



June 28, 2023

New York State Department of Environmental Conservation  
Division of Materials Management  
Bureau of Solid Waste Management  
625 Broadway  
Albany, NY 12233-7260

**RE: Request for Public Comment on the Draft New York State Solid Waste Management Plan: Building the Circular Economy Through Sustainable Materials Management (2023 - 2032)**

Thank you for this opportunity for the Northeast Organic Farming Association of New York (NOFA-NY) to comment on the Draft New York State Solid Waste Management Plan: Building the Circular Economy Through Sustainable Materials Management (2023 - 2032).

Founded in 1983, NOFA-NY is the premier statewide organization growing a strong organic agriculture movement and is part of a regional network of seven Northeast Organic Farming Associations. NOFA-NY provides education and assistance to organic farmers; connects consumers with organic products; advocates policies that support a sustainable and fair food and farm system at both the state and federal levels; and is the largest USDA-accredited organic certifier in New York certifying over 1,000 operations.

We commend the Department of Environmental Conservation (DEC) for the goal of developing a circular economy based on waste prevention, reduction, reuse, manufacturer responsibility, and the reduction of toxic materials in production. We appreciate the increase in food scrap recycling and composting. We also recognize the importance of coordinating this plan as the concrete fulfillment of the “overarching requirements and timeframe” outlined in the Climate Leadership and Community Protection Act (CLCPA).

Our comments are focused on two priority areas: biosolids and anaerobic digesters.

**Biosolids:** As noted in both the [NYS Climate Act Scoping Plan](#) and the [Draft NYS Solid Waste Management Plan](#), contamination is a continuing reality in biosolids, also called sewage sludge. There

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is a serious potential crisis for New York Farmers and consumers emerging across the northeast. Recent [testing in Maine](#) and [New Hampshire](#) has revealed that soils where biosolids were spread, even decades ago, have unacceptably high levels of PFAS, and testing only accounted for two out of the many thousands of possible “forever chemicals” that contaminate the plants that are grown in those soils and run off into the water. Consequently, we call upon DEC to ban the spreading of biosolids on farmland, gardens, parks, and forests until the many measures in the plan to reduce toxic residues are fully implemented and in effect.

**Anaerobic digesters:** Both the NYS Climate Act Scoping Plan and the Draft NYS Solid Waste Management Plan acknowledge that unless carefully constructed, skillfully operated, and regularly monitored, anaerobic digesters leak methane. Spending public funds on anaerobic digesters on large livestock farms, including Confined Animal Feeding Operations (CAFOs) contributes to the consolidation of farming into ever larger entities while investments in alternative manure management encourage more diversified farms and reduce methane emissions by separating solids and liquids, composting, and raising livestock on pasture instead of feedlots. Consequently, we call upon DEC to limit investments in anaerobic digesters on farms and to ban the production of so-called “renewable natural gas” for export from farms through pipelines.

The DEC will need to resist the pressures of industry to continue business as usual or to find subterfuges in offsets that allow the continuing use or even expansion of fossil fuels. Reducing and eventually eliminating the use of toxics like the many thousands of PFAS, neonicotinoids, organochlorides, organofluorides, carbamates, and other toxic pesticides, fungicides and herbicides must be a central feature of solid waste planning for it to be successful in meeting its goal of creating a circular economy.

During the development of the USDA National Organic Program regulations, organic farmers and conscious consumers fought hard to keep biosolids out of organic farming because of our concern for contamination and the inadequacies of testing. The USDA saw the wisdom in keeping this out of USDA program certification, because of overwhelming public concern and outcry over dangerous risks in the practice of spreading biosolids. Organic agriculture uses the [Precautionary Principle](#). We urge the DEC to use it too. The Precautionary Principle functions to protect individuals and communities from avoidable harms, especially when risks from an action are unknown or high, and benefits are unknown or low. By definition, the harms from an action are avoided when the Precautionary Principle is followed, leading to that action not being taken. The Precautionary Principle has its highest moral force when those proposing an action will not suffer or take responsibility for the risks and harms possibly attending that action. In simple terms, the Precautionary Principle urges decision makers to “do no harm” — taking no action or no new action when risk of harm is high and likelihood of and ability to remediate harms, if they do materialize, is low.

# Biosolids

## Beneficial Use

According to the Draft NYS Solid Waste Management Plan, of the 42.2 million tons of total waste stream generation in 2018, biosolids account for 4%. (p. 17 and See Table 6 page 78 – for the current amount of biosolids and projected amounts). The state’s 600 water resource recovery facilities (WRRFs) generate approximately 375,000 dry tons of biosolids annually (p. 24). However, as noted in the Draft NYS Solid Waste Management Plan, regulation of biosolids has focused almost exclusively on controlling pathogens through stabilization:

*“Biosolids are nutrient-rich organic materials that can be recycled and utilized as a soil amendment when properly treated and processed. Biosolids treatment and quality standards have been developed to promote the safe use of this material. Public health and the environment are protected by controlling pollutant limits and reducing the pathogenic content of the material that is beneficially used.”*

The DEC [webpage on biosolids management](#) promotes the “beneficial use” of biosolids through direct land application, composting, heat drying, or chemical stabilization. A [factsheet linked through the biosolids management page](#) (accessed 6/20/2023) dated December 1999 reads,

*“After stabilization, composting, heat drying, or chemical fixation, biosolids can be beneficially used at appropriate application rates as soil conditioners (fertilizers, sources of organic material, etc.) on farmland, forest land, public works projects, landscaping activities, and land reclamation.”*

The factsheet includes examples of where biosolids have been spread on NYS farmland. For example, Bernard Leerkes Farm in Ticonderoga applied 210 dry tons per year on 147 acres.

Nevertheless, landfilling continues to be the most common way to manage biosolids. This may be good news for NY farmland. While it is true that biosolids provide nutrients and organic matter to soils, the risk of contamination by toxic materials remains too high. The high cost of disposing of biosolids should never be used as a justification for poisoning farmland, gardens, and other settings.

## Contamination Risks

The term PFAS, also commonly called “forever chemicals” describes over 9,000 compounds – most of them are drastically understudied, or completely unstudied in terms of health impacts. PFOA and

PFOS are two of the most studied PFAS compounds and are known to cause human harm in relatively very small quantities. PFAS have recently been recognized as contaminants in agriculture and are believed to largely have entered soil through the application of biosolids, industrial sludges, and ashes. They enter waste streams through the disposal of household products (including toilet paper), and through industry discharges into public sewer lines. Landfill leachate, highly contaminated with PFAS, is also accepted by many wastewater treatment plants adding to the levels of contamination in biosolids.

According to Draft NYS Solid Waste Management Plan (p. 38), the DEC is working to limit the environmental exposure of these chemicals and EPA is completing a comprehensive risk assessment to determine an environmentally protective limit for biosolids recycling. Also, DEC is providing funding to SUNY ESF to determine the concentration of PFAS in recycled biosolids in New York State and to identify any industrial sources so they can be addressed. [2017 revisions to the federal regulations, Part 360 series](#), added requirements for active landfills to include PFAS and 1,4-Dioxane to their sampling plans for both leachate and groundwater monitoring. In 2018, DEC conducted sampling of leachate at most landfills in the state and found significant levels and concluded: “The ubiquitous presence of PFAS compounds in consumer and commercial products for decades, and continuing today, leads to issues in all environmental media (air, water, and land) and DEC programs.”

PFAS bioaccumulates in our bodies so even at low levels, exposure can pose [health risks](#) including reproductive and developmental effects, risk of cancer, weakened immune system, hormone interference, and increased cholesterol. PFAS and other substances like heavy metals are persistent in our bodies and in soil and water. Every time biosolids-derived soil amendments are applied to land, the PFAS/heavy metals burden in the soil increases. The US EPA has repeatedly lowered its health advisories for PFAS in drinking water. In June 2022, [the EPA issued a health advisory](#) for PFAS in drinking water that put safe levels for two common PFAS compounds, PFOA and PFOS, at 4 parts per quadrillion, below current detection levels. In effect, EPA stated that PFOA is 100,000 times more toxic than the agency understood in 2009 when it set the health advisory at 400 parts per trillion. PFAS are highly mobile, leaching into groundwater, and are now [present in rain](#). DEC must help us break the vicious cycle of PFAS contamination by prohibiting PFAS-laden biosolids to be applied to farmland, gardens, landscapes, playing fields, and other settings. **DEC must put an end to the land application of biosolids.**

## Testing and Treatment

In addition to PFAS, other [harmful and even hazardous materials](#), ranging from pharmaceuticals to hormones and pathogens are found in biosolids. Wastewater treatment plants do not have the means

to remove or detoxify PFAS chemicals or any of the other toxic chemicals identified by the US EPA Inspector General in a [2018 report entitled “EPA Unable to Assess the Impact of Hundreds of Unregulated Pollutants in Land-Applied Biosolids on Human Health and the Environment.”](#) Recent Consumer Protection laws do restrict some of the contaminants (1,4 Dioxane in cleaning products, cosmetics and personal care products, PFAS in packaging, flame retardants in furniture and mattresses), but there is still a long way to go before biosolids will be free of toxic substances.

Testing biosolids is not sufficient to protect public health and the environment. A single accidental industrial discharge, [as occurred at a plant in Michigan](#), could cause PFAS levels in a load of biosolids to skyrocket — but would easily be missed with quarterly or even monthly testing. A farmer in Michigan [faces ruin after accepting free biosolids fertilizer](#), and only later discovering his beef is laden with PFAS. We do not know how many NYS farmers have inadvertently contaminated their soil, water, crops, and livestock — as well as their family’s bodies — due to the DEC-sanctioned practice of spreading biosolids on farmland.

**In 2022, the state of [Maine enacted a ban on the land application of any materials derived from biosolids](#), after dairy farms were found to have been producing PFAS-contaminated milk thanks to cows consuming feed grown on fields fertilized with biosolids. New York must follow Maine’s lead. The DEC’s push to boost the state recycling rate should not be used to justify this egregious practice. Land application of biosolids must be removed from the waste management plan.**

**We also urge the DEC to identify the extent of contaminated land in New York, curb exposure, and work with other state departments to build a well-funded and accessible support network for impacted farms that includes access to soil and water testing, health screenings, crisis support, financial and liability relief, compensation for lost revenue due to contamination, and assistance in navigating future business plans.**

## Anaerobic Digesters

The Draft NYS Solid Waste Management Plan also calls for the ongoing promotion of anaerobic digestion capacity on farms, a practice that is extremely costly, , and is not in alignment with the goals of the Climate Leadership and Community Protection Act.

[According to the USDA](#), just 12% of New York dairies account for nearly 70% of New York’s dairy cow population and are responsible for the vast majority of associated methane emissions. According to the [Climate Act Scoping Plan](#),

*“AF8. Advance Alternative Manure Management. The storage of manure is an important practice to facilitate nutrient management, reducing the need for synthetic fertilizers and mitigating runoff for the improvement of water quality. However, the treatment and storage of livestock manure can produce methane through the anaerobic decomposition of the manure. Manure storages have caused the single highest increase in agricultural emissions from the 1990 baseline year to today.” (p. 288-9).*

Through the first six rounds of funding, the Climate Resilient Farming program has [awarded \\$6.2 million](#) for manure storage cover and methane capture systems, assisting 20 farms. Manure pits, caps, and [anaerobic digesters have also been funded by NRCS](#). This substantial amount of public funding disproportionately favors the largest farms, incentivizing biogas generation (a false climate solution) and locking farms into a herd size that is driven by waste production instead of market demand for milk, meat, or livestock. The Climate Justice Working Group was critical of this approach, but the final Climate Act Scoping Plan disregarded the critique. (p. 289) and expressed enthusiasm for increasing investment in anaerobic digesters in section 16 pages 330-331, which reads,

*“ Optimize and expand anaerobic digestion: The State should support energy production and methane mitigation following a full life cycle analysis, including measurement and abatement of methane leakage, consideration for avoided emissions, and supporting co-digestion programs at anaerobic digesters with existing capacity and include organics generated off site, such as food processing waste, food scraps and fats, oils, and grease. Programs that incentivize anerobic digestion should require systems be built (or retrofit) for maximum methane mitigation to ensure development of well-managed, low emissions biogas or RNG production such as utilizing emissions minimizing technologies and techniques, minimizing fossil fuel use in biogas or RNG.”*

Additionally, both the NYS Climate Act Scoping Plan and the Draft NYS Solid Waste Management Plan acknowledge that unless carefully constructed, skillfully operated, and regularly monitored, anaerobic digesters leak methane. Furthermore, a [review of manure management field studies](#) found that the process of anaerobic digestion creates more per-head methane emissions than other manure management systems. These increased emissions are not fully dealt with in cover and flare systems which produce 3 pounds of CO<sub>2</sub> per pound of methane burned plus nitrous oxide which is not burned.

**We join with the Climate Justice Working Group in supporting alternative manure handling systems that are accessible to smaller and more diversified farms and reduce greenhouse gas emissions such as dry manure management systems, composting, and raising livestock on pasture. We urge DEC to remove ongoing investment in anaerobic digestion – that enables the accelerating concentration of livestock farms at a steep cost to rural communities and our climate-- from the Draft Waste Management Plan.**