webinars about the proposed PFAS NPDWR on March 16, 2023, and March 29, 2023. The webinars will be similar, with each intended for specific audiences. Registration is required to attend. The webinar recordings and presentation materials will be made available following the webinars at this website. For questions related to the public webinars, contact PFASNECB@epa.gov.

- March 16, 2023** (2:00-3:00 pm Eastern Time) Webinar Registration: General Overview of Proposed PFAS NPDWR
- March 29, 2023** (2:00-3:00 pm Eastern Time) Webinar Registration: Technical Overview of Proposed PFAS NPDWR



North East Biosolids and Residuals Association (NEBRA) Recycled Organics: Tools for Sustainability

Thanks, WRF!!

Setuiki "KI" Yeo • 2nd
Hazen and Sawyer

As you may already be aware, the USEPA recently released proposed rules for PFAS, aka "forever chemicals". The associated document is quite overwhelming with almost 400 pages of information. Don't we ...see more

Understanding Proposed USEPA PFAS Regulations - 1 page

Understanding Proposed USEPA PFAS Regulations

What is USEPA's proposed rule?

Contaminant	Proposed MCL	Proposed MCLG	Proposed PFC
PFOA	10 ppt	0.1 ppt	400 ppt
PFOS	10 ppt	0.1 ppt	400 ppt
PFNA	10 ppt	0.1 ppt	400 ppt
PFHxS	10 ppt	0.1 ppt	400 ppt
PFBS	10 ppt	0.1 ppt	400 ppt

Key Points

- Links are required to use EPA's official website for information on PFAS.
- Public comments are required to be submitted to EPA's website.
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What is USEPA's regulation timeline?

Timeline showing key dates from 2023 to 2025:

- March 14, 2023: EPA announces proposed rule.
- March 16, 2023: General Overview Webinar.
- March 29, 2023: Technical Overview Webinar.
- June 2023: EPA publishes final rule.
- September 2023: EPA publishes final rule.
- December 2023: EPA publishes final rule.
- January 2024: EPA publishes final rule.
- February 2024: EPA publishes final rule.
- March 2024: EPA publishes final rule.
- April 2024: EPA publishes final rule.
- May 2024: EPA publishes final rule.
- June 2024: EPA publishes final rule.
- July 2024: EPA publishes final rule.
- August 2024: EPA publishes final rule.
- September 2024: EPA publishes final rule.
- October 2024: EPA publishes final rule.
- November 2024: EPA publishes final rule.
- December 2024: EPA publishes final rule.
- January 2025: EPA publishes final rule.
- February 2025: EPA publishes final rule.
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- August 2025: EPA publishes final rule.
- September 2025: EPA publishes final rule.
- October 2025: EPA publishes final rule.
- November 2025: EPA publishes final rule.
- December 2025: EPA publishes final rule.

What are the next steps?

- Monitoring plan: Develop a monitoring plan for the proposed rule.
- Compliance plan: Develop a compliance plan for the proposed rule.
- Communication plan: Develop a communication plan for the proposed rule.

How are utilities going to pay for this?

The State of Virginia has a law that requires utilities to pay for the cost of the proposed rule. The law is part of the state's effort to address the PFAS problem. The law is part of the state's effort to address the PFAS problem. The law is part of the state's effort to address the PFAS problem.



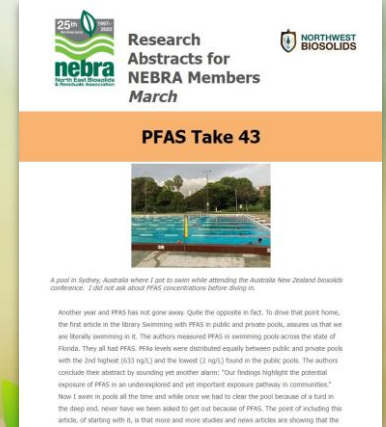
NEWS RELEASE

EPA Announces Listening Sessions on a Potential CERCLA Enforcement Discretion Policy for Addressing PFAS Contamination at Superfund Sites

Dates/Times (w/registration links):
 Tuesday, March 14, 2023, from 1:00 p.m. to 3:00 p.m. (Eastern Standard Time)
 Thursday, March 23, 2023, from 10:00 a.m. to noon (Eastern Standard Time)

Contact: EPA Press Office (press@epa.gov)

WASHINGTON (March 2, 2023)—The U.S. Environmental Protection Agency's (EPA) Office of Enforcement and Compliance Assurance (OECA) announces two public listening sessions to receive individual input related to concerns about potential liability under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as "Superfund." The input received will be reviewed and considered by EPA in drafting a CERCLA per- and polyfluoroalkyl substances (PFAS) enforcement discretion and settlement policy to the extent that PFAS cleanup enforcement efforts occur under CERCLA. There will be opportunities to provide verbal input during the public listening sessions and written input submissions in a separate form.



Research Abstracts for NEBRA Members March

PFAS Take 43

A pool in Sydney, Australia where I got to swim while attending the Australia New Zealand biosolids conference. I did not ask about PFAS concentrations before doing so.

Another year and PFAS has not gone away. Quite the opposite in fact. To show that just home, the first article in the library featuring PFAS in public and private pools, assures us that we are literally swimming in it. The authors measured PFAS in swimming pools across the state of Florida. They all had PFAS. PFAS levels were distributed equally between public and private pools with the 2nd highest (0.33 ng/L) and the lowest (2 ng/L) found in the public pools. The authors conclude their research by warning us another alarm: "Our findings highlight the potential exposure of PFAS in an underexposed and yet important exposure pathway in communities." Now I swim in pools all the time and while once we had to clear the pool because of a hard in the deep end, never have we been asked to get out because of PFAS. The point of including the article, of course with it, is that more and more studies and news articles are showing that the



PFAS: “All Hands On Deck”

What can YOU do?

- **Stay Informed:** Through organizations like NYWEA, NEWEA and especially MABA and NEBRA! They have compiled numerous resources for members to educate themselves and others about PFAS in biosolids
- **Talk about it:** Speak about the PFAS issue, as it impacts your operations, with local officials and your customers.
- **Get involved:** Consider submitting comments on the proposed interim guidance for PFAS in biosolids in New York State and exemptions from CERCLA liability for your utility. Become more involved in MABA and NEBRA!



Mid-Atlantic
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Thank you for your continued work in and support of the biosolids community!

- **Questions? Comments?** We look forward to hearing your questions and feedback to help us better serve you!



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