HB909_MPEN-SOPC_FAV.pdf
Uploaded by: Bonnie Raindrop
Position: FAV

February 26, 2025
Environment and transportation Committee
HB909: Sewage Sludge Utilization Permits - Per- and Polyfluoroalkyl Substances - Concentration Limits
Favorable

The Maryland Pesticide Education Network and its Smart on Pesticides Coalition (SOPC), comprised of 112 organizations and businesses, urges a favorable report on HB909 establishing needed testing requirements to identify PFAS concentrations in biosolids and setting enforceable limits to prevent further contamination. Our organization and our Smart on Pesticides Coalition are well-versed on the issue of PFAS and pesticides, which is the focus of another current Maryland bill.

We are very concerned about the use of PFAS-pesticides and PFAS-containing biosolids that are widely used on farms and in land care – both exacerbating a serious long-term health crisis related to the persistence of PFAS in people and our environment that may also result from their exposure to PFAS in their food grown on farms using PFAS-laden biosolids and PFAS-pesticides. PFAS exposure leads to a number of health effects, including causing certain cancers including prostate, breast, and reproductive cancers, is linked to developmental damage in infants and children, fertility and pregnancy problems, endocrine disruption, increased cholesterol, immune system problems, and interference with liver, thyroid, and pancreatic function. One thing PFAS toxicity does is to target the immune system, which means it can cause decreased antibody response to vaccines and exacerbates autoimmune disorders including asthma and ulcerative colitis.

PFAS-laden biosolids originate from wastewater treatment plants that do NOT breakdown or destroy PFAS compounds. They are retained in "wastewater residuals" and solids known as "sludge." Sludge containing PFAS from wastewater treatment plants is sent to disposal sites or other uses including application to land and use in gardening products. Applying biosolids to land creates hazards at farms and from farm and garden products. Some farms have been forced to discard food products or even cease farming when they found that their land was contaminated by PFAS from biosolids used on their land, as happened for over 60 farms in Maine.

The U.S. EPA warns that especially two kinds of PFAS chemicals can harm human health when found in biosolids at concentrations as low as 1 part per billion after the material has been disposed of or used as fertilizer. The agency determined the chemicals could leach from sewage sludge when land applied.

The EPA released its draft risk assessment in January 2025. It's the first comprehensive look at contamination from PFOA and PFOS in biosolids performed by the agency. The assessment finds that "there can be human health risks exceeding EPA's acceptable thresholds, sometimes by several orders of magnitude" from living near sites that have land applied contaminated biosolids or from using groundwater or products impacted by such a site.

PFAS contamination can exist for generations, even after biosolids are no longer used. For example, according to the Maine Organic Farmers and Gardeners Association, an organic farm in Maine was found to be contaminated because a previous owner had spread biosolids with PFAS. This happened even though organic farms are not allowed to use biosolids to become certified.

HB909 is essential to protect Maryland farms and gardens from PFAS contamination; please deliver a favorable report.

Bonnie Raindrop, Program Director, Maryland Pesticide Education Network & Smart on Pesticides Coalition
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HB0909 Favorable Brent Walls.pdf
Uploaded by: Brent Walls
Position: FAV

POTOMAC RIVERKEEPER NETWORK

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HB0909 - Sewage Sludge Utilization Permits - Per- and Polyfluoroalkyl Substances - Concentration Limits
Hearing date: Tuesday, February 24, 2025

Position: FAVORABLE

Dear members of the Health and Government Operations:

Potomac Riverkeeper Network: *Our mission is to protect the public's right to clean water in the Potomac and Shenandoah Rivers and their tributaries. We stop pollution to enhance the safety of our drinking water, protect healthy river habitats, and enhance public use and enjoyment.*

As the representative of the 3000 members of Potomac Riverkeeper Network, we respectfully request a FAVORABLE report on HB0909 which establishes a long-overdue limit on toxic PFAS found in biosolids (sewage sludge) that is used as fertilizer and spread on Maryland's farm fields.

The Problem

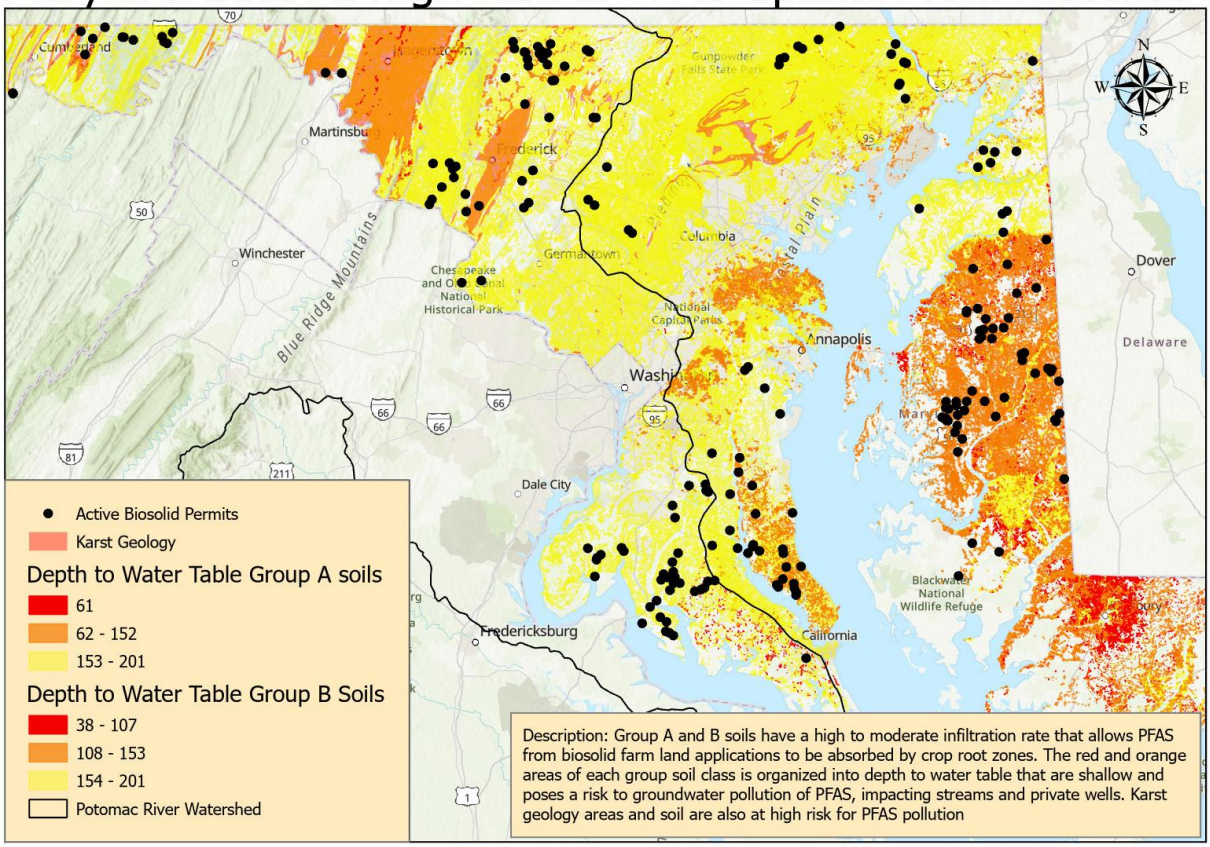
Biosolids are the solid waste, or sludge, produced during the treatment of municipal, human, and industrial wastewater. In Maryland, biosolids — including some from out-of-state facilities — are used as fertilizer on farms. However, these biosolids often contain pathogens and toxic substances, including PFAS chemicals, also known as "forever chemicals." While existing Maryland regulations prohibit immediate grazing, raw crop consumption, and public access to treated fields, these measures fall short when biosolids contain PFOS and PFOA, two highly toxic PFAS compounds that persist in the environment and pose significant risks to human and ecological health. During treatment, these chemicals concentrate in biosolids, which are then spread on agricultural fields.

The Risk to Maryland Water Resources and Human Health

Biosolids containing PFAS run off farm fields and filter into groundwater, contaminating drinking water sources. When biosolids are applied to farm fields, PFAS pollutants are not bound to soils and end up leaching through the soil and into the sub-surface water. The depth to water values for all soils in Maryland are updated annually and the following map highlights the soils in Maryland that have a higher risk of PFAS contamination impacting the groundwater; which in turn can contaminate private wells that are on or surrounding the farms where biosolids are applied. The map below also locates the existing sites where land applied biosolids. The red and dark orange indicate high risk areas that fall mostly on the Eastern Shore, but also on the lower Potomac River region along with areas in Frederick County. These are primarily rural areas with a dominant agricultural land use.

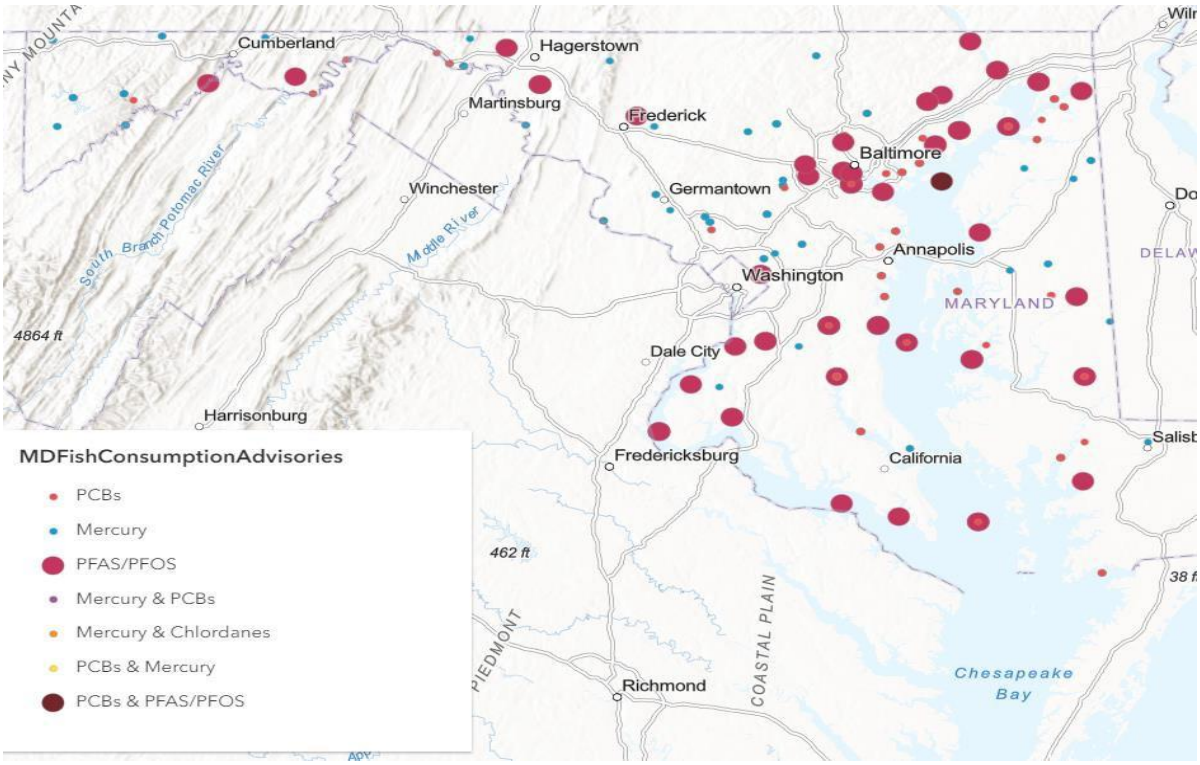
PFAS pollutants build up in soils after repeated biosolid applications, which means PFAS is available for long periods after application to leach into groundwater and run off into local streams. PFAS pollutants can also be taken up by leafy plants such as soybeans and grasses used for pasture which research shows can impact farm products and pasture grazed animals.

Maryland Soils At High Risk to PFAS Uptake From Biosolids



PFAS Puts Maryland's Fisheries at Risk

PFAS is known to bioaccumulates in fish and wildlife, increasing the risk to hunters and fisherman and their families by eating contaminated meat. In 2023, Maryland Department of the Environment issued fish consumption advisories for several species at 38 locations across the State of Maryland, with 80% of these sites located in agricultural regions. The advisories are also in areas where communities' subsistence fish to feed their families.



In 2024, Dr. Vicki Blazer with USGS published a paper on the testing of small mouth bass at several river systems in the Chesapeake Bay, including Maryland. The results of the study identified two dominant sources of PFAS in agricultural areas, pesticides and biosolids. The chart below compares the land use at 4 of the locations. The second slide shows the levels of 4 PFAS compounds found in small mouth bass at each location with PFOS having higher concentrations.

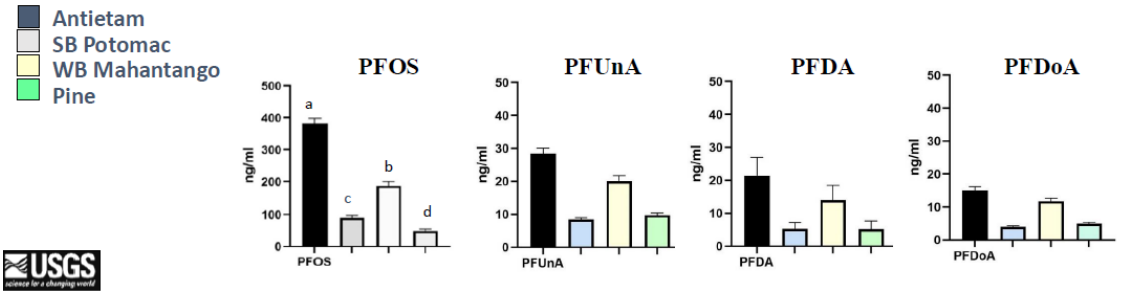
Land-use Comparison – Upstream Catchment

Site	Drainage area (km²)	Percent Agriculture	Percent Pasture	Percent Crop	Percent Forest	Percent Developed
Antietam Creek	730	49	21	28	32	17
South Branch Potomac River	3,150	14	13	1	81	3
West Branch Mahantango Creek	218	32	12	20	60	7
Pine Creek	2,437	9	8	1	84	4

USGS

Initial PFAS Analyses - 2018

- **Used archived plasma from smallmouth bass collected at four sites for analyses of 13 PFAS**
- **Four PFAS were found in every sample with PFOS having the highest concentrations**



USGS

[video presentation](#) | [powerpoint presentation](#)

EPA Actions on PFAS in Biosolids

Since 2003, EPA has known that biosolids can contain alarming levels of PFAS. In a 2018 report, the Environmental Protection Agency's (EPA) Inspector General accused the agency of failing to properly regulate biosolids. However, it wasn't until January 2025 that the EPA's draft Sewage Sludge Risk Assessment was released. It highlights the severe risks posed by PFOS and PFOA levels as low as 1–5 parts per billion (ppb), linking exposure to contaminated water, wildlife, and crops to serious health issues, including immune dysfunction, thyroid disease, and cancer.

In April of 2024, the EPA issued national drinking water limits for PFOA and PFOS at 4 parts per trillion (ppt) each. There are no other pollutants that are regulated by EPA or any state with limits lower or even close to 4 ppt. This means that the potential for PFOA and PFOS to cause harm is severe and must have lower limits. Biosolids are measured in parts per billion, which is 1000 times greater than parts per trillion. The reason for this difference is that biosolids are in a semi-solid form tied to a mix of solid and aqueous. When biosolids are applied to a farm field and is incorporated into the soil, weather events promote leaching into the groundwater and into streams from stormwater run off. Depending on the concentration of PFOS and PFOA in the biosolids, the leaching concentration is well above the 4 ppt drinking water limit. However, we do not usually drink straight from the river and the river volume tends to dilute the levels. But the repeated application of biosolids and the cumulative impact of several farm sites leaching PFAS increases the PFAS levels contaminating our fish, our drinking water source and the foods we grow. That is why the EPA draft Sewage Sludge Risk assessment sets the human health hazard limit to 1 ppb. The EPA limit is backed but robust scientific research, rather than statistical assessments of the present concentration of PFAS in biosolids that states like Michigan use as a basis for their PFAS limits in biosolids. In August of 2024, MDE issued recommendations for limits in biosolids for PFOA and PFOS at 100 ppb. This concentration limit was taken from Michigan's regulations, which has no scientific basis for human health exposure.

What the Bills Does as Written

- Requires biosolids originating from multiple plants and are commingled at a storage facility, will be tested 14 days prior to being applied to farmland. This does not include biosolids directly from a wastewater plant to a farm for application.
- Establishes a limit for PFOS and PFOA in biosolids at 1ppb.

Proposed Amendments

There has been considerable communication between bill sponsors, advocates, MDE and opposition to develop a workable solution to this issue. It is apparent that all parties recognize that we need to protect our resources from further unchecked contamination. All parties are also interested in developing a transition plan that reduces the burden on wastewater systems and the costs to rate payers. However, we must consider the costs and liabilities to farmers taking PFAS contaminated biosolids that may threaten their product and the groundwater their communities use for drinking through private wells. There are no protections or funds available to communities with private wells that may be contaminated, like there are for public water sources. We need a solution that works. The following amendments are being considered:

MDE's proposed amendments:

1. Revise contaminant limit from 1part per billion to 100ppb (begins 10/1/25) **–All Agreed**
2. MDE will adopt regulations to establish concentration limits as close to 1ppb as technologically and economically feasible to 1ppb (On or before 10/1/2028). **Agreed, but see below**
3. If the Department fails to adopt the regs above by 10/1/28, the limit goes to 1ppb (begins 10/1/28) **Agreed, but see below**

Advocates' Proposed Amendments to MDE Amendments:

1. Revise contaminant limit from 1ppb to 100ppb for the total of PFOS and PFOA (PFOS + PFOA - This distinction was offered by MDE)
2. Concentration limits can not be more than 25 ppb PFOS and 10 ppb PFOA when adopting limits on or before 10/1/2028.

Farmers and watermen are sounding the alarm and filing lawsuits. Their fear is the liability of PFAS pollution contaminating their well and their neighbors drinking water. Farmers are concerned that the products they produce are contaminated with PFAS and may cause harm to the communities they provide food for. We should act now. Maryland can't wait for the EPA and must take stronger action to safeguard its drinking water sources, environment and the health of our farmers and communities.

We urge this committee to issue a favorable report on HB0909.

Sincerely,

Brent Walls
Upper Potomac Riverkeeper
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In Favor of HB909.pdf
Uploaded by: Carole Trippe
Position: FAV

Testimony in Support of HB0909
Sewage Sludge Utilization Permits – Per-and Polyfluoroalkyl Substances – Concentration Limits
House Environment and Transportation Committee 26 February 2025
Submitted on 24 February 2025 before 6 pm

To the Chair and Committee Members,

My name is Carole Trippe. I live in Chestertown, MD near the Chester River on the Eastern Shore. I urge a favorable report on HB0909. Thank you in advance for your consideration of support.

Biosolids containing PFAS – persistent and harmful "forever chemicals" – pose a serious risk to public health and the environment. When spread on farmland, these chemicals pollute soil, groundwater, crops, and wildlife, endangering communities, especially in rural areas like where I live on the Eastern Shore. To address this crisis, **Maryland must implement strict PFAS limits in biosolids and mandate testing before land application** to protect drinking water, food supplies, and ecosystems from further contamination.

This Bill will:

- Require testing of biosolids for PFAS contamination at least 14 days before land application
- Require the Maryland Department of the Environment to set health-based concentration limits for PFOS and PFOA in biosolids applied to agricultural land
- Restrict the application of biosolids with PFOS and PFOA concentrations higher than the limits.

By testing biosolids for PFAS and restricting application based on human and environmental health-based limits, Maryland will target biosolids disposal while protecting public health and the environment.

I **support Bill HB0909** because it proactively protects Maryland's drinking water, food supply, and environment from harmful PFAS contamination**, and will help to ensure our future generation's health and well-being.**

Thank you for your consideration, and I look to this committee to give HB090 a **favorable** report.

Sincerely,
Carole Trippe
caroletrippe@gmail.com
537 High Street
Chestertown, MD 21620

Stein Testimony HB 909.pdf
Uploaded by: Dana Stein
Position: FAV

DANA M. STEIN
Legislative District 11B
Baltimore County

SPEAKER PRO TEM

Environment and Transportation Committee

Subcommittees

Chair, Environment

Natural Resources, Agriculture and Open Space

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Delegate Dana Stein's Testimony in Support of
HB909 – Sewage Sludge Utilization Permits – Per- and Polyfluoroalkyl Substances – Concentration Limits

HB 909 builds on the work this Committee has already done on PFAS, a class of toxic chemicals that cause significant health risks in people who are exposed, including: higher cholesterol, impacts on liver enzymes, decreased vaccine effectiveness in children, increased risk of high blood pressure, increased risk of many cancers, and decreased infant birth weight.

In the past four years, the Maryland General Assembly has

- banned the use of PFAS in cosmetics[1], firefighting foam, food packaging, rugs and carpets[2];
- required the Maryland Department of the Environment (MDE) to prepare a PFAS Action Plan, including minimizing Marylanders' exposure to PFAS and identifying, assessing, and cleaning up historical PFAS in the environment[3]; and,
- required MDE to identify significant industrial users of PFAS, develop monitoring and testing protocols for those significant industrial users, develop PFAS action levels for addressing PFAS contamination from industrial discharge for pretreatment permits, and develop mitigation plans for reducing the presence of PFAS in industrial discharge.[4]

But, PFAS chemicals are contained in another, perhaps more damaging, use: the biosolids resulting from wastewater treatment plant (WWTP) operations that are sold to farmers to apply as fertilizer on their crops. By applying these biosolids, farmers are inadvertently poisoning their crops and livestock and their fields. Remember, these are "forever chemicals."

And, from the fields, these chemicals run off into local streams, affecting fish and wildlife, and into the groundwater, poisoning drinking water wells.

HB 909 would require testing prior to these biosolids being applied and would set a limit of what level of PFOS and PFOA (two of the PFAS class that are widely known to be the most toxic) can be in the biosolids that are land applied.

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[1] HB 643 (2021)
[2] SB 273/HB 275 (2022)
[3] *Id.*
[4] SB 956/HB 1153 (2024)

Advocates and MDE have been working closely for several weeks on amendments to this legislation that would provide WWTPs more time to make the changes needed to reduce PFAS from biosolids. There is recognition that MDE needs the latitude to regulate the process, rather than passing legislation that is too prescriptive.

The most important goal, however, in recognition of the dangers of PFAS, is to ensure that final limits are not set above 25 parts per billion for PFOS or 10 parts per billion for PFOA. These numbers are in line with the statistical analysis that MDE has done.

I'm hoping that MDE and the bill advocates will be able to resolve remaining issues quickly and provide amendments to this bill that works for stakeholders.

For the foregoing reasons, I respectfully request your favorable report on HB 909.

HB909 Testimony Sewage Sludge PFAS Limits for agri

Uploaded by: Debbie Cohn

Position: FAV

Committee: **Environment and Transportation**
Testimony on: **HB909 – Sewage Sludge Utilization Permits – Per- and Polyfluoroalkyl Substances- Concentration Limits**
Submitting: **Deborah A. Cohn**
Position: **Favorable**
Hearing Date: **February 12, 2025**

Dear Chair and Committee Members:

Thank you for allowing my testimony today in support of HB909. I have lived in Montgomery County since 1986.

Many years ago I started purchasing organic foods, particularly those that were locally grown and cultivated with regenerative farming practices. I made this choice primarily to provide healthier foods for my family and to support more sustainable farming practices.

Recently, I learned that sewage sludge was being promoted as a soil amendment on agricultural land. I was appalled. Sewage sludge, as opposed to composted food scraps, typically has high level of PFOS and PFOA. These "forever chemicals" are already ubiquitous in our bodies. This clearly is not good for our long-term health, including cognitive function.

HB909 is carefully drafted to ensure that any sewage sludge applied to agricultural fields in Maryland in the future need to be reduced to the lowest of three measurable levels measured reasonably close to the time at which the product will be applied to agricultural land.

Passage of this law will promote purchase of produce and other foods grown in Maryland since purchasers will know that the agricultural fields are, going forward, protected to the extent currently recommended, from additional accumulation of PFOS and PFOA.

To protect our health and increase the value of locally grown food, I urge this Committee to issue a FAVORABLE report in committee.

Thank you.

Chesapeake Legal Alliance - Favorable - HB 909.pdf
Uploaded by: Evan Isaacson
Position: FAV

CHESAPEAKE
LEGAL ALLIANCE

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Support for House Bill 909

Dear Chairman Korman and Members of the Committee:

The Chesapeake Legal Alliance strongly supports House Bill 909. This Committee has become well-acquainted in recent years with the unique public health threat posed by Per- and polyfluoroalkyl substances (PFAS). However, the issue of sewage sludge regulation is a topic that has received less attention in recent years from this Committee.

Ten to twenty years ago, as land application of sludge from sewage treatment plants in Maryland began rapidly expanding to become the dominant form of disposal for this large waste stream, the number of bills to regulate land application increased correspondingly. According to the Department of Legislative Services, in 2006, about 30% of sewage sludge generated in Maryland was applied to agricultural fields. By 2009, that figure jumped to 50%, and by 2018, 88% of sewage sludge was reportedly applied to our farmland.

Perhaps not surprisingly, the response to this trend from members of the General Assembly was robust. A review of DLS's legislative database shows that one or more bills were filed every year from 2006 to 2014 to regulate, restrict, or ban the disposal of sewage sludge via land application on agricultural fields. As one would expect, these bills were sponsored and vigorously pursued by the representatives of Maryland's agricultural communities, especially the Eastern Shore and Southern Maryland, including entire county delegations.

Although the vast majority of farms in Maryland do not accept biosolids, there are dozens of sites throughout the state that do. The transfer of residuals from human and industrial waste into these communities naturally provoked concerns, including the potential for constituents in these wastes to contaminate local water, soil, and air. What was not understood by communities or their legislative representatives a decade ago was the extent to which hazardous and persistent chemicals were present in the waste and building up in the soils. PFAS was simply not on the mind of the public or policymakers then.

But we now understand that this class of chemical, popularly known as "forever chemicals," have managed to jump from the laboratory to every reach of the planet and every part of the human body. And what scientists and regulators are learning more about each year is *how* this contamination happens. We now know that the land application of sewage sludge on agricultural fields is one of several major pathways for human exposure globally, either directly in the areas of application or indirectly through contamination of drinking water (especially well water) or the food system.

As we learn more about the sources, exposure pathways, and effects of PFAS, policymakers and regulators have responded. Bans and restrictions on land application of PFAS-contaminated sludge are beginning to proliferate in states (including Maine, Michigan, Minnesota, Connecticut) and an even larger number

are taking other actions like recommended limits or reduced application rates, increased monitoring, or notification to farmers and surrounding communities when higher levels of PFAS are detected.

For its part, the U.S. Environmental Protection Agency has just released its Draft Sewage Sludge Risk Assessment for two PFAS chemicals (PFOS and PFOA) in January 2025. While that report remains in draft form, the science behind it is robust and the conclusion is concerning. This EPA document examined the various human exposure pathways, both via direct contact on the farm and indirect contact with the PFAS exported from the application site, and quantified cancer risk from those exposure levels. The risk assessment then generated the recommended limit of 1 part per billion in sludge. Importantly, the assessment detailed the many reasons why "[t]he draft risk calculations are not conservative estimates."

Sewage sludge has for decades been subject to "cradle to grave" regulation by State and federal law, governing the generation, transport, storage, and ultimate disposal of these wastes. But while this regulatory framework is designed to control certain contaminants in land applied sludge, especially pathogens, most toxic chemicals are simply not covered under this regime; certainly not the most difficult to treat chemicals like PFAS.

Thankfully, the General Assembly jump started the effort to keep PFAS out of both the liquid and solid waste coming from our municipal wastewater treatment plants last year with the passage of Chapters 556 and 557 of 2024. When fully implemented – and if adequately enforced – these new statutory requirements will lower levels of PFAS in municipal sewage sludge in certain facilities through greater regulation of the upstream industrial facilities that send their contaminated wastewater to those municipal sewage treatment facilities. Additionally, as public and private sector efforts to reduce or eliminate PFAS in consumer products continue to develop, that will further reduce the contamination of sewage sludge slowly but surely over time. Eventually, we may hopefully reach the point where sludge from any and all sewage treatment facilities is safe enough to be land applied without the risk of elevated PFAS exposure.

For now, our rural communities and waterways remain in need of greater restrictions on PFAS in biosolids and a return to greater legislative scrutiny of this particular waste stream. For these and many other reasons we support House Bill 909.

For more information, you may reach Evan Isaacson at evan@chesapeakelegal.org.

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HB0909 Testimony PFAS.pdf
Uploaded by: Ginger Cushing
Position: FAV

Testimony in Support of HB0909
Sewage Sludge Utilization Permits - Per- and Polyfluoroalkyl Substances - Concentration Limits
House Environment and Transportation Committee February 26, 2025
Submitted on February 24, 2025 by 3:00PM

To Chair Korman, Delegate Stein and Committee Members,

My name is Ginger Cushing. I live in Centreville, MD, with a home on the Corsica River within the Chester River watershed. I urge a **favorable** report on HB0909.

My 30-year career as a chemist has primarily focused on developing flexible packaging solutions for food applications. Packaging chemistry has heavily relied on PFAS for various purposes. For instance, PFAS are employed to enhance grease resistance in common products like pet food bags, fast food burger wraps, and deli meat paper. The packaging industry is well-informed about the health concerns associated with PFAS, as they accumulate in our bodies through exposure. Despite ongoing research to identify alternatives, PFAS persist in our environment.

This bill aligns with federal, state, and Maryland-specific initiatives aimed at addressing the infiltration of hazardous PFAS "forever" chemicals into Maryland's drinking water and food supply. PFAS enter wastewater treatment plants (WWTPs) from various sources, including industrial, landfill, and household waste, ultimately contaminating biosolids. When spread on farmland, these chemicals pollute soil, groundwater, crops, and wildlife.

Maryland has made remarkable progress in replacing its WWTPs with newer ones that effectively treat nitrogen and phosphorus pollutants. These upgrades were undertaken even before the risks associated with PFAS contamination were fully recognized. However, ongoing and future upgrades must now consider and address these newly identified pollutants. For instance, the planning stages for a WWTP upgrade in Centreville, Maryland, highlight this point. While these plants will incur substantial costs, advancements in technology suggest that the benefits of addressing these risks now are more advantageous than the potential expenses of future remediation. I wholeheartedly support this bill because it presents an opportunity to compel planners to minimize PFAS contaminants by establishing stricter upper limits. The timing of this action is in our favor, as it presents a chance to make a significant positive impact and minimize future cleanup costs.

Thank you for the opportunity to express my views. I look to this committee to give HB0909 a **favorable** report.

Sincerely,

Ginger Cushing
Centreville, MD 21617
GingerCushing@hotmail.com

JCR_HB0909_24Feb2025.pdf
Uploaded by: Janet Ruhl
Position: FAV

Testimony in Support of HB0909/SB0732
Sewage Sludge Utilization Permits -
Per- and Polyfluoroalkyl Substances - Concentration Limits
House Environment and Transportation Committee 26 February 2025
Submitted on 24 February 2025 by 8:30 am

To the Chair and Committee Members,

My name is Janet Ruhl. I live in Galena, MD, on the Sassafras River, and I urge a **favorable** report on HB0909/SB0732. Thank you in advance for your consideration of support.

Biosolids are a valuable agricultural resource for soil conditioning and nutrient content. However, the sewage sludge from which biosolids are derived, may contain pollutants and disease-causing organisms (pathogens). Sewage sludge must to treated to meet state and federal regulations to protects human and environmental health. Limits are in place for several heavy metals, PCB, and pathogens.

With the growing knowledge regarding long-term toxicity of Per- and Polyfluoroalkyl Substances (PFAS), in particular perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA), Maryland must implement limits for individual PFAS in biosolids in line with the limits established by the EPA, mandate testing for individual PFAS before land application, and restrict application of biosolids depending upon the concentrations of the individual PFAS found. These actions are needed to better manage applications of biosolids to protect drinking water, food supplies, and ecosystems from further contamination by harmful PFAS.

This Bill will:

- Require the Maryland Department of the Environment to set health-based concentration limits for PFOS and PFOA in biosolids applied to agricultural land
- Require testing of biosolids for PFAS contamination at least 14 days before land application.
- Restrict the application of biosolids with PFOS and PFOA concentrations higher than the limits.

By testing biosolids for PFAS and restricting application based on human and environmental health-based limits, Maryland will target biosolids disposal while protecting public health and the environment.

I **support** Bill HB0909/SB0732 which focuses on testing biosolids and restricting application based on the concentrations of individual PFAS. This bill is a logical extension to protecting agricultural lands from contamination with toxic heavy metals and disease-causing organisms (pathogens). With each new scientific discovery, we need to review and, potentially, adjust our practices.

Thank you for your consideration, and I look to this committee to give HB0909/SB0732 a **favorable** report.

Sincerely,
Janet C. Ruhl

House Testimony for Bio_Solids HB0909.pdf
Uploaded by: John Thacker
Position: FAV

Testimony in Support of HB0909
Sewage Sludge Utilization Permits - Per- and Polyfluoroalkyl Substances - Concentration Limits

House Environment and Transportation Committee HEARING February 26, 2025
Submitted on the 24th day of February 2025 at 12:00 pm

To Chair Korman and Committee Members,

My name is John Thacker. I own a home on Island Creek, a tributary of the Choptank River in Talbot County, and I urge a favorable report on SB732.

HB0909, Sewage Sludge Utilization Permits - Per- and Polyfluoroalkyl Substances - Concentration Limits Bill, will serve to restrict the application of sewage sludge (Bio-Solids) containing excess PFAS to farmland as fertilizer, and thereby lessen the load of PFAS into Maryland's groundwater, and the Chesapeake Bay and its tributaries.

I **support** this bill because my home is in the critical area on Island Creek, with numerous farm fields in immediate proximity. My well water is drawn from a 200-foot deep groundwater well, and I fish and crab in Island Creek. Without the appropriate restrictions contemplated by this bill, there would remain a risk that the ground water and tidal waters will become increasing contaminated with PFAS, adversely impacting my family's and my neighbors' health. HB0909 smartly addresses these concerns without overburdening agricultural interests.

Thank you for your consideration, and I respectfully ask this committee to give HB0909 a **favorable** report.

Sincerely,
John Thacker
4821 Montgomery Lane, #705
Bethesda, MD 20814
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630-885-0130

In Talbot County:
28116 Brick Row Dr.
Oxford MD 21654

HB909.pdf
Uploaded by: Karen Holcomb
Position: FAV

Testimony in Support of HB 909
Environment and Transportation Committee February 26, 2025
Submitted on February 24, 2025

To Chair Korman and Committee Members,

My name is Karen Holcomb. I live in Chestertown, Maryland , with property on the banks of Fairlee Creek and in the midst of farm lands , and I urge a favorable report on HB909. Thank you in advance for your consideration of support of this bill.

As science advances, we know that PFAS in biosolids contaminates soil, ground water, surface, fish and wildlife in and around application sites. This growing contamination threatens the health of Maryland's rural communities by polluting drinking water and food supplies.

Farmers and waste management treatment facilities aren't to blame - they are caught in a system that fails to address the toxic legacy of PFAS chemicals. By implementing these safeguards, we can protect Maryland's food and water resources and endure a healthier future for all. It is time to act - our communities and our communities depend upon it.

MARYLAND PFAS & SEWAGE SLUDGE BILL

Maryland applies nearly 90% of its biosolids to agricultural land, but biosolids containing PFAS — persistent and harmful "forever chemicals"— pose a serious risk to public health and the environment. PFAS enter wastewater treatment plants from industrial, landfill, and household sources, ultimately contaminating biosolids. When spread on farmland, these chemicals pollute soil, groundwater, crops, and wildlife, endangering communities, especially in rural areas like the Eastern Shore. **To address this crisis, Maryland must implement strict PFAS limits in biosolids and mandate testing before land application to protect drinking water, food supplies, and ecosystems from further contamination.**

THIS BILL WILL:

- Help prevent the spread of harmful PFAS chemicals into Maryland's soil, water, and food supply by *requiring testing of biosolids for PFAS contamination at least 14 days before land application.*
- Protect public health and the environment by *requiring the Maryland Department of the Environment to set health-based concentration limits for PFOS and PFOA in biosolids applied to agricultural land.*

This Bill aligns with federal, state, and Maryland-specific initiatives aimed at addressing PFAS contamination. It is consistent with federal actions such as the designation of PFOS and PFOA as hazardous substances under CERCLA (2024), the establishment of maximum contaminant levels for PFAS in drinking water (2024), and the EPA's Draft Risk Assessment on PFAS in biosolids (2025). It also mirrors initiatives in nearly a dozen states that have implemented or proposed PFAS monitoring requirements and restrictions on biosolids. Additionally, it builds on Maryland's legislative efforts, including the George "Walter" Taylor Act (2022) and the Protecting State Waters from PFAS Pollution Act (2024), as well as the Maryland Department of the Environment's PFAS Action Plan and biosolids testing initiatives.

Allowing biosolids with PFOS and PFOA above 1 ppb poses long-term health risks and will require costly remediation efforts. This bill proactively protects Maryland's drinking water, food supply, and environment from harmful PFAS contamination, ensuring public health and reducing future cleanup costs.

There are 98 biosolids land application permits covering over 2,700 acres of farmland in the Maryland — 28% of the permits covering 45% of the permitted land is on the Eastern Shore.

POTENTIAL IMPACTS

- Prevent PFAS-contaminated biosolids from contaminating Maryland's food, water, land, fish, and wildlife.
- Know exactly the amount and type of PFAS in biosolids prior to land application.
- Save the state's funding needed in the future for drinking water protection and environmental cleanup.

WHO WE ARE

ShoreRivers protects Maryland's Eastern Shore waterways through science-based advocacy, restoration, education, and engagement.

As a leading voice for water quality, our advocacy work is fundamental to creating system-wide change to abate pollution and protect our rivers and creeks.

CONTACT
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SHORERIVERS

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Uploaded by: Matt Stegman
Position: FAV

CHESAPEAKE BAY FOUNDATION

Environmental Protection and Restoration
Environmental Education

House Bill 909

Sewage Sludge Utilization Permits – Per– and Polyfluoroalkyl Substances – Concentration Limits

Date: February 26, 2025
To: Environment & Transportation Committee

Position: **FAVORABLE**
From: Gussie Maguire, MD Staff Scientist

Chesapeake Bay Foundation (CBF) **SUPPORTS** House Bill 909, which sets limits on the concentration of perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) in sewage sludge (also known as biosolids) to be applied to agricultural fields, not to exceed 1 part per billion (ppb). HB 909 draws from the latest research and guidance on PFAS chemicals to protect Maryland's farmers and their customers from forever chemicals, and limits the probability of harmful runoff reaching Maryland's rivers, streams, and the Chesapeake Bay.

PFOS and PFOA are members of the per- and polyfluoroalkyl substances family, also known as "forever chemicals". These persistent chemicals accumulate in soil, groundwater, and living organisms; they are known to have short- and long-term harmful effects on humans and animals at very low concentrations. Ordinary wastewater treatment technologies cannot remove PFAS chemicals, so they become concentrated in biosolids. Once applied to agricultural fields, the chemicals can be taken up by crops, bioaccumulated in grazing animals, percolated into groundwater, or carried by runoff into nearby streams and rivers. Many of Maryland's waterways already have some level of fish consumption advisory due to PFOS and PFOA contamination- limiting their concentration in biosolids reduces another pathway by which these harmful chemicals enter the environment and pose a risk to human health.

HB 909 also sets a time frame for testing, which responds to the potential for comingling of different sources of biosolids and their contaminants. PFAS chemicals, including PFOS and PFOA, have "precursors", or related chemicals that can recombine and transform into PFOS and PFOA, which would increase the concentration of those chemicals in the comingled biosolids batches. Requiring that biosolids be tested 14 days prior to application helps ensure that the measured concentration is close to what will actually be present during application.

Farms throughout the United States have already paid the price for under-regulation of PFAS chemicals in biosolids, experiencing poisoned dairy herds and soil so thoroughly contaminated that vegetables grown on site cannot be safely consumed for generations to come. HB 909 sets a scientifically-informed limit on these dangerous chemicals and will help protect the Chesapeake Bay from polluted runoff.

CBF urges the Committee's FAVORABLE report on HB 909.

For more information, please contact Matt Stegman, Maryland Staff Attorney, at mstegman@cbf.org.

Maryland Office ▪ Philip Merrill Environmental Center ▪ 6 Herndon Avenue ▪ Annapolis ▪ Maryland ▪ 21403

Just Zero - Testimony in Support of HB 909 (Feb. 2
Uploaded by: Peter Blair
Position: FAV

ADVANCING COMMUNITY-CENTERED ZERO WASTE SOLUTIONS

February 26, 2025

Chair Korman
Environment and Transportation Committee
Maryland House of Delegates
Room 251
House Office Building
Annapolis, Maryland 21401

RE: Testimony in Support of HB 909: Sewage Sludge Utilization Permits – PFAS Concentration Limits.

Dear Chair Korman, Vice Chair Boyce, and Members of the Maryland Environment and Transportation Committee:

Thank you for the opportunity to provide testimony on HB 909. Just Zero supports this bill and urges a favorable report from the committee.

Just Zero is a national environmental non-profit advocacy organization that works to implement just and equitable solutions to climate-damaging and toxic production, consumption, and waste disposal practices. We believe that all people deserve Zero Waste solutions with zero climate-damaging emissions and zero toxic exposures.

HB 909 addresses a significant threat to public health and the environment that has been ignored for decades – contamination of farmland, soil, and water from the land application of sewage sludge.[1] Allowing sludge to be spread on land as a "fertilizer" is a toxic practice that Maryland must move to end once and for all. Failing to enact this law would amount to failing to protect Maryland farmers, residents, and the environment from the known impacts associated with exposure to toxic forever chemicals.

I. Sewage Sludge is a Noxious By-Product of Wastewater Treatment.

It is important to understand that sewage sludge is not a beneficial fertilizer. A lot of different kinds of waste go into the sewer. Industrial wastes, hospital wastes, commercial wastes, landfill leachate, human waste, storm water runoff, and every other kind of hazardous, toxic, and biological waste material that goes down the drain. This material is then sent to a wastewater treatment facility ("WWTF") where it is treated to meet water quality standards and then discharged into rivers, lakes, and oceans. A noxious by-product of the treatment process is sewage sludge, a mud-like material containing hundreds of known toxics. While some of these

[1] Sewage sludge is sometimes interchangeably called "sludge" and "biosolids." For this testimony, we will be using the term "sewage sludge" and "sludge."

pollutants are discharged via the effluent, the majority remains in the sludge.[2] Common toxics found in sewage sludge include heavy metals, microplastics, and synthetic chemicals such as per-and-polyfluoroalkyl substances ("PFAS"). When sludge is spread on land, it allows these toxic materials to enter the environment. Once in the environment, remediation is extremely challenging.

II. Sewage Sludge Contains High Levels of PFAS Which Are Released into the Environment When Land Applied

PFAS, often called forever chemicals, are a group of approximately 15,000 synthetic chemicals.[3] PFAS compounds are known to be toxic in concentrations as small as parts per trillion.[4] These chemicals are associated with cancer and have been linked to growth, learning, and behavioral problems in infants and children; fertility and pregnancy problems, including preeclampsia; interference with natural human hormones; increased cholesterol; immune system problems; and, interference with liver, thyroid, and pancreatic function.[5] PFAS have also been linked to increases in testicular and kidney cancer in human adults.[6]

PFAS enter WWTFs from a variety of commercial and industrial sources such as wastewater from metal finishers and other manufacturing plants, electronic industries, and landfill leachate.[7] WWTFs are not designed or equipped to remove or destroy these compounds. As a result, effluent containing these chemicals is discharged into the receiving waters where it can bioaccumulate and threaten the environment and public health. However, a significant portion of the PFAS is transferred to the sludge.[8]

Numerous studies have shown extremely high levels of PFAS in sludge. For instance, since August 2020, the Massachusetts Department of Environmental Protection has required quarterly monitoring of PFAS in sludge generated at the state's largest WWTF. For two of the most concerning PFAS compounds, PFOS and PFOA, the combined average concentration is 15,000 parts per trillion.[9] Land applying sludge creates a pathway for PFAS contamination in soil and water.[10] A 2022 study showed PFAS from land application of sewage sludge migrating as far as

[2] Lenka, S.P., Kah, M., Padhye, L.P., 2021. A review of the occurrence, transformation, and removal of poly- and perfluoroalkyl substances (PFAS) in wastewater treatment plants. Water Res. 199, 117187.
[3] U.S. Environmental Protection Agency, CompTox Chemicals Dashboard.
[4] U.S. Dep't of Health & Human Serv., Agency for Toxic Substances and Disease Registry, Toxicological Profile For Perfluoroalkyls, Agency For Toxic Substances And Disease Registry, at 5–6,
[5] *Id.*
[6] *Id.*
[7] Heidler, J., & Halden, R. U. (2008). Meta-analysis of mass balances examining chemical fate during wastewater treatment. Environmental Science & Technology, 42(17), 6324–6332.
[8] Supra, note 2.
[9] Barbara Moran, Our Sewage Sludge Often Becomes Fertilizer. Problem Is, It's Tainted with PFAS, WBUR. (Mar. 30, 2023).
[10] Scearce, A. E., Goossen, C. P., Schattman, R. E., Mallory, E. B., & MacRae, J. D. (2023). Linking drivers of plant per- and polyfluoroalkyl substance (PFAS) uptake to agricultural land management decisions. Biointerphases, 18(4).

17 meters to underlying groundwater.[11] Once spread, the PFAS that does not move to water can remain in soil for years, adding to the PFAS burden from multiple land applications.[12]

III. Land Application of Sewage Sludge is Causing Widespread PFAS Contamination Across the U.S.

In 2019, reports regarding PFAS contamination at Stoneridge Farm in Maine became public. In response, the Maine Department of Environmental Protection ("Maine DEP") halted the spread of sludge until it was tested for three types of PFAS (PFOA, PFOS, and PFBS).[13] When Maine DEP began testing sludge for those three PFAS, over 95% of the sludge tested exceeded the Department's screening levels.[14] The results of the testing coincided with additional findings of extremely high levels of PFAS contamination in areas where sludge application was routine.[15] Importantly, PFAS contamination was not limited to farmland and soil. Over 200 wells and water sources have been identified as contaminated.[16] Additionally a "do not eat" advisory was issued for deer harvested in the Fort Fairfield area where sludge was previously land applied.[17]

The widespread contamination sparked action, and Maine became the first state to ban the spreading of sludge as a fertilizer.[18] Maine has continued to conduct an extensive evaluation of PFAS contamination associated with the land application of sewage sludge. Statewide sampling and testing found extremely high concentrations of PFAS in soil and groundwater. The contamination was so significant, Maine included $60 million in its 2023 budget to help impacted farmers whose farmland whose contaminated land is now unusable and unsellable.[19] Over the last decade, Maine has spent over $100 million to address PFAS contamination, yet more funding is still needed.[20]

Michigan was one of the first states to investigate PFAS in sewage sludge. Officials shut down a farm that land applied sludge for years after finding extremely high concentrations in the soil.[21] In 2024, the state prohibited the property from ever being used for agricultural purposes ever again.[22] The 400-acre property is now unusable.

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[11] Johnson, G. R. (2022). PFAS in soil and groundwater following historical land application of biosolids. Water Research, 211, 118035.
[12] Venkatesan, A. K., & Halden, R. U. (2014). Loss and in situ production of perfluoroalkyl chemicals in outdoor biosolids–soil mesocosms. Environmental research, 132, 321-327.
[13] Maine DEP. Requirement to Analyze for PFAS Compounds. March 22, 2019.
[14] Tom Perkins, I Don't Know How We'll Survive: The Farmers Facing Ruin in America's Forever Chemicals Crisis, The Guardian. (Mar. 22, 2022).
[15] *Id.*
[16] Kevin Miller, Maine DEP Identifies 34 Towns with High-Priority Sites PFAS Chemical Testing, Maine Public. (Oct. 22, 2021).
[17] Meaghan Bellavance, MDIFW Reduces Size of PFAS Do Not Eat Advisory Area in Fairfield, News Center Maine. (Apr. 24, 2023).
[18] 38 M.R.S.A. §1304(20).
[19] Penelope Overton, State Adopts $70 Million Plan to Help Farmers Deal with PFAS Contamination, Portland Press Herald. (Jul. 13, 2023).
[20] Penelope Overton, With Funds Running Out, Maine is at a PFAS Crossroads, Portland Press Herald (January 23, 2025).
[21] Teresa Homsi, This Farmer's Livelihood Was Ruined by PFAS-Contaminated Fertilizer That Few Midwest States Test For, Nebraska Public Media. (Mar. 11, 2024).
[22] *Id.*

In Johnson Country Texas, officials are taking steps to declare a state of emergency and are seeking federal assistance over farmland contaminated with PFAS from sludge land application.[23] Testing of soil, surface water, and well water from properties near where sludge was applied had levels of PFAS that exceed EPA's health advisory levels which recommend a maximum of 0.04 parts per trillion (ppt).[24] Testing of the neighboring properties revealed surface water contamination of more than 84,7000 ppt, and further testing revealed that a newborn calf on one of the neighboring cattle operations had PFAS levels of 3,200 ppt.[25] Testing has also indicated catfish in a pond on a sludge-impacted farm had PFOS levels in their blood as high as 74,000 ppt.[26] In response, Johnson Country officials are seeking to end land application of sludge to halt any further contamination.[27] Additionally, farmers are suing Synagro for manufacturing, marketing, and distributing the sludge a safe fertilizer.[28]

IV. Banning The Land Application of Sewage Sludge Aligns with the Quickly Evolving Scientific and Regulatory Landscape Surrounding PFAS.

State and federal regulations regarding the land application of sewage sludge are rightfully in flux because of the public's warranted concerns over PFAS-contaminated biosolids. Last year, Connecticut became the second state to ban sludge land application.[29] This legislative session, several states, including Massachusetts, Mississippi, New York, Oklahoma, and Texas, are considering adopting similar bans.[30]

Additionally, the EPA is proposing significant changes to the ways in which PFAS are regulated at the federal level. For instance, the EPA has proposed regulating PFOA and PFOS – two common and highly toxic PFAS compounds– as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act.[31] High concentrations of both PFOA and PFOS are frequently found in sewage sludge.[32] EPA has also proposed amending the Resource Conservation and Recovery Act rules to add nine PFAS to its list of hazardous constituents.[33] These nine PFAS (PFOA PFOS, PFBS, GenX, PFNA, PFHxS, PFDA, PFHxA, PFBA) are also frequently found in sewage sludge at high concentrations.[34]

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[23] Hiroko Tabuchi, Texas County Declares an Emergency Over Toxic Fertilizer, New York Times (Feb. 14, 2025).
[24] Brigit Rollins, Farmers File Suit Over PFAS Contamination, National Agricultural Law Center (April 2, 2025).
[25] *Id.*
[26] Tom Perkins, Texas Farmers Claim Company Sold Them PFAS-Contaminated Sludge that Killed Livestock, The Guardian. (Mar. 1, 2024)
[27] Hiroko Tabuchi, Texas County Declares an Emergency Over Toxic Fertilizer, New York Times (Feb. 14, 2025).
[28] Tom Perkins, Texas Farmers Claim Company Sold Them PFAS-Contaminated Sludge that Killed Livestock, The Guardian. (Mar. 1, 2024)
[29] Connecticut, Public Act No. 24-59 (2024).
[30] See, Mississippi Senate Bill No. 2004 (2025), Massachusetts Senate Bill No. 2403 (2025), New York Assembly Bill No. 8317 (2025), Oklahoma Senate Bill No. 3 (2025), and Texas House Bill No. 1674 (2025).
[31] EPA, Designation of Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS) as CERCLA Hazardous Substances, Proposed Rule, 87 Fed. Reg. 54415 (Sept. 6, 2022).
[32] Venkatesan, A. K., & Halden, R. U. (2013). National Inventory of perfluoroalkyl substances in archived U.S. biosolids from the 2001 EPA National Sewage Sludge Survey. *Journal of Hazardous Materials*, *252–253*, 413–418.
[33] EPA, Listing of Specific PFAS as Hazardous Constituents, Proposed Rule, 89 Fed. Reg. 8606 (Feb. 8, 2024).
[34] Thompson, K. A., Mortazavian, S., Gonzalez, D. J., Bott, C., Hooper, J., Schaefer, C. E., & Dickenson, E. R. (2022). Poly- and perfluoroalkyl substances in municipal wastewater treatment plants in the United States: Seasonal patterns and meta-analysis of long-term trends and average concentrations. *ACS ES&T Water*, *2*(5), 690–700.

In April 2024, the EPA adopted final National Drinking Water Regulations for six PFAS compounds. The new regulations set a maximum contamination level goal of zero for both PFOA and PFOS. The regulations also set legally enforceable maximum contamination levels for all six PFAS.[35] Finally, in January, the EPA released a draft risk assessment that first the first time warned that sewage sludge can contaminate soil, groundwater, crops, and livestock with PFAS, posing human health risks.[36] The extensive study concluded that the risks created from using sewage sludge as a fertilizer exceed federal safety thresholds, sometimes by several orders of magnitude.[37]

V. Conclusion

Banning the land application of Sewage Sludge is a critical and necessary step in protecting public health, safeguarding the environment, and preventing further PFAS contamination. The risks associated with PFAS are well documented and cannot be ignored. Just Zero urges a favorable report of HB 909.

Thank you for your time and consideration of this testimony.

Respectfully submitted,

Peter Blair, Esq.
Policy and Advocacy Director
Just Zero

[35] 40 C.F.R.§ 141. The U.S. EPA has set the following maximum contamination levels in drinking water – PFOA, 4 ppt., PFOS, 4 ppt., PFHxS, 10 ppt., PFNA, 10 ppt., and HFPO-DA, 10 ppt.
[36] U.S. Environmental Protection Agency, Draft Sewage Sludge Risk Assessment for Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonic Acid (PFOS), EPA-HQ-OW-2024-0504 (Jan. 15, 2025).
[37] *Id.*

HB_909_FAV_Thomas_Peter
Uploaded by: Peter Thomas
Position: FAV

Earthcare, LLC
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Bethel, PA 19507

February 19, 2025

Delegate Dana Stein
301 Lowe House Office Building
6 Bladen Street
Annapolis, MD 21401

Delegate Stein,

I am writing in support of House Bill 909.

For several decades, the EPA, state environmental regulators, and independent environmental scientists have been studying the impact of land-applied biosolids. As reported in *Nature* in 2022, the EPA has identified 726 chemicals and "structure-based classes" in the biosolids it has tested, including pesticides and drugs (and their associated metabolites), cosmetics, flame retardants, polychlorinated biphenyls (PCBs), polybrominated biphenyl ethers (PBDEs), dioxins, and dibenzofurans. Some chemicals are sent as liquid waste into local waterways, while others settle into the biosolids.

The low temperatures that are used to produce biosolids from sewage sludge are inadequate to destroy these contaminants, especially PFAS. The EPA acknowledges there is no safe level of PFAS exposure for human health. Yet no federal agency has yet implemented a program to assist farmers plagued by PFAS on their land or to establish guidelines for PFAS in food.

As you are probably aware, some farms have gone out of business because of the PFAS found in their milk, produce and other farm products, and lawsuits regarding PFAS contamination are too numerous to count. According to the EPA, 41 public water systems in Maryland have tested positive for PFAS, including in Middletown in Frederick County. Middletown is a beautiful agricultural area, so no one can claim that the PFAS found in their ground water and drinking water came from any source other than the land application of municipal biosolids.

In September 2017, the EPA's Chesapeake Bay Program approved high-temperature gasification (MTT4) as a technology for converting animal manure to carbon-rich and nutrient-rich by-product called biochar. This technology is now being operated on an industrial scale to process the municipal sewage sludge (pre-biosolids) in southeastern Pennsylvania, and it can easily be implemented throughout Maryland.

Each gasifier can process more than 50,000 dewatered wet tons of sewage sludge per year, and two, three, or four gasifiers can be installed and operated 24/7 in the same building to process 100,000, 150,000 or 200,000 dewatered wet tons of sewage sludge per year by two employees per shift.

The petroleum companies claimed that there was not an alternative to tetraethyl lead in gasoline, but by the mid-1990s, they had figured out a way to change their formulation. The biosolids haulers will argue that the limit of 1 microgram per kilogram of PFAS in HB-909 will force them to truck all biosolids to landfills. That is certainly an alternative to the land application of biosolids on farms. Although it is difficult to clean leachate to the point that it can be safely discharged into streams or groundwater, it can and is being done at some large landfills.

The ideal legislation would be a total ban on the land application of biosolids, but in the interim, House Bill 909 is a good starting point. If you have any questions, I am always available via cell phone, and I would be pleased to testify next Wednesday afternoon.

Regards,

Peter Thomas

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FEATURE

Off to a Solid Start

As utilities are rethinking biosolids management, emerging biochar-producing technologies are gaining ground

Mohammad Abu-Orf, Micah Blate, Derya Dursun, and Paul Knowles

For water resource recovery facilities (WRRFs), deciding on a sustainable biosolids management strategy is more challenging than ever. The rising costs of processing, hauling, and beneficial use have made land application a burden on utilities. This is coupled with the presence of per- and polyfluoroalkyl substances (PFAS) and potential regulations that may require PFAS-destruction

technologies. Also, sustainable practices are emerging that require WRRFs to reduce greenhouse gas emissions (GHGe).

As utilities are evaluating new biosolids management solutions, gasification and pyrolysis (G/P) are rising to the top of the list. Both technologies offer significant reduction in mass and volume of biosolids — and therefore, considerable reduction in beneficial use costs — which makes the overall economics favorable compared to conventional technologies. G/P produces biochar that has no detectable PFAS, which protects utilities from any future land-application regulations. Also, the biochar is considered a carbon sink because it captures and stores carbon dioxide, reducing overall GHGe.

This article discusses G/P technologies, the biochar they produce, and their PFAS-destruction potential. It also looks at costs, beneficial use, GHGe, and specific decision-making criteria, drawing on results from studies that evaluate G/P technologies holistically.

Gasification and Pyrolysis

The authors of this article have worked on biosolids management planning projects in several municipalities of various sizes, ranging from the Town of Windsor, California, which treats 8,700 m^3/d (2.3 mgd), to New York City, which operates 14 WRRFs that treat more than 3.8 million m^3/d (1,000 mgd) in aggregate. At both ends of the spectrum, there is a growing trend of utilities choosing biochar-producing technologies in favor of conventional stabilization technologies.

Pyrolysis operates at temperatures ranging from 200°C to 590°C (390°F to 1,100°F) with no oxygen supply, and gasification operates at higher temperatures ranging from 590°C to 980°C (1,100°F to 1,800°F) with a limited amount of oxygen. Because the equipment and operations and maintenance (O&M) requirements of the two technologies are similar, in this article the authors refer to G/P as a single process.

Although G/P requires dried product greater than 75% total solids, it does not necessarily need stabilization (*e.g.*, anaerobic digestion). It produces pyrogas or syngas that has 30% of the heat content of that produced from anaerobic digestion. The syngas usually is oxidized at high temperatures to generate energy that is used

- biodrying followed by pyrolysis.

Of these options, the district chose to evaluate thermal drying and biodrying on a life-cycle cost basis. (The other technologies, due to increased mass and volume of generated biosolids, did not meet potential land-application restrictions or increased land-application costs.) The results showed that the 20-year net present value of all alternatives ranges from USD $33 million to $37 million (see Table 2, below). Although some alternatives have higher capital costs, others have high O&M costs. Overall, the cost of all alternatives for the district's sustainable biosolids management is anticipated to be within the same range.

The district is moving forward with some form of drying (thermal or biodry) followed by pyrolysis, which would produce small amounts of BDB. This option would eliminate the need for (and cost of) land application beneficial use and comply with upcoming PFAS regulations. Facility design is under way.

Anne Arundel County, Maryland. Anne Arundel County Department of Public Works (DPW) operates seven WRRFs with a projected total solids production of 34 dry Mg/d (37 dry ton/d).

The generated solids are managed by a third-party contractor that converts 75% of the solids to Class B biosolids using lime stabilization, and the remainder is converted to Class A compost.

Realizing that the current practice is not sustainable, the county evaluated alternatives that would meet its financial, environmental, and future regulatory needs. It shortlisted four technologies, including anaerobic digestion, thermal drying, pyrolysis, and autothermal thermophilic aerobic digestion. The project generated 64 alternatives of the top four shortlisted technologies and analyzed three potential regional facility locations using a multifacility planning tool. Each alternative was ranked relative to the most cost-effective option: G/P at the Patuxent WRRF.

The tool clearly indicated that the most beneficial technologies would be G/P and mesophilic anaerobic digestion plus thermal drying, so they were included in a detailed cost comparison (see Figure 4, p. 43). In a 20-year life cycle, G/P would result in a payback period of half this time, if practicing mesophilic anaerobic

digestion plus thermal drying. Accordingly, the final recommendation is that pyrolysis or gasification be selected as the regional biosolids processing technology.

Middlesex County Utilities Authority, New Jersey. The authority operates both the WRRF and the adjacent landfill. Primary and waste activated sludges are dewatered and then thermally dried using thin-film drying technology to 50% to 60% dry solids. The WRRF then further pasteurizes the solids with lime stabilization, producing a Class A dried product that is disposed of at the landfill and used for daily cover operation. Aware of the existing landfill capacity and its high operating cost, the authority evaluated two technologies for reducing the mass and volume of its biosolids, advanced anaerobic digestion and G/P either alone or combined with advanced anaerobic digestion.

Table 2. Evaluation Results for Shortlisted Alternatives

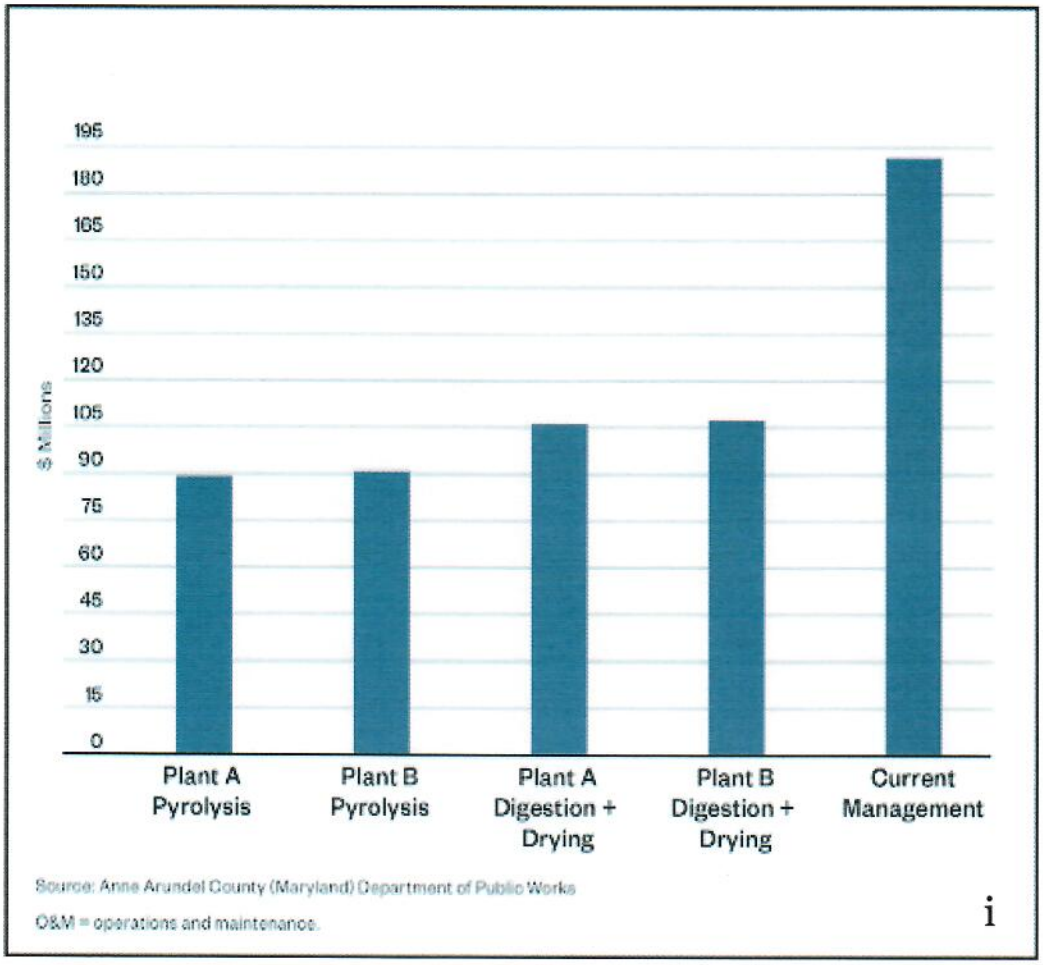
Parameters	Paddle Dryer	Belt Dryer	Biodrying	Biodrying and Pyrolysis
Output biosolids	90%-92% Class A/EQ biosolids	90%-92% Class A/EQ biosolids	Greater than 90% Class A/EQ biosolids	Biosolids-derived biochar
Probable construction cost (USD $ million)	$24.7	$27.3	$26.8	$29.7
Annual O&M cost (USD $ million)	$0.583	$0.662	$0.522	$0.483
20-year NPV (USD $ million)	$33.3	$37.0	$34.5	$36.8
Process Footprint (with clearance, ft^2)	2,500	5,000	6,750	12,000
Building requirement	Enclosed building	Enclosed building	Canopy	Canopy
Land-application area requirement (ac)	100-170	100-170	100-170	None
Projected long-term beneficial use/disposal options	No	No	No	Yes

Source: Windsor (California) Water District

EQ = Exceptional Quality.

O&M = operations and maintenance.

NPV = net present value.



Evaluation results showed that implementing G/P alone offers the authority the greatest cost savings compared to the current practice. The authority decided to move forward with implementing advanced anaerobic digestion to realize the anticipated savings and implement the G/P technologies as they become more mature.

End Use and Market Assessment

An important aspect of selecting a solidsprocessing technology is the end use of the biosolids product and the viability of the local market. According to the current *U.S. Biochar Market Analysis Report* published by Grandview Research, the market for biochar from nonbiosolids sources is well-established for its use as a soil amendment, adsorbent, building materials, fuel, energy storage, and anaerobic digestion additives. However, the market for BDB — which has similar beneficial uses as nonbiosolids biochar — is just developing.

In the 2018 critical review, "Biochar from Biosolids Pyrolysis"in the *International Journal of Environmental Research and Public Health*, Paz-Ferreiro and colleagues concluded that very limited work exists regarding the use of biosolids biochar to improve agronomic performance. Given that pyrolysis is being considered increasingly for sustainable biosolids management, the researchers highlighted the need to better understand the soil– biochar–plant interaction. Long-term stability of BDB in soil and the long-term fate of nutrients and pollutants need to be further understood.

A recent market assessment by environmental consulting firm Material Matters (Elizabethtown, Pennsylvania) considered various products for the Stamford (Connecticut) Water Pollution Control Facility, which currently produces Class A dried pellets from undigested solids (see Table 3, below). Products considered in the assessment included BDB; incineration ash; dried product from digested and undigested, Class A and Class B cake biosolids; and compost. When the consultant weighted and scored the city's top criteria, BDB scored the highest among all products.

Table 3. Biosolids Products Evaluation

Product	Weighted Product Score (out of 36)	Ability to Meet City's Goals
BDB	35	Very high
SSI ash	32	Very high
Class A dried (digested)	30	Very high
Class A/EQ dried	26	High
Class A digested cake	26	High
Class B digested cake	25	High
Class A/EQ compost	19	Moderate
Unstabilized cake	14	Low

Source: Stamford (Connecticut) Water Pollution Control Facility

BDB = biosolids-derived biochar.

SSI = sewage sludge incineration.

EQ = Exceptional Quality.

In a similar product ranking the consultant conducted for Anne Arundel County, Maryland, BDB also ranked the highest (see Table 4, below). The ranking considered the county's criteria, which are

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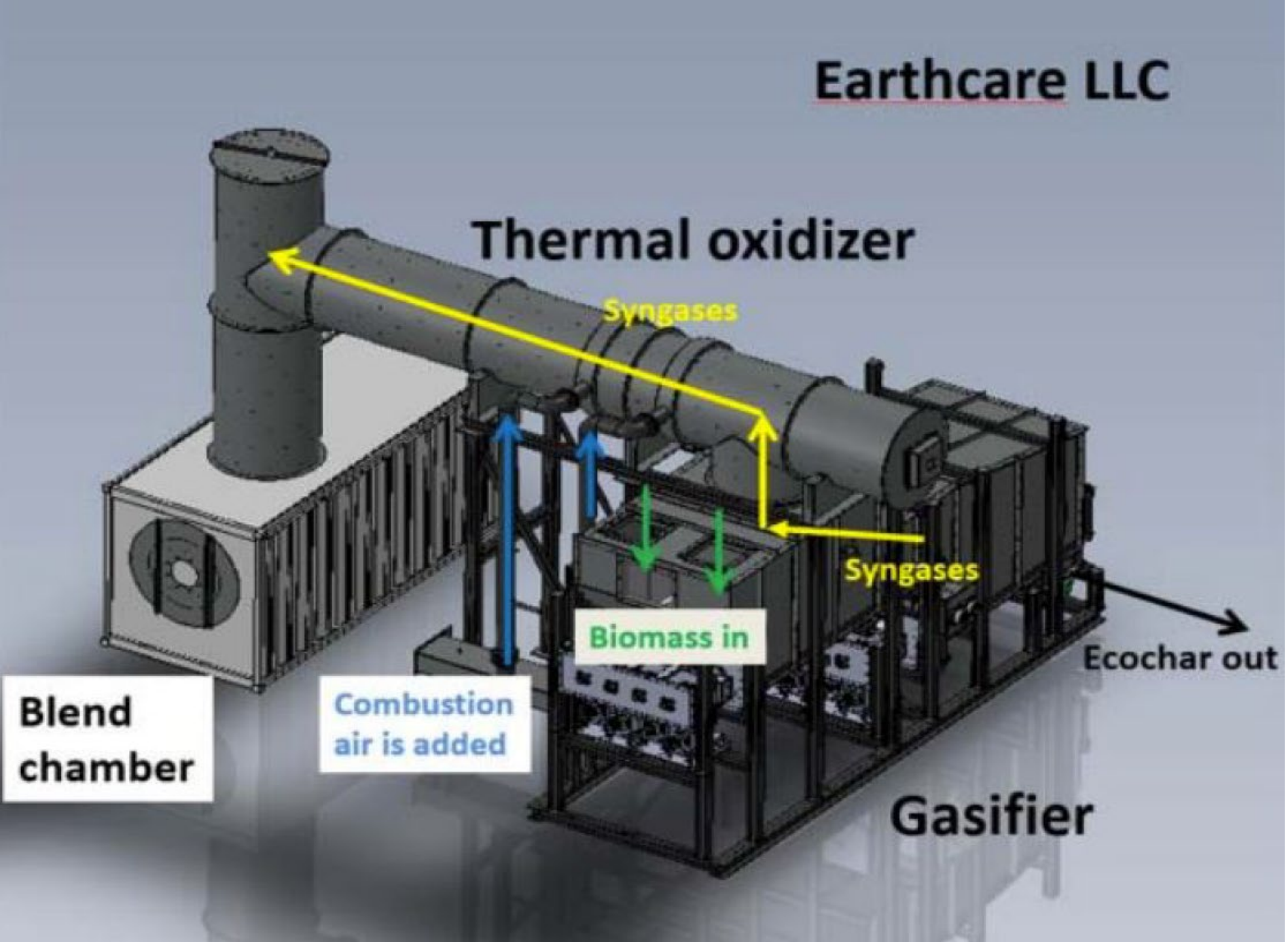
Class B alkaline-stabilized biosolids	6

Source: Anne Arundel County (Maryland) Department of Public Works

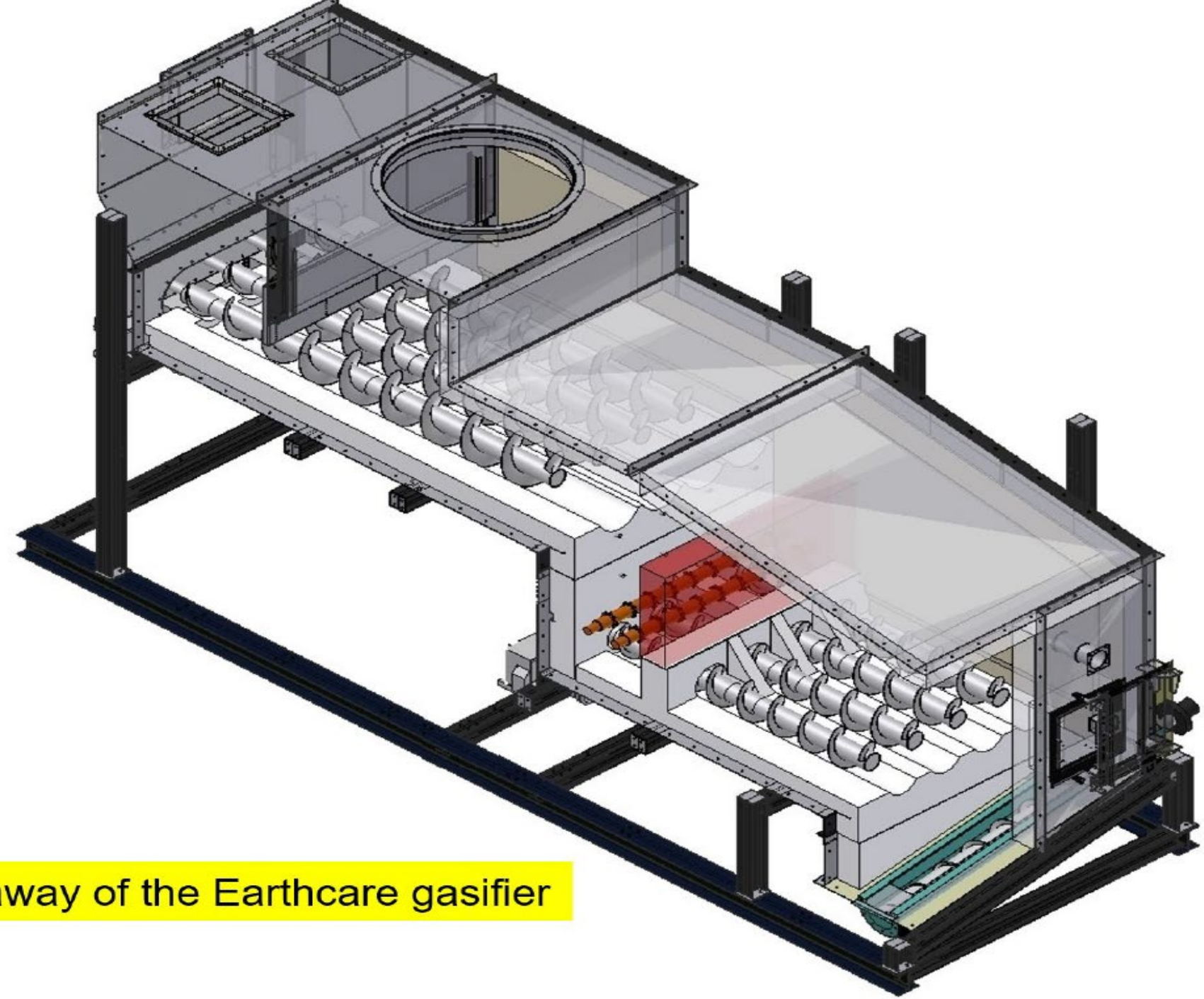
EQ = Exceptional Quality.

Earthcare’s sewage sludge gasifier in Berks County, PA

Triple-pass rotary drum dryer that evaporates 5 tons of water per hour.



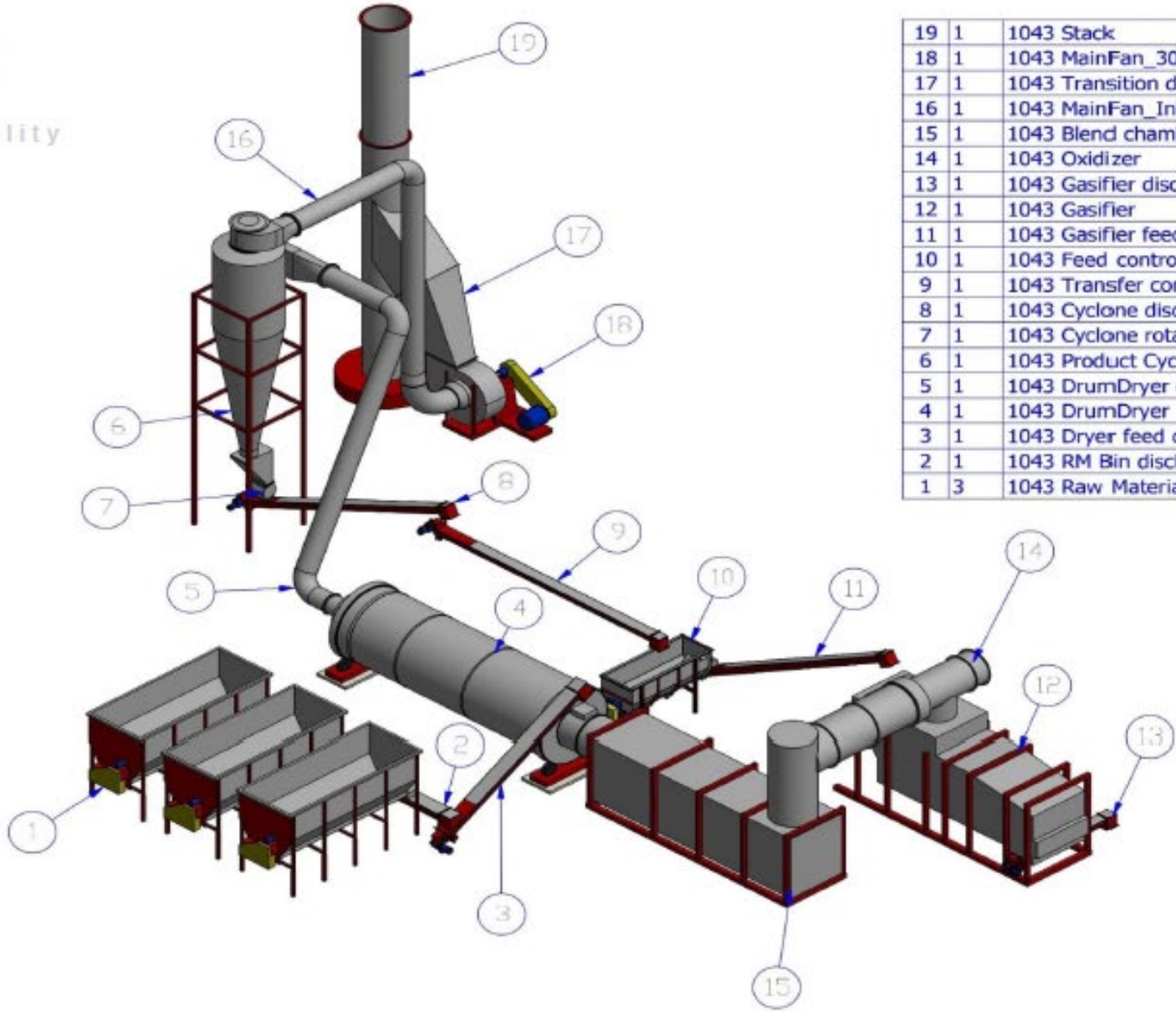
Processes ~150 dewatered wet tons of sewage sludge per day or ~54,000 tons per year. Two, three, or four can be installed and operated side-by-side in the same bldg.



Cutaway of the Earthcare gasifier

Earthcare System

Organics Processing Facility



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18	1	1043 MainFan_300HP
17	1	1043 Transition duct
16	1	1043 MainFan_Inlet pipe
15	1	1043 Blend chamber
14	1	1043 Oxidizer
13	1	1043 Gasifier disch. cnvr
12	1	1043 Gasifier
11	1	1043 Gasifier feed cnvr
10	1	1043 Feed control bin
9	1	1043 Transfer conveyor 1
8	1	1043 Cyclone disch. cnvr
7	1	1043 Cyclone rotary valve
6	1	1043 Product Cyclone
5	1	1043 DrumDryer disch.
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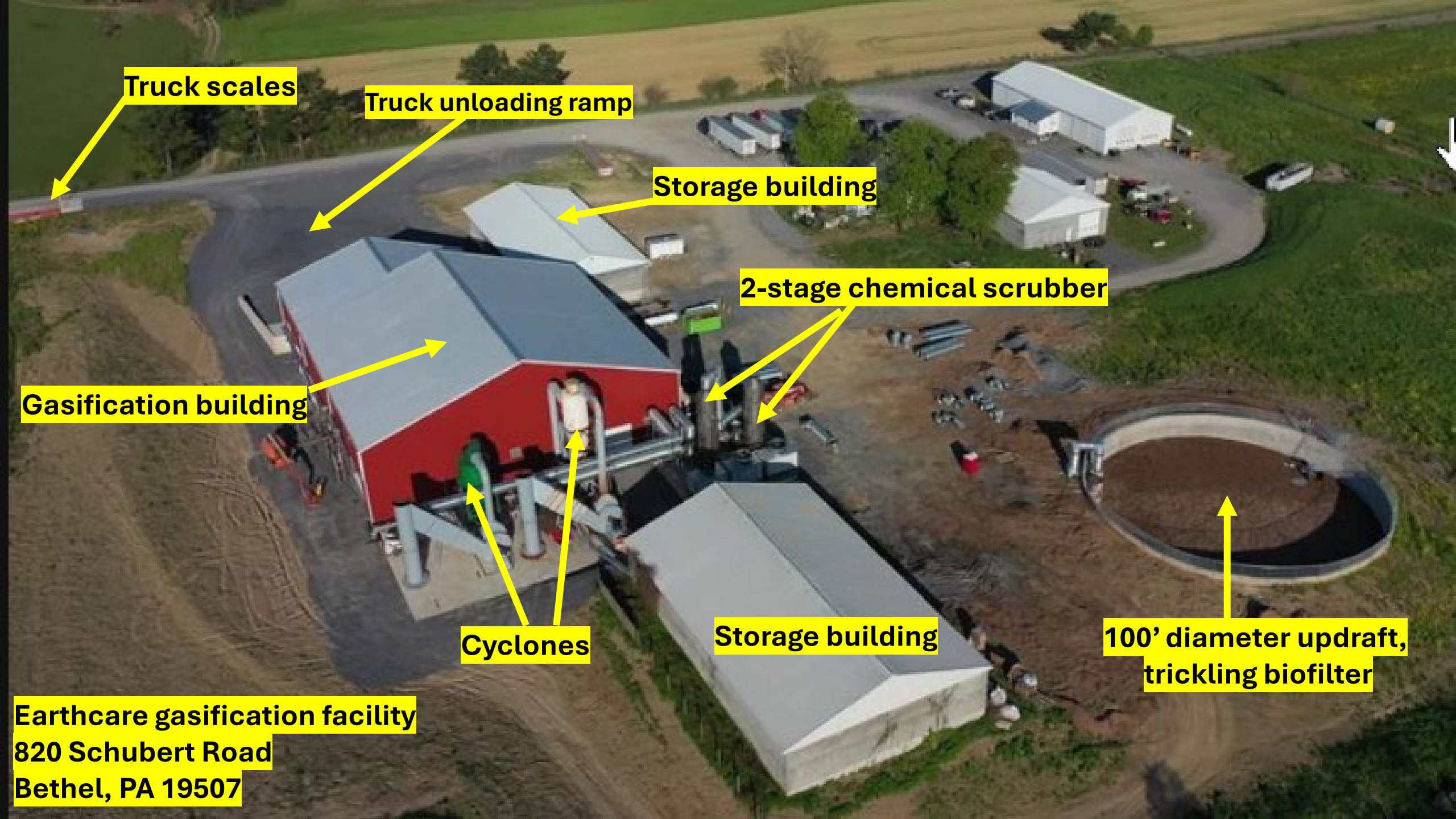
3	1	1043 Dryer feed cnvr
2	1	1043 RM Bin disch. cnvr
1	3	1043 Raw Material Bin


Truck scales
Truck unloading ramp
Storage building
2-stage chemical scrubber
Gasification building
Cyclones
Storage building
100’ diameter updraft, trickling biofilter
Earthcare gasification facility
820 Schubert Road
Bethel, PA 19507

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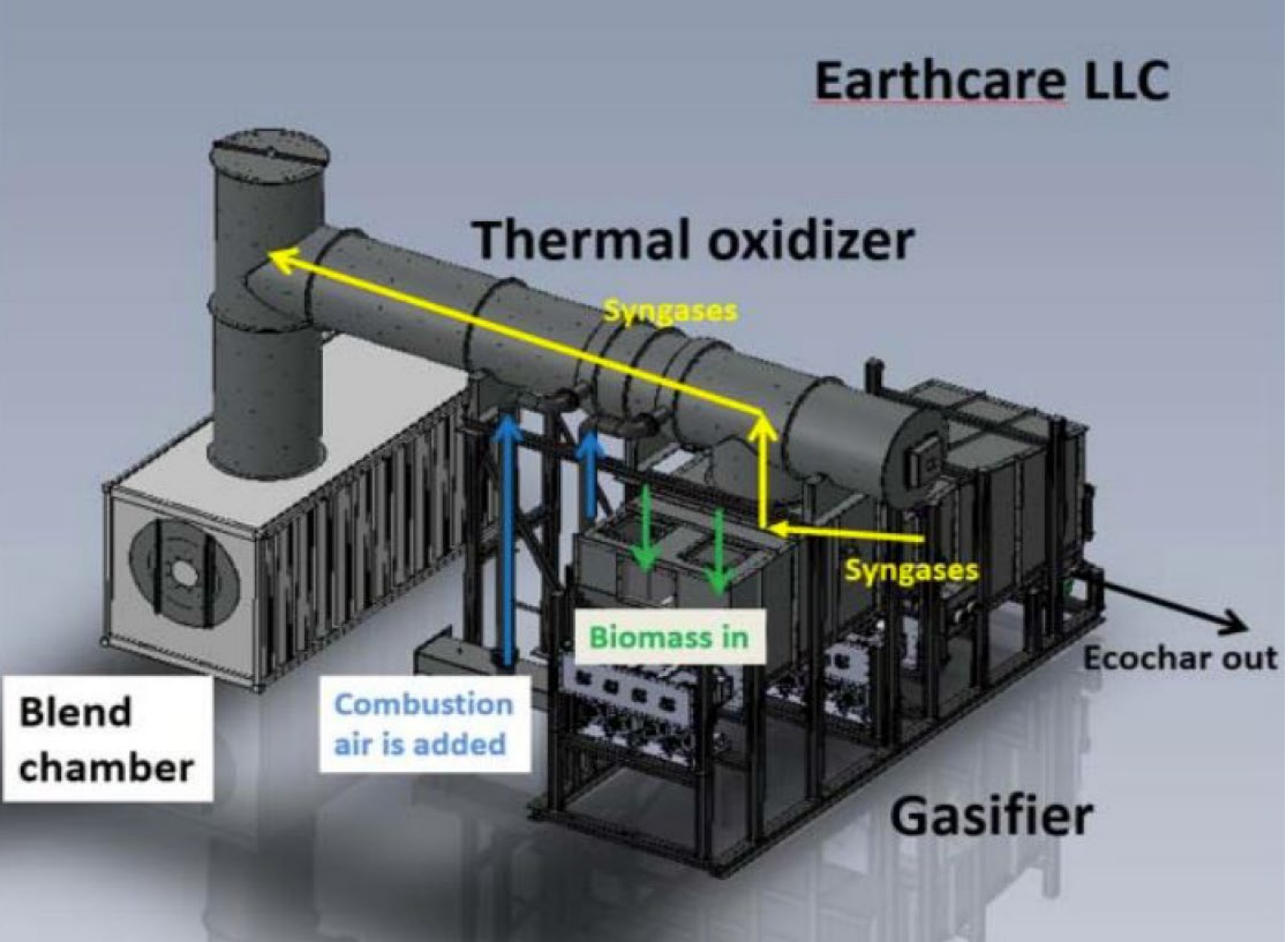

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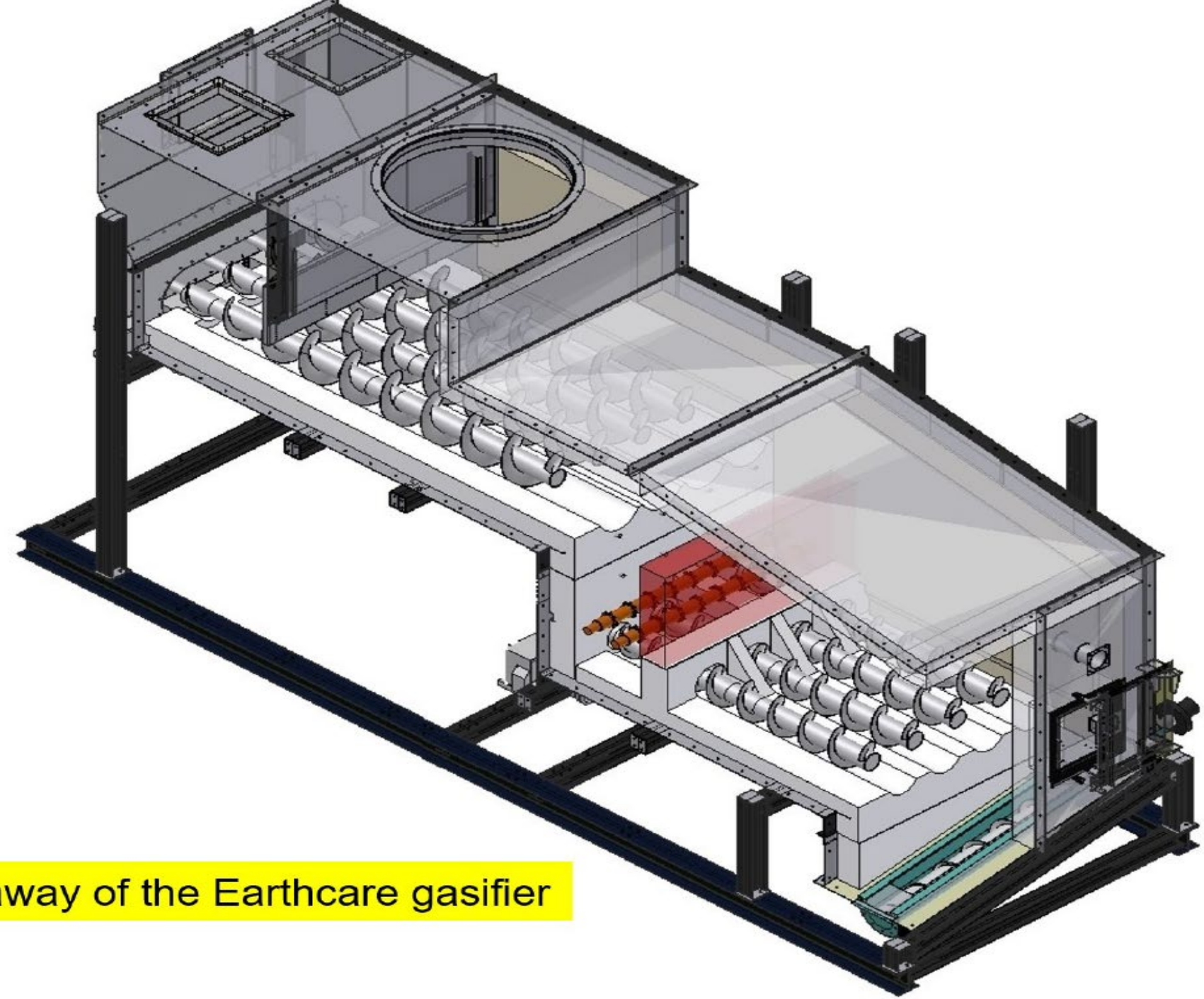

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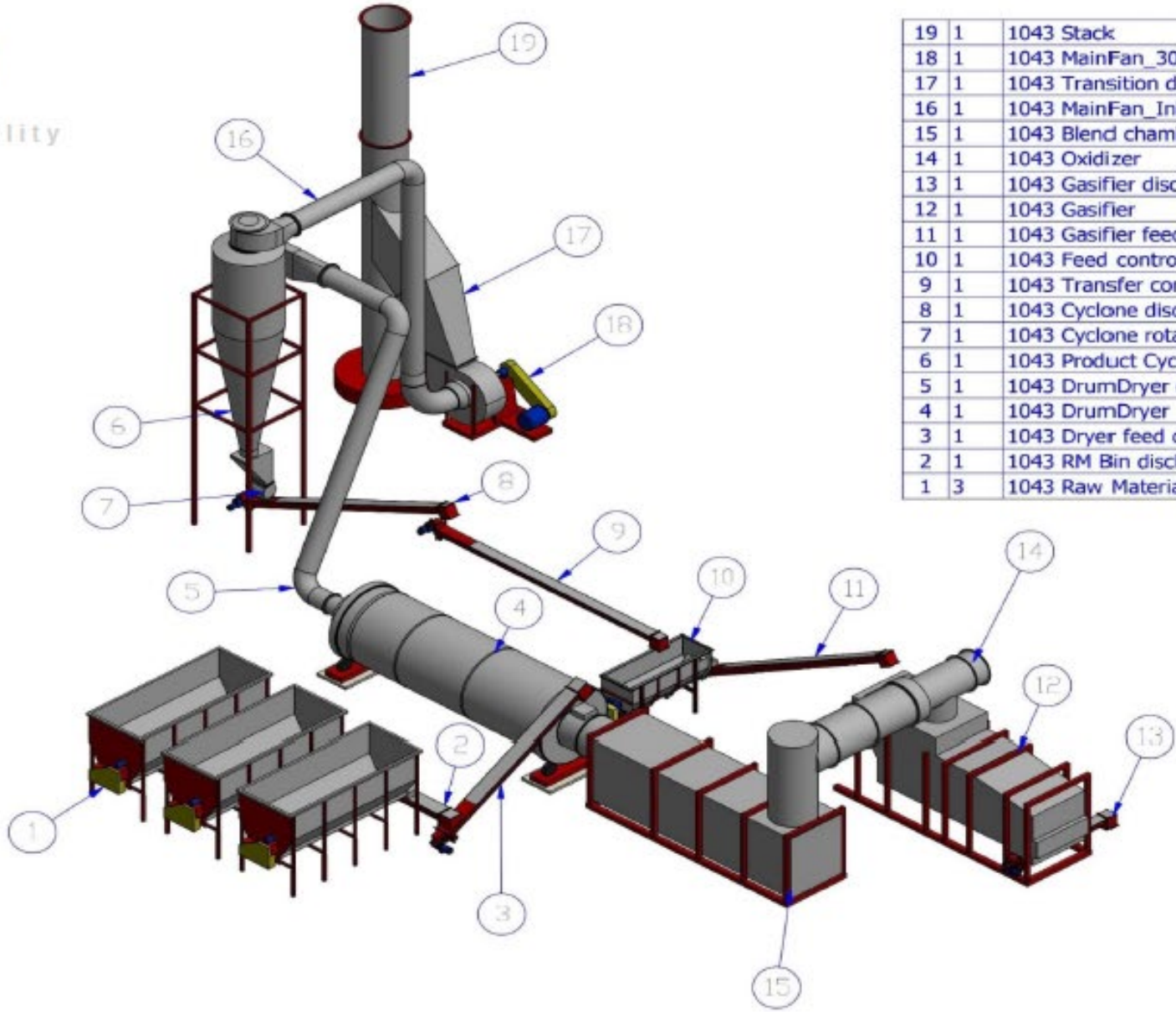

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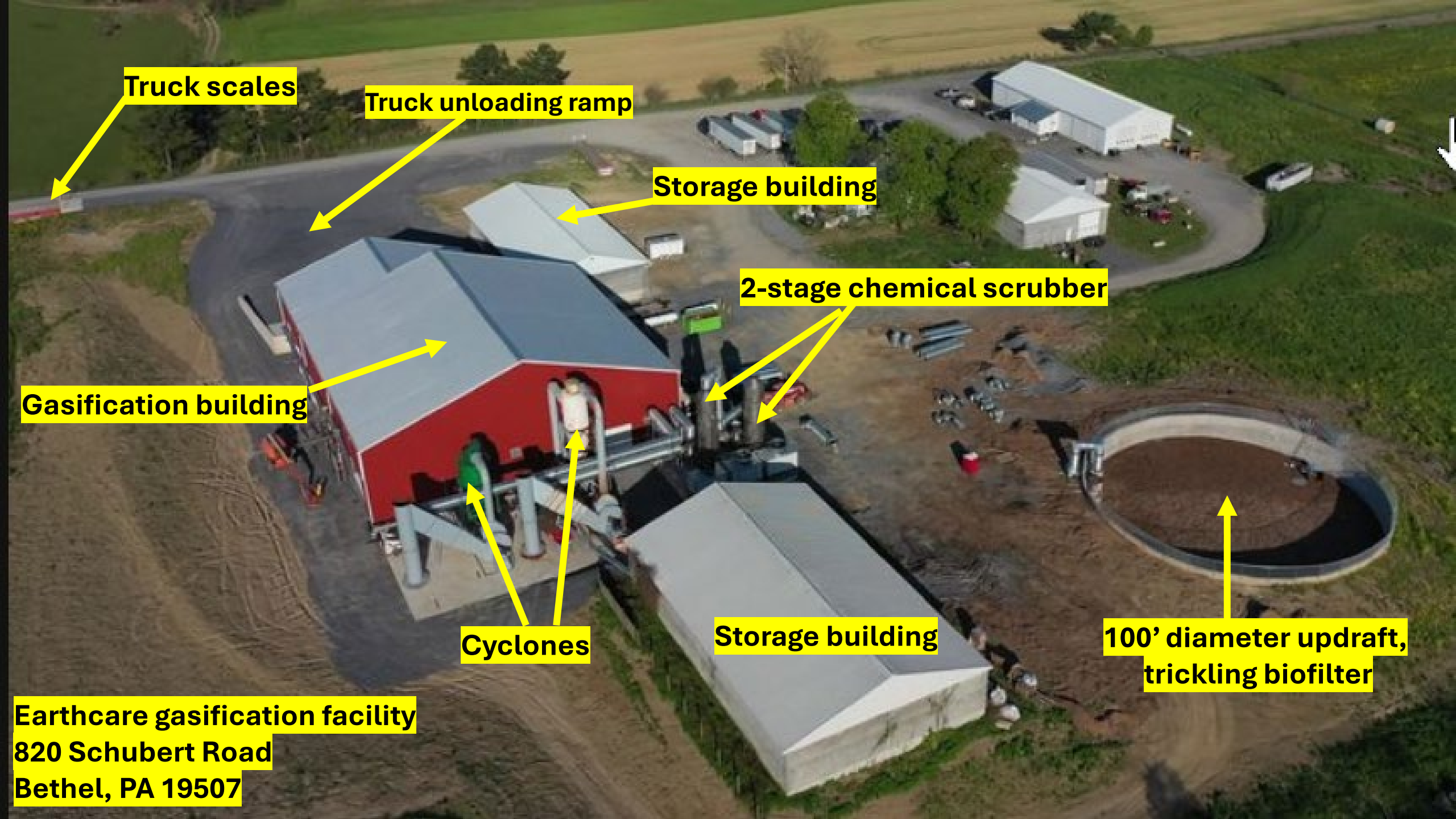
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FEATURE

Off to a Solid Start

As utilities are rethinking biosolids management, emerging biochar-producing technologies are gaining ground

Mohammad Abu-Orf, Micah Blate, Derya Dursun, and Paul Knowles

For water resource recovery facilities (WRRFs), deciding on a sustainable biosolids management strategy is more challenging than ever. The rising costs of processing, hauling, and beneficial use have made land application a burden on utilities. This is coupled with the presence of per- and polyfluoroalkyl substances (PFAS) and potential regulations that may require PFAS-destruction

technologies. Also, sustainable practices are emerging that require WRRFs to reduce greenhouse gas emissions (GHGe).

As utilities are evaluating new biosolids management solutions, gasification and pyrolysis (G/P) are rising to the top of the list. Both technologies offer significant reduction in mass and volume of biosolids — and therefore, considerable reduction in beneficial use costs — which makes the overall economics favorable compared to conventional technologies. G/P produces biochar that has no detectable PFAS, which protects utilities from any future land-application regulations. Also, the biochar is considered a carbon sink because it captures and stores carbon dioxide, reducing overall GHGe.

This article discusses G/P technologies, the biochar they produce, and their PFAS-destruction potential. It also looks at costs, beneficial use, GHGe, and specific decision-making criteria, drawing on results from studies that evaluate G/P technologies holistically.

Gasification and Pyrolysis

The authors of this article have worked on biosolids management planning projects in several municipalities of various sizes, ranging from the Town of Windsor, California, which treats 8,700 m^3/d (2.3 mgd), to New York City, which operates 14 WRRFs that treat more than 3.8 million m^3/d (1,000 mgd) in aggregate. At both ends of the spectrum, there is a growing trend of utilities choosing biochar-producing technologies in favor of conventional stabilization technologies.

Pyrolysis operates at temperatures ranging from 200°C to 590°C (390°F to 1,100°F) with no oxygen supply, and gasification operates at higher temperatures ranging from 590°C to 980°C (1,100°F to 1,800°F) with a limited amount of oxygen. Because the equipment and operations and maintenance (O&M) requirements of the two technologies are similar, in this article the authors refer to G/P as a single process.

Although G/P requires dried product greater than 75% total solids, it does not necessarily need stabilization (*e.g.*, anaerobic digestion). It produces pyrogas or syngas that has 30% of the heat content of that produced from anaerobic digestion. The syngas usually is oxidized at high temperatures to generate energy that is used

- biodrying followed by pyrolysis.

Of these options, the district chose to evaluate thermal drying and biodrying on a life-cycle cost basis. (The other technologies, due to increased mass and volume of generated biosolids, did not meet potential land-application restrictions or increased land-application costs.) The results showed that the 20-year net present value of all alternatives ranges from USD $33 million to $37 million (see Table 2, below). Although some alternatives have higher capital costs, others have high O&M costs. Overall, the cost of all alternatives for the district's sustainable biosolids management is anticipated to be within the same range.

The district is moving forward with some form of drying (thermal or biodry) followed by pyrolysis, which would produce small amounts of BDB. This option would eliminate the need for (and cost of) land application beneficial use and comply with upcoming PFAS regulations. Facility design is under way.

Anne Arundel County, Maryland. Anne Arundel County Department of Public Works (DPW) operates seven WRRFs with a projected total solids production of 34 dry Mg/d (37 dry ton/d).

The generated solids are managed by a third-party contractor that converts 75% of the solids to Class B biosolids using lime stabilization, and the remainder is converted to Class A compost.

Realizing that the current practice is not sustainable, the county evaluated alternatives that would meet its financial, environmental, and future regulatory needs. It shortlisted four technologies, including anaerobic digestion, thermal drying, pyrolysis, and autothermal thermophilic aerobic digestion. The project generated 64 alternatives of the top four shortlisted technologies and analyzed three potential regional facility locations using a multifacility planning tool. Each alternative was ranked relative to the most cost-effective option: G/P at the Patuxent WRRF.

The tool clearly indicated that the most beneficial technologies would be G/P and mesophilic anaerobic digestion plus thermal drying, so they were included in a detailed cost comparison (see Figure 4, p. 43). In a 20-year life cycle, G/P would result in a payback period of half this time, if practicing mesophilic anaerobic

digestion plus thermal drying. Accordingly, the final recommendation is that pyrolysis or gasification be selected as the regional biosolids processing technology.

Middlesex County Utilities Authority, New Jersey. The authority operates both the WRRF and the adjacent landfill. Primary and waste activated sludges are dewatered and then thermally dried using thin-film drying technology to 50% to 60% dry solids. The WRRF then further pasteurizes the solids with lime stabilization, producing a Class A dried product that is disposed of at the landfill and used for daily cover operation. Aware of the existing landfill capacity and its high operating cost, the authority evaluated two technologies for reducing the mass and volume of its biosolids, advanced anaerobic digestion and G/P either alone or combined with advanced anaerobic digestion.

Table 2. Evaluation Results for Shortlisted Alternatives

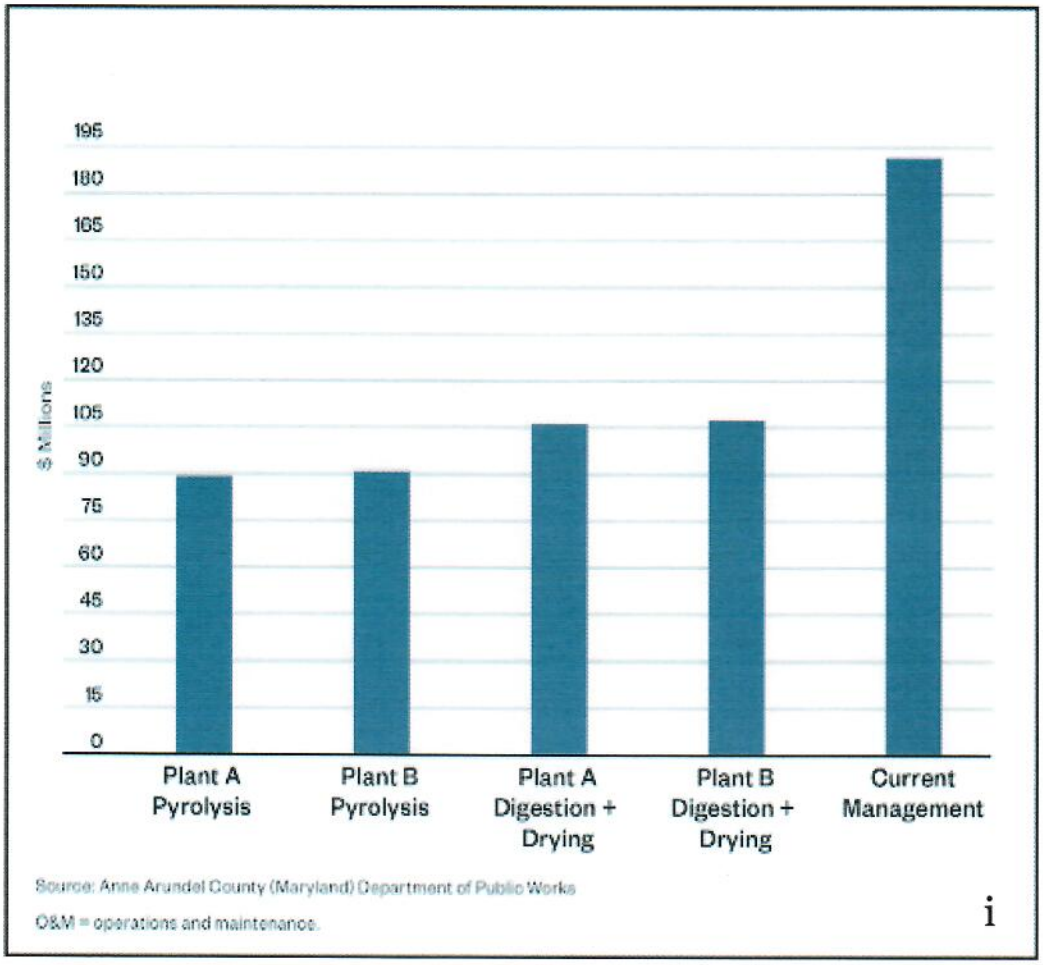
Parameters	Paddle Dryer	Belt Dryer	Biodrying	Biodrying and Pyrolysis
Output biosolids	90%-92% Class A/EQ biosolids	90%-92% Class A/EQ biosolids	Greater than 90% Class A/EQ biosolids	Biosolids-derived biochar
Probable construction cost (USD $ million)	$24.7	$27.3	$26.8	$29.7
Annual O&M cost (USD $ million)	$0.583	$0.662	$0.522	$0.483
20-year NPV (USD $ million)	$33.3	$37.0	$34.5	$36.8
Process Footprint (with clearance, ft^2)	2,500	5,000	6,750	12,000
Building requirement	Enclosed building	Enclosed building	Canopy	Canopy
Land-application area requirement (ac)	100-170	100-170	100-170	None
Projected long-term beneficial use/disposal options	No	No	No	Yes

Source: Windsor (California) Water District

EQ = Exceptional Quality.

O&M = operations and maintenance.

NPV = net present value.



Evaluation results showed that implementing G/P alone offers the authority the greatest cost savings compared to the current practice. The authority decided to move forward with implementing advanced anaerobic digestion to realize the anticipated savings and implement the G/P technologies as they become more mature.

End Use and Market Assessment

An important aspect of selecting a solidsprocessing technology is the end use of the biosolids product and the viability of the local market. According to the current *U.S. Biochar Market Analysis Report* published by Grandview Research, the market for biochar from nonbiosolids sources is well-established for its use as a soil amendment, adsorbent, building materials, fuel, energy storage, and anaerobic digestion additives. However, the market for BDB — which has similar beneficial uses as nonbiosolids biochar — is just developing.

In the 2018 critical review, "Biochar from Biosolids Pyrolysis"in the *International Journal of Environmental Research and Public Health*, Paz-Ferreiro and colleagues concluded that very limited work exists regarding the use of biosolids biochar to improve agronomic performance. Given that pyrolysis is being considered increasingly for sustainable biosolids management, the researchers highlighted the need to better understand the soil– biochar–plant interaction. Long-term stability of BDB in soil and the long-term fate of nutrients and pollutants need to be further understood.

A recent market assessment by environmental consulting firm Material Matters (Elizabethtown, Pennsylvania) considered various products for the Stamford (Connecticut) Water Pollution Control Facility, which currently produces Class A dried pellets from undigested solids (see Table 3, below). Products considered in the assessment included BDB; incineration ash; dried product from digested and undigested, Class A and Class B cake biosolids; and compost. When the consultant weighted and scored the city's top criteria, BDB scored the highest among all products.

Table 3. Biosolids Products Evaluation

Product	Weighted Product Score (out of 36)	Ability to Meet City's Goals
BDB	35	Very high
SSI ash	32	Very high
Class A dried (digested)	30	Very high
Class A/EQ dried	26	High
Class A digested cake	26	High
Class B digested cake	25	High
Class A/EQ compost	19	Moderate
Unstabilized cake	14	Low

Source: Stamford (Connecticut) Water Pollution Control Facility

BDB = biosolids-derived biochar.

SSI = sewage sludge incineration.

EQ = Exceptional Quality.

In a similar product ranking the consultant conducted for Anne Arundel County, Maryland, BDB also ranked the highest (see Table 4, below). The ranking considered the county's criteria, which are

synthetic fertilizer production applied to land provide a good carbon offset, but do not mitigate regulatory risk of land-application restrictions due to PFAS. Instead, projects that convert residuals to energy and biochar can provide significant carbon footprint reduction through fossil fuel offsets and sequestration of carbon. The carbon footprint reduction is improved if drying is done through energyefficient methods that use waste heat and/or enthalpy recovery.

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Source: Anne Arundel County (Maryland) Department of Public Works

EQ = Exceptional Quality.

Testimony in Support of HB909.pdf
Uploaded by: Ray Earnest
Position: FAV

Testimony in Support of HB909

Environment and Transportation Committee, Hearing 2/26/25

Submitted on 2/24/25

To All Committee Members,

My name is Ray Earnest; I live in Caroline County on Maryland's Eastern Shore, and I urge a favorable report on SB0732.

This bill will protect Marylanders from PFAS —persistent and harmful "forever chemicals." Currently, Maryland applies nearly 90% of the biosolids from wastewater treatment plants to agricultural land, but biosolids containing PFAS pose a serious risk to public health and the environment. The known health risks, according to the federal EPA, include:

- Reproductive effects such as decreased fertility or increased high blood pressure in pregnant women.
- Developmental effects or delays in children, including low birth weight, accelerated puberty, bone variations, or behavioral changes.
- Increased risk of some cancers, including prostate, kidney, and testicular cancers.
- Reduced ability of the body's immune system to fight infections, including reduced vaccine response.
- Interference with the body's natural hormones.
- Increased cholesterol levels and/or risk of obesity.

When spread on farmland, these chemicals pollute soil, groundwater, crops, and wildlife, endangering communities, especially in rural areas like the Eastern Shore. This legislation will:

1. Help prevent the spread of harmful PFAS chemicals into Maryland's soil, water, and food supply by requiring testing of biosolids for PFAS contamination at least 14 days before land application; and

2. Protect public health and the environment by requiring the Maryland Department of the Environment to set health-based concentration limits for PFOS and PFOA in biosolids applied to agricultural land.

I support this bill because I care about the health of my family, my neighbors and all Marylanders. Thank you for your consideration, and I look to this committee to give SB0732 a favorable report.

Sincerely,
Ray Earnest
20375 Hog Island Rd Preston, MD 21655 Rayearnest1@gmail.com

FAV_HB0909 Sewage Sludge & PFAS Limits.pdf
Uploaded by: Robin Broder
Position: FAV

HB0909 - Sewage Sludge Utilization Permits - Per- and Polyfluoroalkyl Substances - Concentration Limits
Hearing date: Wednesday, February 26, 2025

Position: FAVORABLE

Dear Chair Korman and members of the Environment & Transportation Committee:

Waterkeepers Chesapeake and the below signed organizations and farmers respectfully request a FAVORABLE report on HB0909 which establishes a long-overdue limit on toxic PFAS found in biosolids (sewage sludge) that is used as fertilizer and spread on Maryland's farm fields.

The Problem

Biosolids are the solid waste, or sludge, produced during the treatment of municipal, human, and industrial wastewater. In Maryland, biosolids — including some from out-of-state facilities — are used as fertilizer on farms. However, these biosolids often contain pathogens and toxic substances, including PFAS chemicals, also known as "forever chemicals." While existing Maryland regulations prohibit immediate grazing, raw crop consumption, and public access to treated fields, these measures fall short when biosolids contain PFOS and PFOA, two highly toxic PFAS compounds that persist in the environment and pose significant risks to human and ecological health.

During treatment, these chemicals concentrate in biosolids, which are then spread on agricultural fields. Alarmingly, Maryland's biosolid permits allow waste from multiple facilities to be applied to single fields, heightening the risk of contamination.

Biosolids containing PFAS run off farm fields into rivers and streams and filter into groundwater, contaminating drinking water sources. PFAS also bioaccumulates in fish[1] and wildlife, and is stored in milk, as well as certain fruits and vegetables.

[1] Land Use Associations and Sources of PFAS in Smallmouth Bass in Chesapeake Bay Watershed, Vicki Blazer, USGS, presentation at Maryland Pesticide Education Network conference, December 2024 https://mdpestnet.org/wp-content/uploads/2025/01/Blazer_Assoc.-PFAS-in-Smallmouth-Bass.pdf

States across the country are working to pass policies that protect human and environmental health from toxic PFAS in biosolids. Following their lead, Maryland began testing biosolids and found significant PFAS levels. While the state has recommended guidance on PFOS and PFAS levels in biosolids, the recommendations are not strong enough and they lack necessary enforcement authority.

Since 2003, EPA has known that biosolids can contain alarming levels of PFAS. In a 2018 report, the Environmental Protection Agency's (EPA) Inspector General accused the agency of failing to properly regulate biosolids.[2] However, it wasn't until January 2025 that the EPA's draft Sewage Sludge Risk Assessment was released[3]. It highlights the severe risks posed by PFOS and PFOA levels as low as 1–5 parts per billion, linking exposure to contaminated water, wildlife, and crops to serious health issues, including immune dysfunction, thyroid disease, and cancer.

What the Bill Does

- Requires biosolids originating from multiple plants and are commingled at a storage facility be tested 14 days prior to being applied to farm land.
- Establishes a limit for PFOS and PFOA in biosolids.

Proposed Amendments

There has been considerable communication between bill sponsors, advocates, MDE and opposition to develop a workable solution to this issue. It is apparent that all parties recognize that we need to protect our resources from further unchecked contamination. All parties are also interested in developing a transition plan that reduces the burden on wastewater systems and the costs to rate payers. However, we must also consider the costs and liabilities to farmers taking PFAS contaminated biosolids that may threaten their product and the groundwater their communities use for drinking through private wells. There are no protections or funds available to communities with private wells that may be contaminated, like there are for public water sources. We support the development of amendments that lead to a solution that works for Maryland.

Farmers and watermen are sounding the alarm[4] and filing lawsuits[5]. We should act now. Maryland can't wait for the EPA and must take stronger action to safeguard its drinking water sources, environment and the health of our farmers and communities. Waterkeepers

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[2] The EPA Promotes Toxic Fertilizer. 3M Told It of Risks Years Ago, New York Times, Hiroko Tabuchi, December 27, 2024

[3] EPA's Draft Sewage Sludge Risk Assessment for Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonic Acid (PFOS), January 2025 https://www.epa.gov/biosolids/draft-sewage-sludge-risk-assessment-perfluorooctanoic-acid-pfoa-and-perfluorooctane

[4] Beware of Biosolids: Lack of Testing for Forever Chemicals Heightens Risk [Opinion], Tom Venesky, Lancaster Farming, February 7, 2025

[5] EPA Sued to Remove PFAS from Biosolid Fertilizers, PEER, June 6, 2024, https://peer.org/epa-sued-to-remove-pfas-from-biosolid-fertilizers/

Chesapeake and the below signed organizations and farmers urge this committee to issue a favorable report on HB0909.

Respectfully,
Robin Broder, Acting Executive Director
Waterkeepers Chesapeake
robin@waterkeeperschesapeake.org

Betsy Nicholas, VP of Programs & Litigation
Brent Walls, Upper Potomac Riverkeeper
Dean Naujoks, Potomac Riverkeeper
Potomac Riverkeeper Network

Matt Pluta, Choptank Riverkeeper & Director of Riverkeeper Programs
ShoreRivers

Evan Isaacson, Senior Attorney, Director of Research
Chesapeake Legal Alliance

Elle Bassett, West, Rhode & South Riverkeeper
Arundel Rivers Federation

Alice Volpitta, Baltimore Harbor Waterkeeper
Blue Water Baltimore

Taylor Swanson, Executive Director & Assateague Coastkeeper
Asstateague Coastal Trust

Theaux LeGardeur, Executive Director & Riverkeeper
Gunpowder Riverkeeper

Tim Whitehouse, Executive Director
Public Employees for Environmental Responsibility

Matt Stegman, Maryland Staff Attorney
Chesapeake Bay Foundation

Marisa Olszewski, Environmental Policy Manager
Maryland League of Conservation Voters

Emily Ranson, Chesapeake Regional Director
Clean Water Action

Peter Alexander, Co-Facilitator
Indivisible HoCoMD Environmental Action

Bonnie Raindrop, Program Director
Maryland Pesticide Education Network

Liz Whitehurtz
Owl's Nest Farm
Upper Marlboro, MD

Randy Lyon, Legislative Chair
Sierra Club Maryland Chapter

Tom Taylor, Co-Chair
Beaverdam Creek Watershed Watch Group

Liz Lamb, Community Farming Program Manager
The 6th Branch

Caroline Taylor, Executive Director
Montgomery Countryside Alliance

Wendy Maria Sheppard, farm owner
Montgomery County, MD

MDE HB909 SWA.pdf
Uploaded by: Jeremy D. Baker
Position: FWA

The Maryland Department of the Environment
Secretary Serena McIlwain

HB 909
Sewage Sludge Utilization Permits - Per- and Polyfluoroalkyl Substances - Concentration Limits

Position: Support with Amendments
Committee: Environment and Transportation
Date: February 26, 2025
From: Leslie Gray, Government Relations Officer

The Maryland Department of the Environment (MDE) **SUPPORTS** HB 909 **WITH AMENDMENTS**.

Bill Summary

This legislation would require certain sewage sludge utilization permits issued or renewed by the Department to limit the concentration of certain PFAS substances in biosolids being applied to agricultural lands.

Position Rationale

Managing PFAS levels in biosolids is an important strategy in protecting the public health and environment. Additionally, the land application of biosolids is an important tool for Maryland to meet its Chesapeake Bay water quality and climate goals. Not only does the land application of biosolids add bacteria and organic matter to soil, but land application of biosolids also improves the tillability and moisture retention capability of soil. Thereby reducing nutrient runoff, and helping to sequester carbon into the soil. If farmers had to use commercial fertilizer, this may inadvertently increase nutrient runoff and increase carbon emissions.

The sewage sludge utilization permit limit on the total concentration of PFOS and PFOA proposed in HB 909, effectively restricts the land application of any Class B biosolids on agricultural land. Given a cursory review of Maryland wastewater treatment plant PFAS data, MDE expects that no biosolids in Maryland are meeting the 1 ppb limit in this legislation. This will result in MDE needing to permit the remaining 17 landfills (10 currently permitted), to account for the significant volume of biosolids that would need to be disposed of. Moreover, biosolids may have to be disposed of out of state, increasing costs on wastewater treatment plants. Additionally, 250 farmers will no longer be able to utilize biosolids as a nutrient source, forcing them to procure more expensive nutrient sources.

Proposed Amendments

MDE proposes that the legislation provide for an immediate ban on the land application of sewage sludge containing a mixture of PFOA and PFOS at or above 100 ppb. The legislation should direct MDE within 3 years to develop a technologically and economically feasible standard for mixtures of PFOA and PFOS, using 1ppb as a presumptive baseline and require such standard to be incorporated within all sewage

sludge utilization permits within a reasonable timeframe after promulgation. Further, the legislation should be amended to codify MDE's current guidance as interim guidance during the period preceding incorporation of a final standard. This is consistent with land application guidelines and established limits in other states. Additionally, the Department recommends amendments to authorize MDE to establish workable sampling and testing protocols through evaluating the capacity, costs, and feasibility of a sampling testing program. The Department could issue guidance, within 180 days of enactment, on monitoring for PFOA and PFOS prior to land application while the Department develops formal regulations, to include sampling and testing protocols. Further, the Department could be instructed to revise such standards periodically to incorporate additional PFAS, as appropriate.

For the reasons detailed above MDE asks for a **FAVORABLE WITH AMENDMENTS** report for HB 909.

Contact: Leslie Gray, Government Relations Officer
Email: leslie.gray@maryland.gov

MD hB909 Submitted NACWA Testimony.pdf
Uploaded by: Danielle Cloutier
Position: UNF

1130 Connecticut Ave NW
Suite 1050
Washington DC 20036

T (202) 833-2672
F (888) 267-9505

www.nacwa.org

February 24, 2025

The Honorable Marc Korman
Chair, House Environment and Transportation Committee
250 Taylor House Office Building
Annapolis, MD 21401

Re: Submission of Written Testimony for the Record in Opposition to HB 909 "An Act concerning Sewage Sludge Utilization Permits – Per-and-Polyfluoroalkyl Substances – Concentration Limits" Before the State of Maryland's Senate Education, Energy, and Environment Committee

Dear Chairman Korman and Members of the House Environment and Transportation Committee:

The National Association of Clean Water Agencies (NACWA) appreciates the opportunity to provide written testimony pertaining to the Committee's hearing on HB 909. NACWA has significant concerns with the legislation in its current form, especially its flawed reliance on the U.S. Environmental Protection Agency's (EPA) recent Draft Risk Assessment for PFOA and PFOS in Biosolids and its incorrect application of a 1 part per billion (ppb) PFAS limit as a regulatory standard.

NACWA is the national advocacy voice for more than 360 public wastewater and stormwater utilities around the country – including the Anne Arundel County Department of Public Works, the Baltimore City Department of Public Works, the Howard County Department of Public Works, and WSSC Water.

NACWA and its public utility members recognize the critical importance of addressing PFAS contamination concerns and support policies that promote effective, science-based solutions to protect public health and the environment. NACWA member agencies in Maryland and across the country are facing significant challenges associated with PFAS related to their role as passive receivers of these chemicals via municipal wastewater influent.

PFAS are ubiquitous in our society and in our bodies because they are found in many of the products we use every day like cookware, clothes and cosmetics. By the time PFAS reach a clean water utility, they have flowed out of homes, businesses, and communities. This underscores that to meaningfully protect our water bodies and ourselves from PFAS risks, source control must be the first step.

Written Testimony for the Record in Response to HB 909
February 24, 2025

Maryland Senate Bill 732 attempts to address concerns around PFAS in biosolids, and NACWA believes there are appropriate ways to address these concerns via state legislation. Unfortunately, HB 909 in its current form attempts to address these concerns in an inappropriate manner based on its flawed understanding of what EPA's Draft Risk Assessment found and a misunderstanding of the 1 ppb number used in the Draft Risk Assessment. The legislation misapplies EPA's scientific and human health protection data and could ultimately create greater environmental harm than it seeks to prevent.

As EPA made clear in its communication materials released as part of the Draft Risk Assessment, the assessment only found an increased health risk from PFAS in biosolids for a very narrow, specific segment of the population – namely the hypothetical "farm family" that EPA used in its risk models that assumed a family living on a farm that eats all of its food and drinks all of its water from that farm where biosolids are applied. However, this hypothetical family does not actually exist in the real world. EPA's materials further clarify that the Draft Risk Assessment does not indicate any increased health risk from PFAS in biosolids to the general public or to the general food supply.[1]

HB 909's use of the 1 ppb number for PFAS in biosolids also misunderstands and misapplies how that level was used in EPA's Draft Risk Assessment. The 1 ppb number is simply the number EPA picked for modeling purposes – it could have instead picked any other number it wanted to run the models. The 1 ppb number is not, and was never intended to be, a regulatory standard for PFAS in biosolids. As EPA's own Fact Sheet for State Water Agencies makes clear, the Draft Risk Assessment and its 1 ppb number is not a regulation and does not compel any action from states.[2]

If EPA wants to ultimate set a regulatory standard for PFAS in biosolids, it will have to first finalize the Draft Risk Assessment and then go through a comprehensive rulemaking process with public notice and comment to determine what regulatory standard would be most appropriate. NACWA believes that states should allow this federal rulemaking process to play out before setting their own standards.

HB 909 also places an impossible compliance burden on public wastewater utilities that are not the source of PFAS contamination. As currently written, the legislation will effectively ban the land application of biosolids in Maryland due to its impractical compliance timeline and testing requirements. This will leave municipal clean water utilities with no other option but a direct-to-landfill requirement that will be more burdensome logistically, less environmentally-friendly, and exponentially more costly – costs that are ultimately passed onto Maryland residents. Instead of mitigating PFAS contamination, the bill will shift the problem elsewhere, potentially worsening Maryland's environmental footprint.

As an alternative, NACWA urges legislation that considers codifying or building upon the existing, science-based initiatives led by the Maryland Department of the Environment (MDE). MDE has implemented a tiered strategy for managing PFAS concentrations in biosolids, setting specific guidelines based on measured levels of PFOS and PFOA. This approach allows a pathway for land application to continue while protecting public

[1] See EPA Press Release on Draft Risk Assessment (Jan. 14. 2025); EPA FAQs on Draft Risk Assessment; EPA Fact Sheet on Draft Risk Assessment.
[2] See EPA Fact Sheet for State Water Agencies.

health and the environment. This approach helps preserve the environmental benefits offered by beneficial reuse of biosolids and the green energy generation that can take place as part of the biosolids processing.

NACWA believes more balanced, science-driven approach is needed—one that aligns with ongoing state regulatory efforts, ensures practical implementation and prevents unintended consequences that could leave Maryland facing greater environmental challenges than the status quo.

Rather than work from an incomplete federal risk assessment with a modeling value that was never intended to be used as a regulatory threshold, it is critical that policymakers allow the appropriate scientific processes to take place to determine what the appropriate risk-based regulatory approaches are most appropriate and protective of public health.

NACWA appreciates the opportunity to provide written testimony on HB 909. If members of the state legislature have questions, please don't hesitate to contact me or Nathan Gardner-Andrews, NACWA's Chief Advocacy & Policy Officer, at ngardner-andrews@nacwa.org.

Sincerely,

Adam Kranz
CEO

HB0909_UNF_Synagro WWT_Sewage Sludge Utilization P
Uploaded by: Drew Vetter
Position: UNF

House Environment and Transportation Committee
February 26, 2025
House Bill 909 – *Sewage Sludge Utilization Permits – Per- and Polyfluoroalkyl Substances – Concentration Limits*
POSITION: OPPOSE

Synagro WWT, Inc. (Synagro) is the largest recycler of organic by-products in the United States. Providing essential environmental solutions to over 600 public and private water and wastewater treatment facilities in the municipal and industrial sectors, the Company operates in every part of the nation, including Maryland, and employs more than 750 people. Synagro's direct land application and reclamation program is a proven, time-tested management approach, ensuring the beneficial use of biosolids and other suitable residuals. Synagro wishes to register its strong opposition for House Bill 909.

This bill limits sewage sludge utilization permits issued or renewed by the Maryland Department of the Environment (MDE) for applying sewage sludge to agricultural land to 1 microgram per kilogram or lesser levels adopted by the U.S. Environmental Protection Agency (EPA) or MDE. A limit at the one microgram per kilogram level – equivalent to 1 part per billion (ppb) – is an extraordinarily low level and represents a sudden and *de facto* ban on the land application of biosolids. A 1 ppb limit is overly restrictive, lacks scientific justification, and threatens the beneficial reuse of biosolids in agriculture.

Biosolids recycling is a well-established and regulated practice that provides essential nutrients to soils, reduces reliance on chemical fertilizers, and supports healthy crop production. Existing federal and state regulations, including those established by the EPA under 40 CFR Part 503, already set stringent safety standards for the treatment and application of biosolids. These standards have been developed through extensive scientific research and risk assessments to ensure the protection of human health and the environment.

The proposed 1 ppb limit is technically unfeasible, given current analytical detection limits and naturally occurring background levels of certain substances in organic material. Implementing such an extreme standard would effectively eliminate biosolids recycling, increase municipal disposal costs, and place unnecessary strain on landfills and incineration facilities – all without measurable environmental benefits.

Synagro acknowledges that the 1 ppb limit proposed in this legislation was most likely adopted from the draft risk assessment recently released by the EPA on January 14, 2025. However, we caution against adopting this limit into Maryland State law when the risk assessment is still in draft form and not fully scrutinized by the scientific and stakeholder communities. Nor does it express any impact to the general public. Synagro has been working closely with MDE on this issue for several years. In response, MDE released a PFAS in Biosolids Regulatory Update on August 20, 2024. This document is based on a comprehensive sampling of influent, effluent, and sewage sludge at wastewater treatment plants (WWTPs) in Maryland. Based on that data, MDE has provided the following guidance:

- If the level of PFOS or PFOA is 100 µg/kg or above, land application of the biosolids is recommended to be stopped.
- If PFOS or PFOA is at or above 50 µg/kg, but less than 100 µg/kg, the recommended

application rate for land application of biosolids must be lowered to 1.5 dry tons per acre or less.

- If PFOS or PFOA is at or above 20 µg/kg, but less than 50 µg/kg, the recommended application rate for land application of biosolids must be lowered to 3 dry tons per acre or less.
- Biosolids with a PFOS concentration below 20 µg/kg and a PFOA concentration below 20 µg/kg may be land applied with no additional requirements after submission of results.

The legislation unnecessarily goes well beyond the scientific sampling-based guidance developed by MDE. Additionally, the effective ban on land application of biosolids in Maryland creates a different enormous environmental challenge – the disposal of sewage sludge. Synagro understands that landfills or incinerators in Maryland currently do not accept sewage sludge. The only remaining option is transporting the sludge out-of-state, a costly and environmentally burdensome endeavor. If WWTPs suddenly need to dispose of all sewage sludge out-of-state, sewage costs will increase dramatically.

Lastly, the legislation does not consider the environmental impacts to the alternatives. Alternative disposal will result in release of PFAS into the environment, will lack any beneficial component, and will result in significantly higher greenhouse gas emissions and energy consumption.

Synagro is committed to ensuring that Maryland's biosolids program remains sustainable, practical, and protective of public health. We encourage the General Assembly to consider the broader economic impacts of this legislation and thoroughly consider alternatives and the consequences of the legislation as drafted. We respectfully request an **unfavorable** report.

For more information call:
Andrew G. Vetter
J. Steven Wise
Danna L. Kauffman
(410) 244-7000

HB 909 - Sewage Sludge Utilization Permits.pdf
Uploaded by: Erin Dey
Position: UNF

Karen Henry, Director
2662 Riva Road, Annapolis, MD 21401
410-222-7042
pwhenr00@aacounty.org
www.dpwandyou.com

February 24, 2025

Environment and Transportation Committee
251 Taylor Avenue
House Office Building
Annapolis, Maryland 21401

Dear Chair Korman,

The Anne Arundel County Department of Public Works (DPW) strongly opposes House Bill 909 - Sewage Sludge Utilization Permits - Per- and Polyfluoroalkyl Substances - Concentration Limits. This legislation, as currently drafted, creates an unfunded mandate that will impose significant and undue financial burdens on Anne Arundel County and its residents.

HB 909's concentration limits for PFOS and PFOA will necessitate a drastic change in our biosolids management strategy. If biosolids land application is effectively banned, we will be forced to find alternatives out-of-state. If out-of-state options are available, which may not be the case, we anticipate that this will double our biosolids handling costs, increasing them from the current $700 per dry ton to an estimated $1,400 per dry ton. This translates to an approximate annual increase of **$12 million** for Anne Arundel County. As a local utility, we have no choice but to pass those costs on to our ratepayers, which we do not want to do, especially when they are facing ongoing inflationary pressure on essentials like food, housing, transportation, and energy costs.

Beyond the immediate cost increase, HB 909 fails to provide sufficient time for the County to explore and implement more cost-effective disposal methods. It does not allow adequate time to plan, design, and construct treatment facilities capable of achieving the stringent PFOS and PFOA concentration limits of less than 1 microgram per kilogram. This lack of a reasonable timeframe places an unreasonable burden on local governments.

We understand and appreciate the General Assembly's efforts to address the important issue of PFAS contamination. However, we believe HB 909, in its current form, creates a crippling financial burden on our department and the residents of Anne Arundel County. We urge the Senate to reconsider the bill and explore alternative approaches that are both effective in addressing PFAS contamination and feasible for local governments to implement.

Thank you for considering our concerns. We respectfully request that you oppose House Bill 909.

Sincerely,

Karen Henry

Karen Henry
Director

cc: Members of the House Environment and Transportation Committee

(City of Frostburg) Land Application of sludge PFA

Uploaded by: Hayden Lindsey

Position: UNF

City of Frostburg

Delegate Marc Korman, Chair
Delegate Regina T. Boyce, Vice-Chair
House Environment & Transportation Committee
250 Taylor House Office Building

Annapolis, MD 21401

RE: HB909/SB732 (Sewer Sludge Utilization Permits – PF0S & PFOA)

Delegate Korman:

I'm writing to you to request your support in rejecting the proposed legislation under HB 909 and SB 732 which proposes to restrict land applications of biosolids (or sewage sludge) on agricultural land produced at treatment plants. Perfluoro octane Sulfonic Acid (PFOS) and Perfluorooctanoic Acid (PFOA) are "forever chemicals." These compounds are found in sewage and originate from everyday items.

The City of Cumberland operates a regional water treatment plant that treats sewage for a majority of Allegany County, Frostburg included. If the bill is passed as written, Frostburg's sewerage costs will increase drastically, over double, due to the changes Cumberland will have to make to their treatment process. Cumberland land applies a large portion of its' solids post treatment. If not allowed to land-apply, Cumberland's costs will increase dramatically due to trucking and disposal fees. These increases will be passed on to Frostburg residents.

I strongly recommend you object to this bill and seek revisions to the legislation. While Frostburg supports efforts to reduce exposure to PFOS and PFOA, we do not believe the current bill reflects a reasonable approach by grossly exceeding MDE's own guidance. The language shifts the burden of treating these chemicals from the industries manufacturing them to your constituents.

If this bill is passed, Cumberland will have to store biosolids on site until a location can be determined for disposal. Our local landfills (Allegany County and Somerset, PA) will not be able to accept all of it due to restrictive capacity. If a new location is not identified within 60 days, Cumberland will need to shut down their wastewater facility. This would be disastrous for not only Frostburg but the entire county.

Frostburg requests that the bill be revised to comply with existing MDE guidance.

Respectfully

Todd J. Logsdon
Mayor
City of Frostburg

cc:

Delegate Dana Stein, House Bill Sponsor
Senator Sara Love, Senate Bill Sponsor
Senator Brian Feldman, Chair, Senate E3 Committee
Senator Cherly Kagan, Vice-Chair, Senate E3 Committee
Allegany County Delegation
Mayor Raymond Morriss, City of Cumberland
Jeffrey Silka, City Administrator, City of Cumberland

DC Water Oral Testimony HB 909 .pdf
Uploaded by: James Fotouhi
Position: UNF

David L. Gadis, Chief Executive Officer
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY | 1385 CANAL STREET, SE | WASHINGTON, DC 20003

The Honorable Marc Korman
Chair, Environment and Transportation Committee
250 Taylor House Office Building
Annapolis, MD 21401

OPPOSE – HB 909 (Sewage Sludge Utilization Permits – Per-and Polyfluoroalkyl Substances – Concentration Limits)

Chairman Korman,

I represent DC Water's Blue Plains advanced wastewater treatment plant and the great biosolids program that we've developed. Our goal is to project the environment, particularly the Chesapeake from carbona and nutrients present in sewage. DC Water receives flow from all over the regions include 40% from Montgomery and PG county. 10 years ago we upgraded our biosolids system to both generate energy and produce a high quality biosolids product, which we market around the region as bloom.

Because products containing PFAS compounds are ubiquitous, very small, background societal concentrations of PFOS and PFOA end up in municipal biosolids. These compounds are in products we use in our home every day at thousands of times higher concentrations than Bloom and as a result, the average household dust has 10 times the PFAS in Bloom. A farm field in MD receives as much PFOS from annual rainfall as from applying Bloom for corn growth.

In August, Maryland set guidelines for biosolids reuse to ensure industrially impacted biosolids are prohibited from land application and MDE requires municipalities to investigate and limit discharge from industrial facilities within their service area.

This bill would drive up costs significantly for Maryland residents and will negatively affect affordability. DC Water will need to find landfill space (the only viable option), at an estimated $33M/yr. Maryland residents will share 40% of this additional cost without a significant reduction in their risk of PFAS exposure.

DC Water shares the concerns over PFAS in our society but disagrees with setting limits at levels many orders of magnitude lower than our daily household exposure. We do not want to impose these high additional costs on MD residents when it will do little to reduce their exposure risk. DC Water would welcome the opportunity to assist MDE in a campaign to educate residents on products they use that contain PFAS and alternatives to their use. A campaign such as this could have a significant impact on PFAS exposure levels and risk of contact.

DC Water Written Testimony HB 909.pdf
Uploaded by: James Fotouhi
Position: UNF

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David L. Gadis, Chief Executive Officer

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY | 1385 CANAL STREET, SE | WASHINGTON, DC 20003

February 26, 2025

The Honorable Marc Korman
Chair, Environment and Transportation Committee
250 Taylor House Office Building
Annapolis, MD 21401

Re: Unfavorable – HB909 (Sewage Sludge Utilization Permits – Per-and Polyfluoroalkyl Substances – Concentration Limits)

Dear Chairman Korman:

The District of Columbia Water and Sewer Authority (DC Water) shares the concern over ubiquitous PFAS use in our society, and welcomes the opportunity to assist the Maryland Department of the Environment (MDE) in their existing program to limit PFAS release. On behalf of DC Water, I am writing to share concerns with HB 909, which would direct MDE to issue sewage sludge (biosolids) utilization permits for agricultural land application with a limit of 1 microgram per kilogram (equivalent to 1 part per billion, or ppb) for PFOS or PFOA. DC Water operates the Blue Plains Advanced Wastewater Treatment Plant with the mission of removing nutrients and carbon and keeping them out of the Chesapeake Bay. HB 909 would impact nearly every wastewater plant in the State including Blue Plains, which is geographically out of state but receives 40% of its substantial flow from Montgomery and Prince George's Counties. Maryland residents pay 40% of the capital and operating expenses for this regional facility. DC Water is not a for-profit utility, but rather an autonomous authority, and Blue Plains is funded entirely by its wastewater bills (including 40% by residents in MD). Ten years ago DC Water invested in thermal hydrolysis, digestion, and combined heat and power equipment ($470M, 40% from MD) to recover the nutrients and generate green energy in the form of heat and electricity (7 MW continuous electricity production and an equal amount of thermal energy). The high heat, high pressure system produces a Class A exceptional quality soil amendment product which we branded and trademarked as Bloom. DC Water is proud of the Bloom program, as we return Maryland carbon and nutrients back to the land from which it came, completing the natural cycle. In addition, the digester and Bloom program reduced our carbon footprint by a third, or approximately 50,000 MT CO_2e annually.

Because products containing PFAS compounds are ubiquitous, very small, background societal concentrations of PFOS and PFOA end up in municipal biosolids. These compounds are in products we use in our home every day at thousands of times higher concentrations than Bloom (see graphic below) and as a result, the average household dust has 10 times the PFAS in Bloom. To illustrate how low the concentrations are in Bloom, the PFOS and PFOA in Bloom are roughly at the same level as in the average American's blood serum. A farm field in MD receives as much PFOS from annual rainfall as from applying Bloom for corn growth. The proposed 1 ppb limit in this bill is lower than blood serum and is unachievable for any municipal biosolids. Additionally, University of Arizona studies found PFAS at levels higher than 1 ppb on farms that never received biosolids, indicating the ubiquitous nature of PFAS exposure in the environment.

Other states, including Maryland, set guidelines for biosolids reuse to ensure industrially impacted biosolids are prohibited but allow for municipal agencies to continue recycling biosolids with low concentrations of PFOS and PFOA. Along with the application rate recommendations, MDE requires municipalities to investigate and limit discharge from industrial facilities within their service area. This approach allows for continual improvement toward reducing the circulation of PFAS compounds in our society while still reaping the benefits of biosolids recycling.

PFAS Concentrations in Household Products, ug/kg or ppb

Dental Floss[8]	2,489,000
Ketchup[7]	58,000
Organic Pasta Sauce[7]	21,000
Cosmetic Foundation[6]	10,500
Smartwatch Wristbands[5]	800
Daycare Dust[4]	523
Pork Liver[3]	283

[3] Concentrations of perfluoroalkyl substances in foods and the dietary exposure among Taiwan general population and pregnant women, ScienceDirect
[4] Per- and polyfluoroalkyl substances in paired dust and carpets from childcare centers, PubMed (nih.gov)
[5] Smartwatch Wristbands, University of Notre Dame study as published in Environmental Science & Technology Letters
[6] Fluorinated Compounds in North American Cosmetics, Environmental Science & Technology Letters (acs.org)
[7] Toxic PFAS, the "Everywhere Chemicals," Are in Organic Pasta Sauce and Ketchup, Drugs, Pesticides, and Foodware, Sierra Club
[8] Dental Floss, Environmental Health News/Mamavation study
[9] PFAS in Biosolids: A Southern Arizona Case Study, The University of Arizona, 2020

This bill would drive up costs significantly for our Maryland residents whose sewage is routed to Blue Plains, and negatively affect affordability. If biosolids land application is de facto banned, local wastewater managers will need to find alternative options at much higher costs. At DC Water, we currently spend $5.7M annually on our biosolids program, but if land application is no longer available, DC Water will need to find landfill space (the only viable option), at an estimated $33M/yr, losing all the well-documented benefits of land application. This would translate into a 15% increase in residents water/sewer bill just at the outset, but would likely increase in cost due to the

scarcity of disposal options, as seen in Maine. DC Water objects to asking MD residents to pay more for biosolids management when the private industrial companies that make or use PFAS and profit from PFAS are paying nothing and still circulating these products into our system.

DC Water shares the concerns over PFAS in our lives. The solution to our societal PFAS issue is source control, both at the industrial and residential points of entry. DC Water would welcome the opportunity to assist MDE in a campaign to educate residents on products they use that contain PFAS and alternatives to their use. A campaign such as this could have a significant impact on PFAS exposure levels and risk of contact. DC Water urges the Committee to consider the impacts on the State's wastewater plants and their customers and **Vote NO** on HB 909.

Please feel free to contact me with any questions at james.fotouhi@dcwater.com or 202-787-4723.

Sincerely,

James Fotouhi,
Program Manager – Resource Recovery
DC Water

cc: Environment and Transportation Committee Members
HB 909 Sponsor

MD PFAS House Bill opposition remarks Jfotouhi.pdf
Uploaded by: James Fotouhi
Position: UNF

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David L. Gadis, Chief Executive Officer

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY | 1385 CANAL STREET, SE | WASHINGTON, DC 20003

February 26, 2025

The Honorable Marc Korman
Chair, Environment and Transportation Committee
250 Taylor House Office Building
Annapolis, MD 21401

Re: Unfavorable – HB909 (Sewage Sludge Utilization Permits – Per-and Polyfluoroalkyl Substances – Concentration Limits)

Dear Chairman Korman:

The District of Columbia Water and Sewer Authority (DC Water) shares the concern over ubiquitous PFAS use in our society, and welcomes the opportunity to assist the Maryland Department of the Environment (MDE) in their existing program to limit PFAS release. On behalf of DC Water, I am writing to share concerns with HB 909, which would direct MDE to issue sewage sludge (biosolids) utilization permits for agricultural land application with a limit of 1 microgram per kilogram (equivalent to 1 part per billion, or ppb) for PFOS or PFOA. DC Water operates the Blue Plains Advanced Wastewater Treatment Plant with the mission of removing nutrients and carbon and keeping them out of the Chesapeake Bay. HB 909 would impact nearly every wastewater plant in the State including Blue Plains, which is geographically out of state but receives 40% of its substantial flow from Montgomery and Prince George's Counties. Maryland residents pay 40% of the capital and operating expenses for this regional facility. DC Water is not a for-profit utility, but rather an autonomous authority, and Blue Plains is funded entirely by its wastewater bills (including 40% by residents in MD). Ten years ago DC Water invested in thermal hydrolysis, digestion, and combined heat and power equipment ($470M, 40% from MD) to recover the nutrients and generate green energy in the form of heat and electricity (7 MW continuous electricity production and an equal amount of thermal energy). The high heat, high pressure system produces a Class A exceptional quality soil amendment product which we branded and trademarked as Bloom. DC Water is proud of the Bloom program, as we return Maryland carbon and nutrients back to the land from which it came, completing the natural cycle. In addition, the digester and Bloom program reduced our carbon footprint by a third, or approximately 50,000 MT CO_2e annually.

Because products containing PFAS compounds are ubiquitous, very small, background societal concentrations of PFOS and PFOA end up in municipal biosolids. These compounds are in products we use in our home every day at thousands of times higher concentrations than Bloom (see graphic below) and as a result, the average household dust has 10 times the PFAS in Bloom. To illustrate how low the concentrations are in Bloom, the PFOS and PFOA in Bloom are roughly at the same level as in the average American's blood serum. A farm field in MD receives as much PFOS from annual rainfall as from applying Bloom for corn growth. The proposed 1 ppb limit in this bill is lower than blood serum and is unachievable for any municipal biosolids. Additionally, University of Arizona studies found PFAS at levels higher than 1 ppb on farms that never received biosolids, indicating the ubiquitous nature of PFAS exposure in the environment.

Other states, including Maryland, set guidelines for biosolids reuse to ensure industrially impacted biosolids are prohibited but allow for municipal agencies to continue recycling biosolids with low concentrations of PFOS and PFOA. Along with the application rate recommendations, MDE requires municipalities to investigate and limit discharge from industrial facilities within their service area. This approach allows for continual improvement toward reducing the circulation of PFAS compounds in our society while still reaping the benefits of biosolids recycling.

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[6] Fluorinated Compounds in North American Cosmetics, Environmental Science & Technology Letters (acs.org)
[7] Toxic PFAS, the "Everywhere Chemicals," Are in Organic Pasta Sauce and Ketchup, Drugs, Pesticides, and Foodware, Sierra Club
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scarcity of disposal options, as seen in Maine. DC Water objects to asking MD residents to pay more for biosolids management when the private industrial companies that make or use PFAS and profit from PFAS are paying nothing and still circulating these products into our system.

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Please feel free to contact me with any questions at james.fotouhi@dcwater.com or 202-787-4723.

Sincerely,

James Fotouhi,
Program Manager – Resource Recovery
DC Water

cc: Environment and Transportation Committee Members
HB 909 Sponsor

HB 909.pdf
Uploaded by: Lawrence Richardson
Position: UNF

ROBERT G. CASSILLY
Harford County Executive

ROBERT S. MCCORD
Director of Administration

February 24, 2025

Delegate Marc Korman, Chair
Environment and Transportation Committee
250 Taylor House Office Building
6 Bladen Street
Annapolis, Maryland 21401

Re: Letter of Opposition on HB909 – Sewage Sludge Utilization Permits – Per-and Polyfluoroalkyl Substances – Concentration Limits

Dear Chairman Korman and Committee Members,

On behalf of Harford County, I am writing to share serious concerns with House Bill 909. Harford County is a Maryland Association of Municipal Wastewater Agencies (MAMWA) Member and support MAMWA's comments on this bill and encourage Committee members to review them carefully.

This bill would have a major impact on our plants and would drive up costs significantly for our ratepayers. If biosolids land application is effectively banned, Harford will be forced to find alternatives either out-of-state or at landfills. We fully anticipate that, if there are even options available (which may not be the case), our current annual biosolids management budget of $727,000 will increase to approximately $3,452,000. As a local utility, and during times of unprecedented budget shortfalls, we will have no choice but to pass those costs on to our ratepayers who are already facing on-going inflationary pressure on essentials like food, housing, transportation, and energy costs.

This bill is also unnecessary. The State's wastewater treatment plants are working right now with MDE on implementing last year's Protecting State Waters from PFAS Pollution Control Act. This important work is focused on PFAS sources—which are unequivocally not local wastewater plants—to reduce the level of PFAS loadings from those industries into local plants. In addition, MDE has a new policy in place that recommends that additional steps be taken if biosolids with more than 20 ppb will be land applied. In short, there is good work underway to address PFOS and PFOA levels in biosolids, and this work will be disrupted by HB909.

I respectfully request that the Environment and Transportation Committee report unfavorably on HB909.

Thank you.

Yours truly,

Robert G. Cassilly

MAMWA Ltr HB 909 2.24.25.pdf
Uploaded by: Lisa Ochsenhirt
Position: UNF

Maryland Association of Municipal Wastewater Agencies, Inc.
Washington Suburban Sanitary Commission
14501 Sweitzer Lane, 7th Floor
Laurel, MD 20707
Tel: 301-206-7008

February 24, 2025

The Honorable Marc Korman
Chair, House Environment and Transportation Committee
250 Taylor House Office Building
Annapolis, MD 21401

Re: OPPOSE -- HB 909 (Sewage Sludge Utilization Permits – Per-and Polyfluoroalkyl Substances – Concentration Limits)

Dear Chair Korman:

On behalf of the Maryland Association of Municipal Wastewater Agencies (MAMWA), I am writing to share **serious concerns with HB 909**, which would direct the Maryland Department of the Environment (MDE) to issue sewage sludge (biosolids) utilization permits for agricultural land application with a limit of 1 microgram per kilogram for PFOS or PFOA. MAMWA is a statewide association of local governments and wastewater treatment agencies that serve approximately 95% of the State's sewered population. Many members rely on biosolids land application to manage the residuals that remain after treatment at their wastewater plants.

HB 909 would be **damaging for the State's citizens**. The bill would impact nearly every wastewater plant in the State and would **drive up costs significantly for our ratepayers**. If biosolids land application is de facto banned, local wastewater managers will scramble to find alternative options at higher costs.

MAMWA objects to asking our ratepayers to pay more for biosolids management when the private industrial companies that make or use PFAS and profit from PFAS are paying nothing. MAMWA's members take affordability very seriously. We do not want to pass along additional costs, especially when citizens are spending more for essentials like food, housing, transportation, and energy as a result of inflation.

We surveyed our members to ask them how much more their biosolids programs would cost under HB 909. Here are the estimated impacts for just a few of the State's wastewater treatment plants:

- **Utility #1:** Currently land applies in Maryland. Current annual cost is $120,000. **HB 909 would increase costs to $211,000 (76% increase)**.

- **Utility #2:** Currently land applies in Maryland. **HB 909 would increase costs by approximately $12,000,000 annually**.

- **Utility #3:** Current land applies in Maryland. Current annual cost is $5,700,000. **HB 909 would increase these costs 6 times, increasing them to $33,000,000.**

- **Utility #4:** Currently land applies in Maryland. Current annual cost is $727,000. **HB 909 would increase costs to approximately $3,452,000 or an increase of approximately 4.8 times.**

- **Utility #5:** Currently land applies in Maryland. Current annual cost is $3,100,000. **HB 909 would increase costs to $4,600,000 annually (48% increase)**.

- **Utility #6:** Current land applies in Maryland. Current annual cost is $3,000,000. **HB 909 would increase costs to $3,500,000 annually**.

Another member who did not provide financial impacts shared that landfilling biosolids would increase costs significantly because of their location, limited access to landfills, and declining landfill capacity for biosolids as more and more plants are pushed to landfill the material.

MAMWA urges the Committee to consider the catastrophic impacts on the State's wastewater plants and their customers and **Vote NO** on HB 909.

Please feel free to contact me with any questions at Lisa@AquaLaw.com or 804-716-9021.

Sincerely,

Lisa M. Ochsenhirt
MAMWA Deputy General Counsel

cc: Environment and Transportation Committee Members
HB 909 Sponsor

OPPOSE HB 909 SSU Permits - PFAS - Concentration
Uploaded by: Mark Schweitzer
Position: UNF

FREDERICK COUNTY GOVERNMENT

DIVISION OF WATER AND SEWER UTILITIES

Jessica Fitzwater
County Executive

Mark A. Schweitzer, Director

February 24, 2025

The Honorable Marc Korman
Chair, House Environment and Transportation Committee
250 Taylor House Office Building
Annapolis, MD 21401

Re: OPPOSE -- HB 909 (Sewage Sludge Utilization Permits – Per-and Polyfluoroalkyl Substances – Concentration Limits)

Dear Chairman Korman:

On behalf of **Frederick County**, I am writing to share serious concerns with HB 909, which would direct the Maryland Department of the Environment (MDE) to issue sewage sludge utilization permits for agricultural land application with a limit of 1 microgram per kilogram for PFOS or PFOA. **Frederick County** is a Maryland Association of Municipal Wastewater Agencies (MAMWA) Member and we rely on a viable biosolids land application program to manage the residuals that remain after the treatment process at our plant(s). We support MAMWA's comments on this bill and encourage Committee members to review them carefully.

HB 909 would impact our plants and would **drive up costs significantly for our ratepayers**. If biosolids land application is effectively banned, we will be forced to find alternatives either out-of-state or at landfills. We fully anticipate that, if there are even options available (which may not be the case), our current annual biosolids management budget of **$3.1 million** will increase to approximately **$4.6 million**. As a local utility, we have no choice but to pass those costs on to our ratepayers, which we do not want to do, especially when they are facing on-going inflationary pressure on essentials like food, housing, transportation, and energy costs.

HB 909 is also **unnecessary**. The State's wastewater treatment plants are working right now with MDE on implementing last year's Protecting State Waters from PFAS Pollution Control Act. This important work is focused on PFAS sources—which are unequivocally not local wastewater plants—to reduce the level of PFAS loadings from those industries into local plants. In addition, MDE has a new policy in place that recommends that additional steps be taken if biosolids with more than 20 ppb will be land applied. In short, there is good work underway to address PFOS and PFOA levels in biosolids, and this work will be disrupted by HB 909.

Frederick County is aware that MAMWA representatives have held discussions with staff from the Maryland Department of Environment and the bill sponsor to share our concerns on this bill and are actively discussing amendments to address them.

Please feel free to contact me with any questions at MSchweitzer@FrederickCountyMD.gov or 301-600-2296.

Sincerely,

Mark A. Schweitzer
Director

cc: Environment and Transportation Committee Members
HB 9009 Sponsor

MD HB0909 Baker Testimony.pdf
Uploaded by: Mary Baker
Position: UNF

Good afternoon, Representative Korman, Committee members. My name is Mary Baker and I am the executive director of the Mid-Atlantic Biosolids Association.

Since 1997, the Mid-Atlantic Biosolids Association has been communicating the benefits of resource recovery within the biosolids community and the communities we serve.

I am here to express concern about House Bill 909, which will **negatively impact** the beneficial reuse of biosolids. Biosolids are a **valuable resource** created during wastewater treatment. Land application of biosolids improves soil health, reduces the need for carbon-intensive synthetic fertilizers, and helps to fight climate change by carbon sequestration.

It's important to recognize that wastewater treatment plants are **passive receivers** of waste and they do **not** produce PFAS. The levels of PFAS in most biosolids are **significantly lower** than those found in common household products.

House Bill 909 notes its basis on EPA regulation. The EPA's draft risk assessment is **not yet finalized** and **should not** be the basis for new legislation. It is **premature** to enact laws based on a **draft** assessment that is still under review. In fact, the EPA directly stated that the draft risk assessment is **not** a regulation and does **not** compel action.

I ask that you report **unfavorably on House Bill 909**. Let the EPA complete its risk assessment and establish any necessary regulations before enacting potentially harmful restrictions on biosolids reuse.

<u>Please</u> protect the clean water sector, essential service providers, and rate payers from the unintended consequences of this bill.

HB909.SB732- Cumberland Letter (OPPOSED)(2025).pdf
Uploaded by: Richard Reinhardt
Position: UNF

CITY OF CUMBERLAND MARYLAND

DEPARTMENT OF ENGINEERING

Delegate Marc Korman, Chair
Delegate Regina T. Boyce, Vice-Chair
House Environment & Transportation Committee
250 Taylor House Office Building
Annapolis, Maryland 21401

Re: ***House Bill 909/Senate Bill 732: Sewer Sludge Utilization Permits – PF0S & PFOA - OPPOSED***

February 26, 2025

Dear Chairman Korman and Committee Members:

I'm writing to you to request your support in rejecting the proposed legislation under HB 909 and SB 732 which proposes to restrict land applications of biosolids (or sewage sludge) on agricultural lands produced at treatment plants.

Perfluorooctane Sulfonic Acid (PFOS) and Perfluorooctanic Acid (PFOA) are "forever chemicals" linked to health concerns across the country, most notably in Maine. These compounds are found in sewage but originate in the consumer goods we utilize every day such as dental floss, nonstick coatings and moisture wicking clothing.

The City of Cumberland ("the City") operates a regional water reclamation facility that treats sewage from roughly 44,000 citizens in our region. If the bill is passed as written, the City can expect to raise our sewer rates by nearly double in order to afford the trucking fees to dispose of our sludge at an approved landfill which we have not yet identified. Many landfills are already restrictive of the volume of biosolids they can accept and their existing capacity may already be reserved under existing agreements.

Currently, Maryland Department of Environment (MDE) has offered the following guidance on PFOS/PFOA in relation to land application:

- If the level of PFOS or PFOA is 100 µg/kg (ppb) or above, land application of the biosolids is recommended to be stopped.
- If PFOS or PFOA is at or above 50 µg/kg (ppb), but less than 100 µg/kg (ppb), the recommended application rate for land application of biosolids must be lowered to 1.5 dry tons per acre or less.

57 N. LIBERTY STREET, CUMBERLAND, MD 21502 www.cumberlandmd.gov
VOICE (301)759-6600 • FAX (301)759-6608 • TDD (800)735-2258

- If PFOS or PFOA is at or above 20 µg/kg (ppb), but less than 50 µg/kg (ppb), the recommended application rate for land application of biosolids must be lowered to 3 dry tons per acre or less.
- Biosolids with a PFOS concentration below 20 µg/kg (ppb) and a PFOA concentration below 20 µg/kg (ppb) may be land applied with no additional requirements after submission of results.

As currently written, treatment plants will not be permitted to facilitate land application of biosolids with PFOS or PFOA concentration higher than 1 µg/kg (ppb) unless the U.S. Environmental Protection Agency or MDE sets a more restrictive level.

Since 2022, the City has complied with regulation from MDE to test semi-annually for PFOS and PFOA. Our results showed that our PFOS at levels are between 4.8 and 6.4 µg/kg (ppb) and PFOA levels measured between 0.31 µg/kg (ppb) to 0.37 µg/kg (ppb).

The bill also states that land application can occur if the sludge is tested within 14 days of application. PFOS and PFOA testing is tremendously expensive ($1,000 per test) and typically takes 14 days (or more) to get the results. Orchestrating the testing and hauling in a 14-day period is not a feasible option for the City. The concessions to allow sludge to be applied after the 14-day window include factors that are outside of the sludge generators control once they leave the respective facility, such as the potential for the receiver to mix the sludge with other materials.

I implore you object to this bill and seek revisions to the legislation. While the City supports efforts to reduce exposure to PFOS and PFOA, we do not believe the current bill reflects a reasonable approach by grossly exceeding MDE's own guidance. The language shifts the burden of treating these chemicals from the industries manufacturing them to your constituents.

If this bill is passed, the City will have to store our biosolids on site until a location can be determined for disposal as our local landfills (Allegany County and Somerset, PA) will not be able to accept all of it due to restrictive capacity. If a new location is not identified within 60 days, we will need to shut down our wastewater facility. I assure you that this is not hyperbole.

The City requests that the bill be revised to comply with existing MDE guidance which I outlined in this letter. Until there is an alternative method for addressing PFOS and PFOA that is readily available to the City and other regions of the State, the General Assembly should be looking to address the areas with highest concentrations of these chemicals based on the required MDE testing instead addressing them in one fell swoop across the State.

Should you have any questions or concerns, please don't hesitate to contact me back at any time by email at robert.smith@cumberlandmd.gov or by phone at 301-759-6601.

Respectfully,

Robert Smith

Robert Smith, PE
Director of Engineering and Utilities

cc:

Delegate Dana Stein, House Bill Sponsor
Senator Sara Love, Senate Bill Sponsor
Senator Brian Feldman, Chair, Senate E3 Committee
Senator Cherly Kagan, Vice-Chair, Senate E3 Committee
Allegany County Delegation
Mayor Raymond Morriss, City of Cumberland
Jeffrey Silka, City Administrator, City of Cumberland

2025-MML-HB909-Unfavorable.pdf
Uploaded by: Tyler Brice
Position: UNF

Maryland Municipal League
The Association of Maryland's Cities and Towns

TESTIMONY

February 26, 2025

Committee: House – Environment and Transportation

Bill: HB 909 - Sewage Sludge Utilization Permits - Per- and Polyfluoroalkyl Substances - Concentration Limits

Position: ***Unfavorable***

Reason for Position:

On behalf of the Maryland Municipal League (MML), representing 161 local governments across the state, we respectfully submit this testimony expressing our opposition to House Bill 909. While we fully support efforts to reduce exposure to harmful chemicals such as PFOS and PFOA, the proposed restrictions on the land application of biosolids (sewage sludge) in HB 909 impose significant challenges on local governments, particularly those managing wastewater treatment facilities.

The bill's strict limitations on PFOS and PFOA concentrations in biosolids would require municipalities to invest heavily in alternative disposal methods, such as transporting biosolids to landfills. This shift could significantly increase disposal costs, with some municipalities potentially seeing their sewer rates double. These increases would place a substantial financial burden on local governments and ultimately result in higher costs for Maryland residents. The bill's testing and reporting requirements, particularly the need to test biosolids for PFOS and PFOA within a 14-day window, are both impractical and costly. Testing fees for PFOS and PFOA can reach up to $1,000 per test, with results typically taking more than 14 days to receive. The 14-day testing window, combined with the challenge of arranging timely disposal, presents a logistical and financial burden that is unfeasible for many municipalities, especially smaller or resource-constrained communities.

The language of the bill also imposes requirements that exceed the Maryland Department of the Environment's (MDE) current guidance, which already provides a reasonable framework for regulating PFOS and PFOA concentrations in biosolids. By raising the threshold for PFOS and PFOA concentration to levels as low as 1 μg/kg, this bill places an unfair burden on municipalities to comply with regulations that go far beyond the existing, scientifically-supported guidelines. Many municipalities, such as the City of Cumberland and the City of Frostburg, rely on land application for the disposal of biosolids. The restrictions in this bill would force these municipalities to store biosolids on-site or seek out new disposal sites, which may not have the capacity to handle the increased volume. If alternative disposal methods are not found in a timely manner, wastewater treatment facilities could face serious operational disruptions, including potential shutdowns.

Maryland Municipal League
The Association of Maryland's Cities and Towns

For these reasons, the Maryland Municipal League respectfully ***opposes*** HB 909 in its current form. We urge the committee to revise the bill to align with MDE's existing guidance and provide municipalities with more feasible and financially responsible solutions. The Maryland Municipal League (MML) shares the mutual goal of protecting public health and the environment and believes that working together with local governments to address these concerns could help achieve a balanced approach that supports these objectives while minimizing potential burdens on municipalities and residents.

For more information, please contact Tyler Alexis Brice, Manager of Advocacy and Public Affairs, at tylerb@mdmunicipal.org or 254-652-8110.

Thank you for your consideration.

HB0909-ET_MACo_LOI.pdf
Uploaded by: Dominic Butchko
Position: INFO

MARYLAND Association of COUNTIES

House Bill 909

Sewage Sludge Utilization Permits - Per- and Polyfluoroalkyl Substances - Concentration Limits

MACo Position:
LETTER OF INFORMATION

To: Environment and Transportation Committee

Date: February 26, 2025

From: Dominic J. Butchko

The Maryland Association of Counties (MACo) offers a **Letter of Information** on HB 909. This bill places new limitations on the use of certain byproducts from wastewater treatment processing that meet certain per- and polyfluoroalkyl substances (PFAS) thresholds.

Sewage sludge from wastewater treatment facilities is commonly repurposed for various beneficial uses, primarily in agriculture and land reclamation. Rich in organic matter and nutrients like nitrogen and phosphorus, treated sludge—often referred to as biosolids—can be applied as fertilizer to improve soil health and crop yields. Currently, in Maryland, approximately fifty percent of the biosolids from wastewater treatment facilities are used in agriculture.

HB 909 would limit the use of biosolids based on certain PFAS thresholds. As the primary operators of nearly all public infrastructure in Maryland, counties stand on the front line in mitigating the growing number of health threats resulting from PFAS contamination. One of the growing challenges with mitigation is deciding who will ultimately bear the financial responsibility: at-large taxpayers or culpable polluters. Counties are concerned as HB 909 would, whether intentionally or not, place a significant financial burden on local taxpayers, one coming at the same time as counties struggle to meet growing Blueprint obligations and grapple with a shrinking level of support from the federal government. For context, when Maine implemented similar restrictions on biosolids, costs for disposal of this material nearly doubled.

Additionally, counties echo the same concerns voiced by the Maryland Association of Municipal Wastewater Agencies (MAMWA),

> ***HB 909 is based on a narrowly tailored draft risk assessment.*** *MAMWA believes that the 1 microgram per kilogram in the bill is borrowed from EPA's recent draft risk assessment for PFOA and PFOS in biosolids. It is important to note that EPA did not identify any risk from PFOA and PFOS in biosolids to the public or any direct impact of risk to the general food supply. It is also important to note that PFAS chemicals are ubiquitous in our environment. In fact,*

dental floss has an average of 2.5 million ppb, food packaging has an average of 876,000 ppb, ketchup 58,000 ppb, organic pasta sauce 21,000 ppb, cosmetic foundation 10,500 ppb, daycare dust 523 ppb, and even human blood serum contains 7 ppb. The pervasive presence of PFAS in consumer products is the reason MAMWA is working with MDE to reduce PFAS at the source.

HB 909 would be damaging for the State's citizens**. The bill would impact nearly every wastewater plant in the State and would **drive up costs significantly for our ratepayers**. If biosolids land application is effectively banned, local wastewater managers will scramble to find alternative out-of-state (there is not enough landfilling capacity in Maryland to make it an option). **Best case scenario, local wastewater plant owners will see a significant cost increase (e.g., for trucking materials out-of-state, for paying additional permit fees, for paying out-of-state landfilling tipping fees). Worst case scenario, plants may not have anywhere to send these materials for land application or landfilling either in the State or elsewhere.

MACo is currently in discussions with the sponsor, advocates, and the Department of the Environment on amendments to address local concerns and ease the pressures on local taxpayers. Counties stand ready to partner with the committee and others to address the challenges of PFAS, without unduly burdening local ratepayers and taxpayers.

HB909-ET-LOC .pdf
Uploaded by: Nina Themelis
Position: INFO

BRANDON M. SCOTT
MAYOR

Office of Government Relations
88 State Circle
Annapolis, Maryland 21401

HB909

February 26, 2025

TO: Members of the Environment and Transportation Committee

FROM: Nina Themelis, Director of Mayor's Office of Government Relations

RE: House Bill 909 - Sewage Sludge Utilization Permits - Per- and Polyfluoroalkyl Substances - Concentration Limits

POSITION: Letter of Concern

Chair Korman, Vice Chair Boyce, and Members of the Committee, please be advised that the Baltimore City Administration (BCA) wishes to express concerns with House Bill (HB) 909.

HB 909 proposes new amendments to the Maryland Environment Article, focusing on regulating per- and polyfluoroalkyl substances (PFAS) in sewage sludge applied to agricultural land. Under this bill, any sewage sludge utilization permit issued or renewed by the Department of the Environment must limit the concentration of perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) to the lowest of three possible thresholds: one microgram per kilogram (µg/kg), the level established by health-based standards adopted by the U.S. Environmental Protection Agency, or more stringent limits set by the Department through regulations. Compliance requires independent lab testing within 14 days before land application unless the sludge is delivered directly to the site without storage or mixing. The Department may set stricter PFAS limits or regulate additional substances.

Baltimore City's water and wastewater treatment plants, operated by the Department of Public Works (DPW), treat approximately 200 million gallons of wastewater daily, serving 1.6 million residents. Currently, the Back River and Patapsco plants manage sludge byproducts in compliance with Maryland Department of the Environment (MDE) standards, which establish a tiered approach to PFAS monitoring and biosolid land application, with a maximum allowable limit for PFOS and PFOA of 100 µg/kg, beyond which land application must be discontinued. The proposed threshold of 1 µg/kg for PFOS and PFOA poses a far stricter limit, creating significant financial and operational burdens. Given the 2–4 week turnaround for third-party lab results, the proposed two-week standard creates an unachievable compliance timeline, requiring significant investment in testing infrastructure.

Additionally, the proposed legislation would substantially increase operational costs for public utilities, ultimately leading to higher rates for consumers. By imposing an unfunded mandate on utilities, it shifts the financial burden to ratepayers rather than addressing PFAS contamination at its source. Without a clear implementation plan, wastewater operators will be forced to consider costly alternative treatment processes, such as pyrolysis or gasification, which are not yet commercially available in Maryland and have seen limited use nationwide.

While we recognize the need for regulating PFAS to protect public health and the environment, we respectfully ask the committee to **consider these concerns** and their potential impact on public utilities and ratepayers when addressing this bill.

WSSC Water_Testimony_HB_909_Sewage_Sludge_2.21.25.
Uploaded by: Priscilla To
Position: INFO

February 21, 2025

The Honorable Marc Korman and
Members of the House Environment and
Transportation Committee
251 Taylor House Office Building
Annapolis, Maryland 21401

Re: Letter of Information HB 909 Sewage Sludge Utilization Permits - Per- and Polyfluoroalkyl Substances - Concentration Limits

Dear Chair Korman and Members of the Environment and Transportation Committee:

The Washington Suburban Sanitary Commission (WSSC Water) appreciates the opportunity to provide information regarding **HB 909 Sewage Sludge Utilization Permits - Per- and Polyfluoroalkyl Substances - Concentration Limits**. WSSC Water is a bi-county state agency and self-sustaining public utility currently among the largest water and wastewater utilities in the nation, with nearly 11,000 miles of water and sewer pipeline. Our service area currently spans nearly 1,000 square miles in Prince George's and Montgomery counties, and we serve 1.9 million residents, comprising 473,879 customer accounts, in addition to being a wholesale service provider. For more than 106 years, WSSC Water has maintained an exceptional track record of zero drinking water quality violations, consistently meeting strict federal standards and safeguarding the health of our customers. As an anchor institution, WSSC Water's success is directly linked to the prosperity of our communities and customer satisfaction.

WSSC Water collects 185,000,000 gallons of wastewater from our community per day, and generates 96,000 tons of sewage sludge, or biosolids, each year at our six (6) Water Resource Recovery Facilities. WSSC Water also recently commissioned our Piscataway Bioenergy Facility located in Accokeek, Maryland. The innovative $271 million facility is turning "Poop to Power" by transforming how WSSC Water handles biosolids. Once fully operational in 2025, the facility will convert almost half of the biosolids into renewable natural gas and will produce a significantly cleaner (Class A) nutrient-rich organic material. The renewable energy will be used to power Ride On buses in Montgomery County, and the Class A biosolids can be used and distributed as a soil amendment. This vital project creates green energy, green jobs and a green future, and exemplifies WSSC Water's investment and commitment to serving as an environmental steward in the communities we serve and beyond, as well as our focus on balancing investments with affordability.

14501 Sweitzer Lane
Laurel, MD 20707
www.wsscwater.com

Main 301.206.WSSC (9772)
Toll Free 800.828.6439

Emergency 301.206.4002
TTY 301.206.8345

BACKGROUND

Stopping PFAS at the source

WSSC Water, like many community water systems, are passive receivers of PFAS. It is ubiquitous in the environment due to the manufacture and continued use of PFAS-containing materials. WSSC Water has advocated for stopping PFAS at the source as a comprehensive approach to addressing PFAS contamination and to in part alleviate the significant costs associated with PFAS mitigation. Banning biosolids land application in the State of Maryland does not alone achieve the environmental and public health protection desired. Tackling PFAS contamination meaningfully and sustainably would require directing resources where the greatest risk reductions can be accomplished, which is by PFAS elimination at production and use, to stop PFAS from entering the environmental cycle in the first place.

What WSSC Water is doing to reduce PFAS from the source

PFAS ends up in wastewater and eventually in biosolids because of the use of PFAS in consumer and industrial products. WSSC Water shares the concern about the PFAS contamination we receive and affirms our commitment to tackling PFAS contamination meaningfully through research and source elimination to reduce harm to public health and the environment. For this reason, we have significantly increased efforts to reduce PFAS sources in our systems by expanding PFAS monitoring, enhancing source tracking, and developing in-house PFAS analytical capabilities. WSSC Water is also actively leading and participating in nationally recognized research focused on understanding the effect of PFAS on fields receiving municipal sources of biosolids, and reducing and eliminating PFAS concentrations in wastewater and biosolids. We also engage in public outreach and education around limiting PFAS exposure.

What MDE is doing to reduce PFAS from the source

WSSC Water is committed to continue working with the State to implement sustainable solutions for holistic PFAS reduction in biosolids. In August 2024, the Maryland Department of the Environment (MDE) released risk-based tiered recommendations for PFAS in biosolids that prioritize actions based on the level of PFAS risk and ultimately promote risk reduction by source reduction. This approach has demonstrated success in pioneering states like Michigan in keeping high levels of PFAS off agricultural land, reducing industrial sources of PFAS to biosolids, while preserving the renewable resource in biosolids. We support this risk-based policy approach that directs resources to the greatest risk and places the responsibility and cost of PFAS reduction on producers.

IMPACTS OF HB909

Impacts to ratepayers

The proposed bill as written could potentially have the reverse effect, putting the cost on PFAS receivers and ratepayers. MDE has determined that the median level of PFOA and PFOS in biosolids is 4.98 parts per billion (ppb) and 12.7 ppb. HB909 would direct MDE to issue sewage sludge (biosolids) utilization permits for agricultural land application with a limit of 1 microgram per kilogram (equivalent to 1 ppb) for PFOS or PFOA, effectively banning biosolids land application in the State of Maryland. Landfilling would increase biosolids management costs to our ratepayers by as much as 200 to 250%. Due to the

limited capacity of landfills in Maryland, we also expect that as more biosolids are pushed out of Maryland, it will become more difficult and costly to find landfills to accept our biosolids.

Absence of alternatives

Biosolids can be managed by land application, landfilling or incineration, and each method comes with its own environmental considerations. Land application is the only method that returns valuable nutrients and organic materials to the soil. The US Environmental Protection Agency Part 503 Rule sets specific requirements to ensure land application is done safely to protect public health. Landfilling is a final disposal approach, but it is not a preferred approach. Every community has a finite landfill capacity, and landfilling biosolids permanently uses limited landfill space. Biosolids also contribute to landfill methane emissions, and since landfilling does not deal with contaminants at the source, landfill leachate can deliver contaminants back into the environment. Incineration is an energy-intensive process that turns biosolids into ash, carbon dioxide (a greenhouse gas), and regulated air pollutants, but the environmental impacts of polluted air emissions often outweigh the benefits of incineration. For this reason, WSSC Water decommissioned two incinerators, last operated in 2012, as upgrades became prohibitively expensive to continue to meet more stringent air quality standards.

WSSC Water is not currently equipped to destroy the PFAS we receive. The very same properties that make this "forever" chemical resistant to water, oil, grease, and heat are the same properties that make it extremely challenging and expensive to treat. It resists capture and destruction by our existing processes. Building new technologies like pyrolysis or gasification comes at a cost estimate of $175 million. Not only would these technologies destroy the nutrients in biosolids, they are also not proven for long-term or large-scale use. There are no established monitoring methods or policies yet in place to manage PFAS in the resulting air emissions or ash products. If PFAS is not destroyed, it is potentially converted into air pollution over parts of our service area. Consequently, it then becomes a water issue as air emissions travel and rain falls, with no ability to track it.

In closing, WSSC Water appreciates this opportunity to provide testimony on HB909. We continue to advocate for the protection of public health and the environment by stopping PFAS at the source as we seek to manage biosolids responsibly and balance affordability for our ratepayers. If you have any questions, please do not hesitate to contact me at 301-206-8028 or Priscilla.To@wsscwater.com.

Sincerely,

DocuSigned by:
Priscilla To
B3225BC6990E4E8...

Priscilla To, PhD, PE
Director
Department of Operational Reliability and Resilience