June 24, 2022

Comments on the **Waste Chapter** of the **Draft NYS Climate Scoping Plan**

Environmental Justice

The CLCPA seeks to address environmental racism and other forms of environmental injustice. Title VI of the Civil Rights Act of 1964, 42 U.S.C. 2000d et seq., prohibits discrimination on the basis of race, color, or national origin in any program or activity that receives Federal funds or other Federal financial assistance. In order for the State of New York to comply with Title VI, its implementation of CLCPA must look at racial impacts of proposed programs, and should affirmatively act to end current discriminatory practices and prioritize solutions that do the most to correct for historic and current disparate impacts. This must be examined even where the impacts fall hardest on those outside the state, such as New York trash being burned at incinerators in the cities of Newark, NJ and Chester, PA.

The Principles of Environmental Justice do not call for people to be polluted equally, but for pollution to be prevented overall. By adopting across-the-board solutions that prioritize the sectors that most disproportionately impact communities (such as the use of trash incineration[1]), those most impacted will be relieved of their disproportionate burden.

End Waste Incineration

Greenhouse gas emissions from trash incineration are roughly twice that of landfilling the same waste, no matter the transportation distance involved.[2] Only through unscientific gaming of the emissions data can incineration pose as a climate solution or lesser evil. CO_2 emissions from trash incineration are 80% worse than burning coal.

Incineration does not replace landfills, but make them more dangerous by filling them with toxic ash. For every 100 tons burned, about 30 tons of toxic ash are produced and shipped to landfills. About one million tons of this toxic incinerator ash is produced annually from incinerators in New York, and is dumped in landfills throughout New York plus a landfill in Putnam, CT. The other 70 percent of trash burned in New York is emitted from incinerator smokestacks. Using incineration to processes waste prior landfill disposal is the most damaging worst way to conserve landfill space.

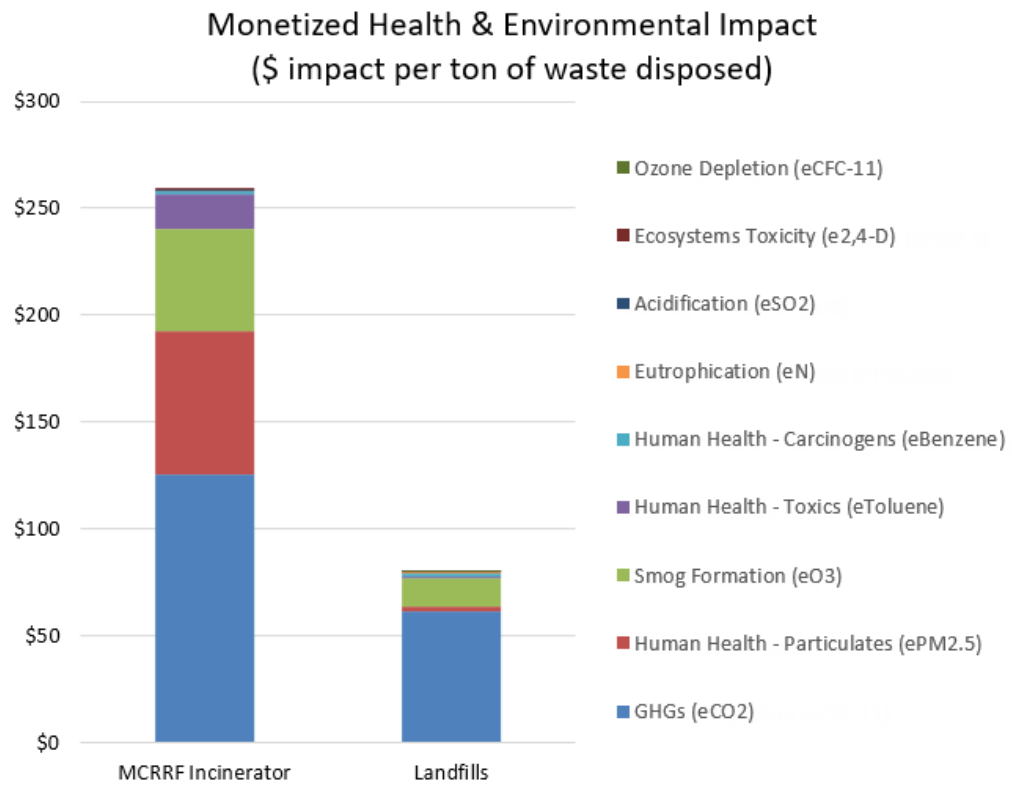
DEC must affirm that a proper life cycle analysis will show incineration to be far worse than landfilling, and must adjust the plan to reflect this fact. There are two main ways in which life cycle analysis is manipulated to make incineration look preferable. First, as much as about two-thirds of the CO_2 from trash incinerators is assumed not to count under the scientifically

[1] "Incineration and Environmental Racism," www.energyjustice.net/incineration/ej
[2] "Beyond Incineration: Best Waste Management Strategies for Montgomery County, Maryland," March 2021. www.energyjustice.net/md/moco

debunked notion that so-called "biogenic" carbon is "carbon neutral." Second, it is assumed that fossil fuels are being displaced by energy produced at incinerators, though in New York, only 46% of the state's electricity comes from fossil fuels (nearly all of that from gas burning, as all of the state's coal power plants have closed), making older studies from other states not reflective of the current situation in New York.

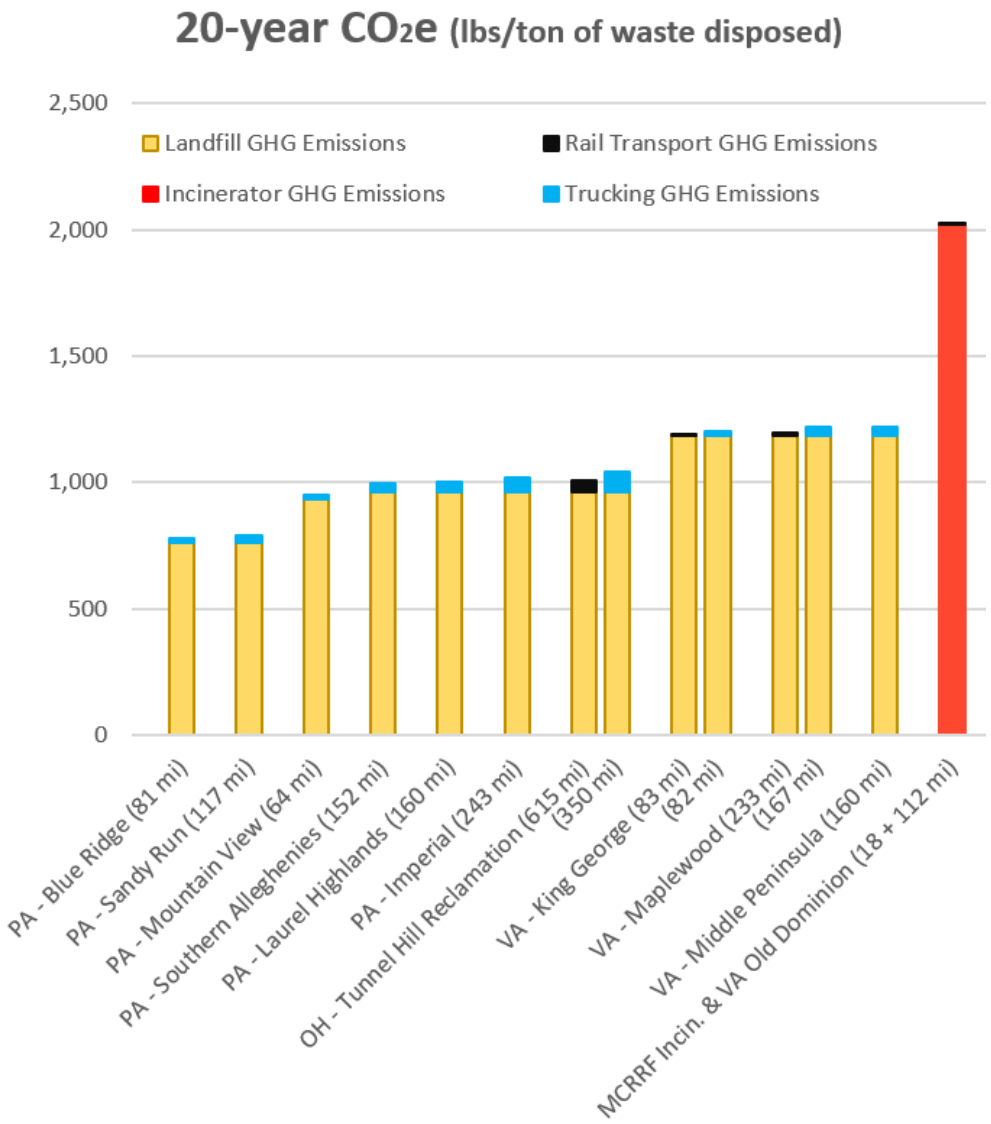
Multiple statements on pages 235-237 of the Draft Scoping Plan incorrectly promote the idea that landfills are worse than incineration, and must be corrected. Page 235 states: "The most obvious and well-documented contribution to GHG emissions from the management of waste is from the uncaptured emissions of methane from landfills." Page 236 states: "For solid waste management and water resource recovery facilities (WRRFs), the major contributors to emissions are associated with landfill emissions, though sources are also found at WRRFs and other facilities." Page 237 perpetuates the outdated waste hierarchy where incineration ("energy recovery") is placed above landfilling ("disposal" – as if incineration and landfilling ash is not also disposal). The Zero Waste Hierarchy makes it clear that incineration is forbidden in a Zero Waste system, precisely because it is far more harmful than direct landfilling.

The chart below summarizes the findings of a life cycle analysis conducted for Montgomery County, Maryland, comparing a composite of hauling to ten out-of-state landfills (in PA, OH, and VA) vs. using the incinerator within their own county.[3] The analysis, using the most comprehensive life cycle analysis software available, measuring nine health and environmental impacts, shows that GHG emissions from incineration are about twice that of landfilling, and that total impacts – factoring in pollutants that cause heart attacks and stroke, trigger asthma attacks, and cause birth defects, cancers, and a wide range of other health impacts – show incineration to be more than three times as harmful as landfilling.



[3] *Id.*

In the analysis for Montgomery County, Maryland, transportation impacts were found to be negligible compared to the impacts of incineration or landfilling, even when trucking hundreds of miles, so most of the above-described impacts are from the facilities themselves.[4] When comparing GHG emissions, transportation accounted for about 3% of the landfill impacts, and a smaller portion of incinerator impacts due to the closer distance, but largely because incinerator GHG emissions are far greater.



Given these climate and health concerns, the plan must call for the closure of the state's existing waste incinerators. This includes:

- All 10 trash incinerators.
- All 18 sewage sludge incinerators.
- The ReEnergy Black River woody biomass and tire incinerator at Fort Drum.
- The Norlite hazardous waste incinerating aggregate kiln in Cohoes, NY.

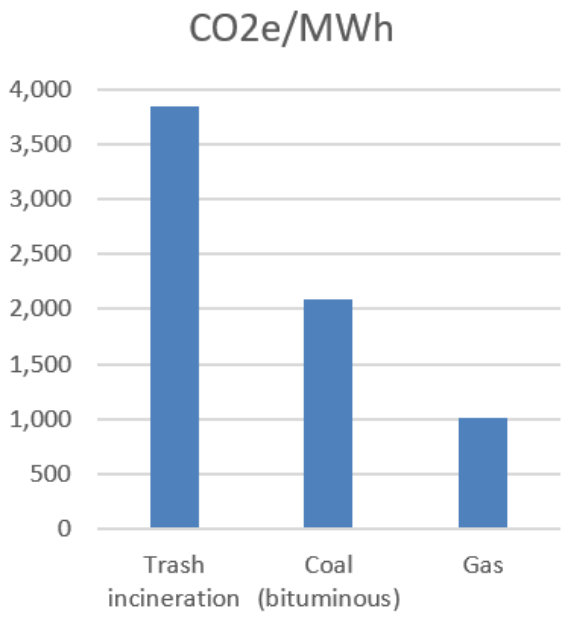
[4] *Id.* at 57.

New York has the distinction of having the greatest number of trash incinerators of any state (now tied with Florida and second only to the Sunshine state in trash burning capacity), plus the greatest number of sewage sludge incinerators, and is one of the rare states with a commercial hazardous waste burning facility. All of these are major toxic air polluters in addition to being large sources of greenhouse gases. Compared to our state's largest power source (natural gas), trash incinerators release nearly four times as much CO_2 per megawatthour.

No new waste burning of any sort should be permitted

Incineration must be prohibited simply because it's the worst climate option for the management of any discard stream. This is fundamentally true whether it's conventional mass burn incineration, incineration as fuel in cement or aggregate kilns, staged incineration (gasification, pyrolysis, plasma arc), or waste-to-fuel (WTF) schemes of various sorts where waste is processed for burning elsewhere.

Facilities such LafargeHolcim's cement kiln in Ravena, Finch Paper in Glens Falls, and the IP Ticonderoga Paper Mill (now Sylvamo) have all tried to burn trash,[5] tires,[6] or other waste streams. We commend DEC for denying the tire burning application from LafargeHolcim, and urge adoption of policies to prevent this trend of using industrial boilers as waste disposal sites.



Note: the low number for gas reflects only stack emissions, not system leakage, which is far more significant.

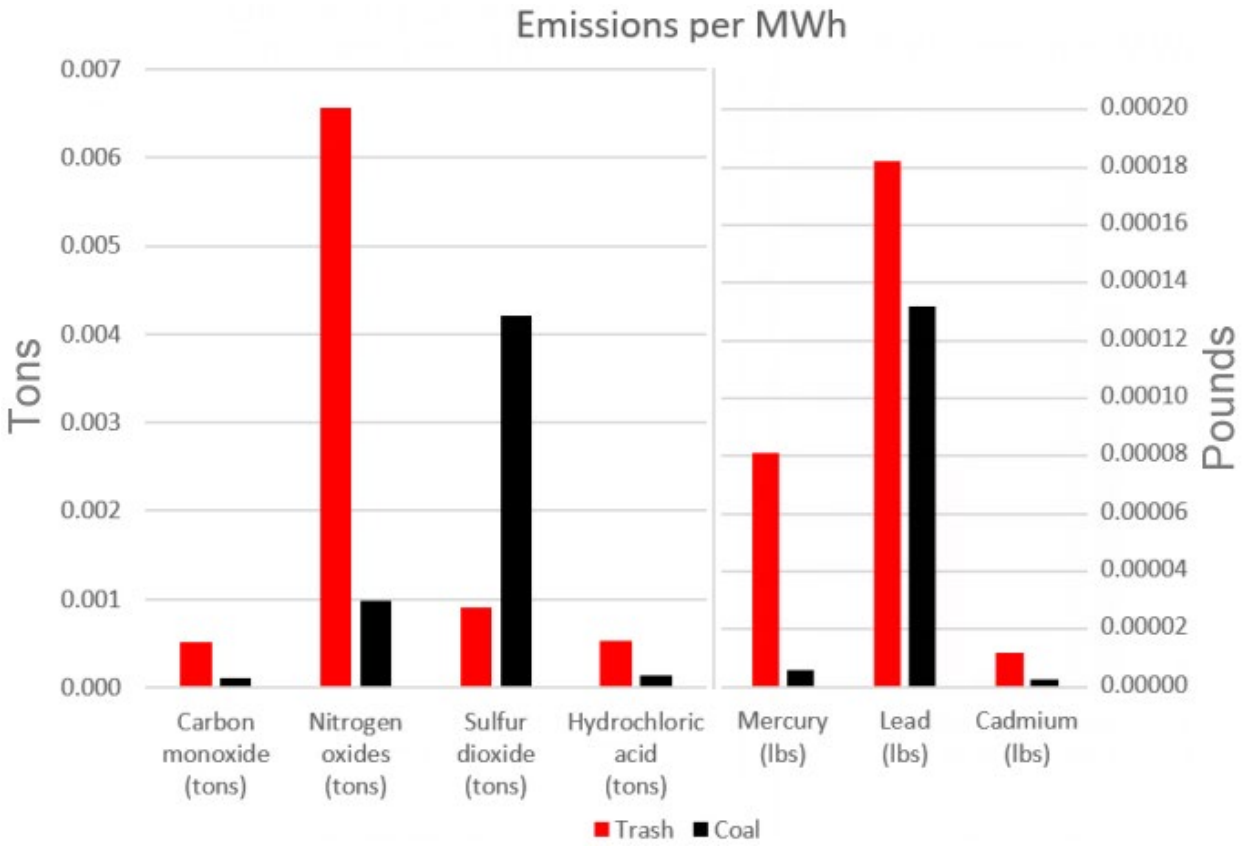
According to EPA's 2020 eGRID database, trash incinerators in New York emit an average of 3,844 pounds of greenhouse gases per unit of energy, measured in CO_2 equivalents over 20 years, using the latest IPCC global warming potentials. This is 3.8 times that of gas-fired power plants in the state, and 1.8 times that of bituminous coal power plants in the country.

No honest life cycle assessment can do enough legitimate subtractions to justify these large emissions. When comparing to landfills and subtracting offset energy production, the New York grid mix had a carbon intensity of only 511 pounds of CO_2 equivalents per megawatthour in 2020 – half that of the stack emissions from gas burning, so less than 1/7th of incinerator GHG emissions can be discounted in that manner.

In 2011, when eight coal power plants were still operating in New York, NY DEC documented how the state's ten trash incinerators (all still operating) were far dirtier than the coal power plants in the state, per unit of energy produced.[7] Even without adjusting for size, shockingly, the state's incinerators released more mercury than all of the state's coal power plants combined. The

[5] Waste Incineration, www.energyjustice.net/incineration
[6] "Coal burning vs. Co-firing tires with coal – Is adding tires more polluting?," www.energyjustice.net/files/ny/TiresVsCoal.pdf
[7] New York State Department of Environmental Conservation, "Matter of the Application of Covanta Energy Corporation for Inclusion of Energy from Waste Facilities as an Eligible Technology in the Main Tier of the Renewable Portfolio Standard Program. Case No. 03-E-0188," p. 27, Aug. 19, 2011. http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7bDEEA097E-A9A6-4E53-898C-0BC2F4C60CC4%7d (link triggers download; web-viewable copy here)

following chart is produced directly from the numbers in the NY DEC analysis, with mercury emissions from the state's incinerators a shocking 14 times greater per unit of energy than the now-closed coal power plants (and in absolute pounds, without adjusting for size, more mercury was emitted by the ten incinerators than from the eight, much-larger, coal power plants operating at the time):



Trash incineration is the most expensive way to produce electricity and the amount of electricity they produce is quite modest (1.4% of the state's generation). Given the outsized level of pollution (not just GHGs) and the elderly age of the state's ten incinerators, it's time to expedite their retirement. The average age of the 47 trash incinerators that have closed in the U.S. since 2000 was just 24 years.[8] New York's fleet ranges from 31 to 42 years of age, averaging 34 years. Only six in the nation have made it into their 40s, so it's reasonable to expect that these incinerators are in their last decade of life.

Newer incineration schemes continue to threaten New York communities. Gasification and pyrolysis are types of incineration that separate combustion into a two-stage process, making it more expensive, more experimental and technically challenging to operate, and not fundamentally much cleaner. Waste burning in cement kilns, aggregate kilns and paper mills is a way of deregulating the same polluting incineration technology, often allowing it to take place in industrial processes not designed for waste burning, where pollution hazards could be even worse. Waste to fuel schemes only displace the burning to other communities by processing waste into solid or liquid fuels to be burned elsewhere, also without the controls that are typically

[8] Trash Incinerator Closures 2000-2020. www.energyjustice.net/incineration/closures.pdf Note: the 24-year figure is after this data is updated to account for additional closures in 2021 and 2022.

used on trash incinerators to cut their air pollution down to the levels DEC found to still be worse than coal. We propose a ban on all variants on these troubling technologies, including plastics to fuel schemes, autoclaving waste to burn elsewhere. Further, we urge that the exporting of New York waste to incinerators in other states be halted, especially the trash flowing to Chester, PA, Newark, NJ, Rahway, NJ, and other environmental justice communities.

Section W5 discusses managing refrigerants. It's important that refrigerants, as well as other challenging wastes such as pharmaceutical wastes and PFAS-laden firefighting foam (aqueous film-forming foam, or AFFF), are processed with safe non-burn alternatives such as supercritical water oxidation (SCWO).

Zero waste solutions

Products are responsible for a huge fraction of greenhouse gas emissions: 42% according to an EPA estimate that includes provision of food and other goods. The greenhouse gases released as a result of our waste represent just the tip of the iceberg. For every pound of trash produced, 70 pounds of waste were created in the process making the product before it hit the store shelves. Therefore, in assessing the climate impacts of managing our wastes, we must keep in mind that these impacts occur at multiple points in the life cycle of industrial products – first, when products are extracted and produced, and second, when they are discarded and "wasted."

To reduce the climate impacts of production and waste management, the Climate Scoping Plan should call for reducing overconsumption/unnecessary consumption and improving the way we manage the stuff we throw away.

The plan mentions "zero waste" just once and must recognize it as a critical materials management strategy. The plan ought to explicitly include the internationally peer-reviewed definition of Zero Waste and the Zero Waste Hierarchy:

> "Zero Waste is the conservation of all resources by means of responsible production, consumption, reuse, and recovery of products, packaging, and materials without burning, and with no discharges to land, water, or air that threaten the environment or human health."

To break it down a little further, Zero Waste strategies include:

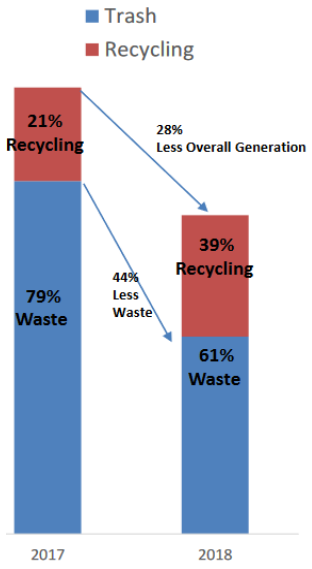
Rethink/Redesign
Reduce
Source Separate reusables, recyclables, compostables, and trash

- **Reuse / Repair**
  (Reusables are just 5% of the discard stream, but comprise 50% of the economic value)[9]
- **Recycle (multi-stream)** → Material Recovery Facility (MRF)
- **Compost** → Aerobically compost clean organic materials (food scraps, yard waste) to return to soils
- **Waste:**
  - **Waste Composition Research** (examine trash to see how the system can be improved upstream)
  - **Material Recovery** (mechanically remove additional recyclables that people failed to separate; could be combined with the MRF, as a separate "dirty MRF" stream)[10]
  - **Biological Treatment** (aerobic composting of organic residuals to stabilize them; or, better yet, anaerobic digestion followed by aerobic composting)
  - **Stabilized Landfilling** (biological treatment reduces volume and avoids gas and odor problems)

More detailed versions of what these steps entail can be found at www.energyjustice.net/zerowaste/hierarchy and www.zwia.org/zwh/

We enthusiastically endorse the Waste Reduction, Reuse and Recycling strategy section of the Climate Scoping Plan.

Figure 1-1: Results of two-month unit-based pricing pilot in New Windsor, MD



Source: WasteZero

Unit-Based Pricing / Save as You Throw

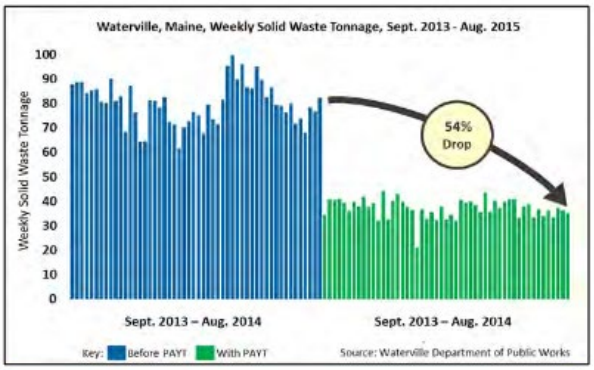
Zero Waste strategies are capable of achieving deep reductions in waste generation. Unit-based pricing (a.k.a. "Pay as You Throw" or "Save as You Throw" – PAYT or SAYT) has proven to be the single most effective and cost-effective way to rapidly reduce waste.[11] When we pay for utilities like electricity, water, or gas, we pay based on our usage. However, with trash, your neighbor could put out ten bags a week and you can put out one, yet you both pay the same amount, and there's no incentive to reduce waste. Setting rates on a per-bag or per-container basis results in real waste reductions and cost savings for residents.

Over 10,000 communities use this system. Connecticut officials announced a serious push for SAYT as the state prepares for the closure of its largest waste incinerator.[12] **SAYT has the capability to almost immediately reduce waste generation by an average of 44%, with about half of the savings coming from behavior**

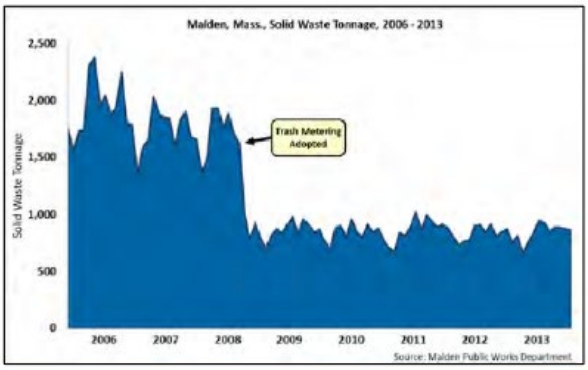
[9] Presentation by Dan Knapp & Mary Lou Van Deventer, founders of Urban Ore, June 11, 2014. www.urbanore.com
[10] To accommodate an ever-shrinking waste stream as Zero Waste programs succeed over time, a modular material recovery facility (MRF) could have some lines that process source separated recyclables, and other "dirty MRF" lines that process trash to recovery additional recyclables. As source separation increases, the dirty MRF lines can be repurposed to sort source separated recyclables.
[11] PayAsYouThrow.org, The Recycling Foundation. www.payasyouthrow.org; on effectiveness see Skumatz, note **Error! Bookmark not defined.** *infra*, p.2, slide 6.
[12] Patrick Skahill, "Could 'Pay as You Throw' be the Future of Connecticut's Trash?," Jan 12, 2021. www.wnpr.org/post/could-pay-you-throw-be-future-connecticuts-trash

changes resulting in source reduction and reuse (higher on the Zero Waste Hierarchy), representing material that does not even have to be removed from the curb to be composted or recycled. When combining SAYT with curbside composting collection, the average waste diversion rate reaches 70%.[13]

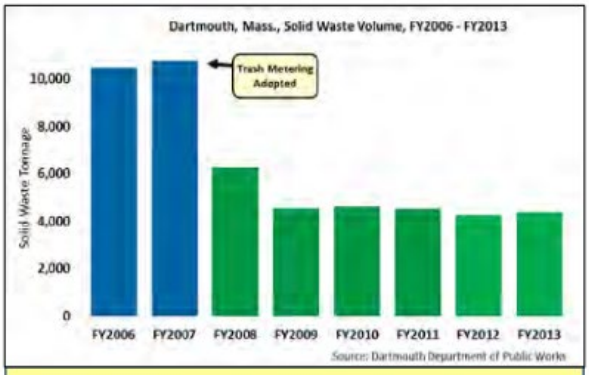
Waste Zero examples of waste reduction impacts of unit-based pricing



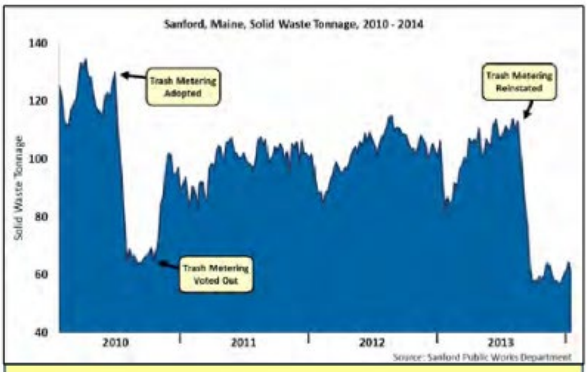
WATERVILLE, MAINE
54% DECLINE IN MSW IN 1 YEAR



MALDEN, MASS.
52% DECLINE IN MSW OVER 5 YEARS



DARTMOUTH, MASS.
59% DECLINE IN MSW



SANFORD, MAINE
POWERFUL MESSAGE

The Sanford, Maine example is particularly powerful. The town adopted SAYT and saw the typical drop of waste generation by nearly half. One resident, who didn't like it and who had just won the lottery, campaigned to repeal it. The town did, and waste generation jumped back up. A few years later, when he moved out of town and the town decided to restart the program, waste generation dropped again.

To boost participation in composting, various cities in the United States and Canada have switched to picking up trash every other week, while collecting recycling and composting weekly.[14] People quickly learn that the "smelly stuff" doesn't belong in the trash bin, but in the composting bin.

[13] Interview with Kristen Brown, Waste Zero. www.wastezero.com

[14] Longmont, CO, Hamilton, MA, Wenham, MA, Portland, OR, Renton, WA, Sultan, WA, Toronto, Canada, 11 cities in British Columbia, and most recently, Edmonton, Alberta have bi-weekly trash collection. On Edmonton, see: "Edmonton to have full source-separated waste collection by August, new carts begin rolling out to homes in March," Jan 6, 2021. www.edmontonjournal.com/news/local-news/new-year-new-waste-disposal-program; Note that this solution is recommended to the county in HDR's April 2019 Task 5 report, Table 7.

There are other well-known building blocks of a Zero Waste system that must be prioritized and done right. These include:

- Mandatory residential and commercial recycling and composting (food scraps and yard waste), including multi-family housing and public housing. According to NYS DEC's Bureau of Waste Reduction and Recycling, NYS could mandate food scrap recycling as a component of its municipal law for source separation under General Municipal Law 120-aa.
- A deconstruction mandate, creating many jobs by requiring dismantling of buildings instead of demolition that spreads dangerous dust into communities and turns valuable materials into construction and demolition waste, which is one of the largest waste streams.
- A ban or phase-out of single-use disposable items.
- Expansion and update of the 1982 Bottle Bill.
- Extended Producer Responsibility (EPR) must be done right, if at all. Producers should be fiscally responsible, but not physically responsible, for the materials they create. Producers' economic interest is in conflict with product reuse and repair, and their control of programs competes with small business and local government involvement in the reuse, repair, and recycling marketplace. A nuanced EPR policy is required that distinguishes between hard-to-recycle materials/products versus traditional recyclables such as paper, glass, metal and #1 and #2 plastic containers. For traditional recyclables, EPR is superfluous and could result in unintended consequences for existing recycling programs. Incineration and so-called "chemical recycling" must be forbidden and producers must not be permitted to control a program lest they discourage reuse in favor of selling new products. EPR programs must be designed to actually encourage redesign of products and packaging. We urge that New York follow the EPR Principles outlined by the Institute for Local Self-Reliance.[15]

Other aspects of the waste plan that we support / recommend, ordered to follow the Zero Waste Hierarchy, include:

Redesign

- **The Climate Scoping Plan must call for the elimination of toxic substances from products and packaging in order to facilitate recycling.** Toxic additives in plastics can get recycled into new products and could impede recycling altogether. To capture the climate benefits of recycling, upstream clean production is an important component. The U.S. Office of Technology Assessment once estimated that for every ton of municipal waste disposed, 71 tons are produced upstream in resource extraction and manufacturing. Since industrial production is responsible for such a large portion of waste generation and greenhouse gases, the Climate Action Plan must prioritize product redesign.
- **Durable goods should be labeled to describe how many years the product is designed to last.** France has a planned obsolescence law that might be a useful model.[16]
- Eliminate toxic chemicals from consumer products and packaging, including PFAS, formaldehyde, arsenic, etc. We know it is contaminating leachate from landfills.

[15] https://ilsr.org/ilsr-statement-on-extended-producer-responsibility-epr-for-packaging/
[16] https://www.loc.gov/item/global-legal-monitor/2017-11-01/france-advocacy-group-files-criminal-complaint-against-alleged-planned-obsolescence-practices/

Researchers are also now warning that incinerators are contributing to plumes of airborne PFAS pollution and could be spreading PFAS significant distances contaminating water and soil. European researchers are finding alarming levels of PFAS downwind of incinerators. A study from Vermont found a downwind plume of PFAS dispersal that extended over roughly 125 square miles from a factory source. According to researchers, the logical extension is to assume similar transport patterns from incinerator stacks.[17]

Reduce

- **We support requiring retail outlets and food service to "skip the stuff" and give single-use disposable products to their customers by request only** to reduce the proliferation of unwanted, unneeded plastic.
- **Discourage overproduction** with taxes or fees targeting fast fashion, overproduction of food, or other major sources of production that never even end up being used by a consumer before becoming waste.

Reuse

- **All retail outlets and food service establishments should be required to provide reusable and refillable options** such as for tableware in eateries and in place of disposable bottles for beverages, as recommended by the Scoping Plan.
- **Provide financial support for local reuse enterprises, repair cafes and businesses, and materials exchanges** as recommended in the Scoping Plan. As one social entrepreneur working in the reuse space stated in a recent workshop, to meet the need, retail reuse facilities will need to be the same size as big box stores. Otherwise, many reusable goods will continue to be wasted.
- **In conformity with the Zero Waste Hierarchy, repair and reuse should always be considered the preferred method for managing discarded products, rather than recycling.**
- **Adopt policies to facilitate customers being allowed to bring their own container** to be served food and drink, or to purchase bulk food or other consumer goods available in bulk. Encourage sale of bulk items. Revise health codes to facilitate this policy. California adopted Assembly Bill 619 of 2019 to this effect, and can serve as a model: https://cpd.sccgov.org/ab-619-retail-food-reusable-containers-multiuse-utensils
- **For electronic waste, where repair/reuse is not feasible, computers and other electronic devices should be disassembled** to recover their working parts for resale and/or reuse. Mass shredding of e-waste is wasteful and should not be incentivized or allowed.
- **Workforce development, from basic job training to skilled trades for repair, deconstruction, etc. is an essential component of developing the reduction, reuse, and recycling sectors.** We support this recommendation.
- **Curbside collection service for reusables (like textiles) and hard-to-recycle materials should be explored.**
- **Bulk collections must be more sophisticated and follow reuse efforts.** Most illegal dumping, if not from contractors dumping construction/demolition waste, is from lack of bulk collection for mattresses, tires, and furniture. Much of this can be reused or recycled, though. Trash collection, whether by public or private haulers, should collect

[17] "PFAS in household waste may be going airborne," Environmental Health News, March 2022. www.ehn.org/pfas-air-pollution-2656977959.html

these materials for recycling where possible, but only after reusables are marketed for reuse. About 20 years ago, the City of Surrey, British Columbia (suburb of Vancouver) was spending about $3 million a year on "spring cleanup days" for large household item pickup and they observed a lot of perfectly good reusable items out at curbside. They decided to take a different approach and through the Recycling Council of British Columbia, contracted for www.surreyreuses.com. The Mayor and Council then advertised that spring cleanup days were no more, but that the service still existed in a different form. To have the city come out and pick up your large bulky household item, you first had to show that you had advertised it to give away on Surreyreuses.com and if there were no takers, the city would pick the item up. As far as we know, the city has not returned to 'spring pickup days,' they continue to save a lot of money each year, and surreyreuses.com is still busy… and is scheduled for new software foundation and makeover this year. Many other options exist, such as Facebook Marketplace, Craigslist, eBay, Freecycle, OfferUp, LetGo, and other online applications. A platform that makes it easy to cross-list items on various platforms could do a lot for reuse. Public and private haulers should be prepared to tag bulky items instead of trashing them, notifying residents of the requirement to demonstrate reuse effort first.

Recycle

- **Education must be an ongoing investment:** The state-run Metropolitan Transportation Authority must stop the misinformation on Subway trash cans that state "You can it, we recycle it," giving the impression that trash is sorted to remove recyclables. Even if that ever really worked for the Subway station trash, giving people the impression that this is what takes place with trash generally is dangerous misinformation. Also, Waste Management ads on trash cans and elsewhere must be prohibited where they make claims about recycling *on a trash can or trash truck*, again giving people the impression that this is taking place and other good things are happening with the trash. This greenwashing must be prohibited, and significant investment must be made to give people the honest understanding about where their trash goes – to highly polluting incinerators and to landfills – in New York, and several other states. So long as incinerators are still handling about half the state's trash, education about waste must not only talk about diverting from "landfills," but must mention trash incinerators, too – and without the unscientific public relations terms like "waste to energy" that try to make incinerators sound good, as if they can violate the laws of physics and turn matter into energy rather than into toxic ash and air pollution.
- **Ban the use of recycling logos and misleading recycling marketing on products and packaging that are not currently being recycled** through residential recycling programs around the state, as California recently did. See: https://www.jdsupra.com/legalnews/california-law-restricts-use-of-chasing-8729529/
- **Provide reverse vending machines** on the MTA systems, and perhaps in other public transit systems, where people can deposit recyclables in exchange for transit fare.
- **Stop counting alternative daily cover as recycling** when glass, incinerator ash, shredded cars, construction and demolition waste, or other waste materials are used in place of soil or tarps at landfills. Conserve landfill space by replacing cover material with reusable tarps.
- **Require all curbside recycling programs to actually recycle glass** into glass cullet to satisfy the requirements of glass furnaces. This is a climate solution as making glass is very energy intensive and the use of recycled glass cullet reduces the energy demands. Downcycling of glass (glassphalt, sandblasting material, aggregate) should be a last

resort where true recycling is not possible. Use of glass for alternative daily cover at landfills should be banned. Read more on the need to keep recycling glass here: https://www.recycleannarbor.org/news/other-communities-are-giving-glass-recycling-heres-why-were-not

- **Provide support to all municipally-owned or operated recycling facilities, collection services and transfer stations for residents in finding and accessing recycling end-markets.** Even though market demand has grown and prices are much higher than they were in the aftermath of the China Sword policy, many municipal programs do not have knowledge about the many good recycling markets in the state and wider region and are unaware of the strong demand for recyclables and these opportunities to sell them.
- **State procurement standards should require products to contain recycled content and give preference to products that are recyclable or compostable through available local programs.**
- **The Climate Scoping Plan should recommend that the State commission a study comparing single-stream and dual-stream recycling systems, documenting contamination rates, marketability of different types of recyclables, and the economics of curbside collection, sorting at the MRFs, and sales of recyclables.** We understand that dual stream systems are much less costly, have significantly lower contamination rates, and are able to access more numerous and better paying markets for their recyclables, compared to single stream systems. The state should provide incentives for public and private sector MRFs (materials recovery facilities that sort recyclables) to switch to dual stream. This would result in lower contamination rates and more materials being successfully recycled into new products.
- **We agree that coordination between local and regional municipalities can help improve recycling in a variety of ways, including through cooperative marketing of recyclable commodities.** In many or maybe most municipalities, oversight of waste haulers and enforcement of source separation is absent. When residents see waste companies dumping recyclables in with the garbage, they lose confidence in recycling.
- **Electronic waste recycling must be *e*-Stewards certified and must not permit incineration**. The *e*-Stewards certification stops some uses of incineration, and prohibits use of prison labor and dumping on developing nations, which are serious environmental justice issues relating to e-waste recycling.
- **Tire recycling must avoid exposing children and athletes through use in synthetic turf**. Used or "scrap" rubber tires present significant solid waste management problems due to their vast quantities, toxicity, and flammability. "Recycling" tires to use as infill for synthetic turf fields and playground areas is a false solution for handling hazardous tire waste and poses serious health and environmental threats. The tire crumb rubber contains a myriad of toxic, restricted use chemicals including heavy metals, benzene, carbon black and volatile organic compounds, which are known carcinogens, neurotoxins and endocrine disruptors. Synthetic turf also contributes to heat Island effects and significant chemical runoff, microplastic pollution and water and soil contamination. There is a lack of plans or guidance for synthetic turf disposal yet they are projected to produce between 1 million and 4 million tons of waste in the next decade. The Resource Conservation and Recovery Act (RCRA) of 1976, our nation's primary law governing disposal of solid and hazardous waste, gives the EPA the authority to control hazardous waste from "cradle-to-grave" including used rubber tires. But it also states that the recycling of a hazardous waste product into a usable consumer product automatically exempts it from RCRA requirements, even if the end product it creates is more toxic than other similar products on the market. This loophole means

that no monitoring follows the new products that have been manufactured from recycled hazardous waste, such as synthetic turf crumb rubber infill or recycled rubber playground surfaces.[18,19,20]

Compost

- **The Climate Scoping Plan should delete the recommendation to use de-packing machines to mechanically remove food from its packaging so it can be more easily composted or anaerobically digested.** In Vermont, it has been documented that these multimillion-dollar de-packing machines leave behind large amounts of microplastics in the food waste they de-package.[21] Contaminating farm soils with significant amounts of microplastics will have negative consequences that scientists are just beginning to investigate. The Climate Plan must protect our soil from harm and err on the side of caution.

Material Recovery and Biological Treatment (MRBT)

- The Scoping Plan must recognize that MRBT to landfill is the most sound waste management method to reduce climate impacts on the back end of the Zero Waste Hierarchy. This means – after extensive upstream work to redesign, reduce, reuse, recycle, and compost – the remaining trash is sorted to mechanically remove extra recyclables, and the organic fraction is biologically stabilized through anaerobic digestion (or at least a composting process) prior to landfilling. This gets the methane generating potential out in an enclosed environment where the gas can be captured more effectively than at a landfill. It also reduces the water weight and volume to minimize trucking needs and costs, and results in a small stable residual to be landfilled, ensuring that landfills won't be as gassy, stinky, or leaky. The life cycle analysis showing this to be the best option is written up in the EcoCycle report: "What is the best disposal option for the 'Leftovers' on the way to Zero Waste?" available at www.ecocycle.org/specialreports/leftovers

Landfill management

- **Landfills must be managed to minimize gas generation and maximize gas capture.** At open landfills, landfill gas should not be used for energy if it means manipulating the landfill to encourage gas generation, as these methods usually lead to more gas escaping capture.
- **Require reusable tarps to replace daily cover and conserve landfill space.**
- **Ban landfilling or incinerating food waste and yard waste.** Exceptions will need to be allowed in cases for loads of food or yard waste that are too contaminated with plastic and other contaminants to meet a compost facility's standards. Do not ban sewage sludge from landfills.

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[18] Independent Science on Public Health Concerns Regarding Synthetic Turf. www.grassrootsinfo.org/synthetic-turf-digest

[19] "Position Statement on the use of recycled tires in artificial turf surfaces," Mount Sinai Icahn School of Medicine. icahn.mssm.edu/files/ISMMS/Assets/Departments/Environmental%20Medicine%20and%20Public%20Health/CEHC/CEHC%20Artificial%20Turf%20Position%20Statement%205.2017.pdf

[20] "Athletic Playing Fields: Choosing safer options for health and the environment," Toxic Use Reduction Institute, April 2019. www.turi.org/var/plain_site/storage/original/application/b9727dedf5860ae7e83e3226d058b7ee.pdf

[21] https://www.sevendaysvt.com/vermont/market-to-farm-a-new-food-waste-disposal-method-raises-fears-that-microplastics-will-taint-fields/Content?oid=34317978

- **Enforce at disposal sites that waste cannot be accepted unless first processed with MRBT.**
- **Require that landfill leachate is pretreated** with a process that removes or detoxifies hazardous substances before it is taken to a wastewater treatment plant.

Disposal and exports

We support a per-ton surcharge on waste as a tried and true approach to creating a funding stream for waste reduction, reuse, and recycling infrastructure and programs, and to make Zero Waste alternatives more economically competitive with landfilling and incineration.

However, the proposed fee per ton of waste generated in New York (page 242 in the plan) must be thought out more carefully.

If the fee can be levied at the source of generation regardless of whether it's hauled out-of-state, that'll be best. If the fee is levied at waste transfer or disposal facilities, it must be equal for waste generated out-of-state to avoid a commerce clause challenge. Perhaps more significantly, it needs to be designed so that it doesn't drive even more of New York's waste to Pennsylvania and other states. New York has long been the nations #1 trash exporter, and Pennsylvania the nation's #1 trash importer. Exacerbating this situation is unfair and is only justified if it comes as a result of closing incinerators and choosing landfills until New York can reduce waste and handle its own trash.

The fee must be designed in a way that does not encourage a switch from glass to plastic packaging.

Fees should be deposited in a dedicated fund, to be managed by designated state employees, who would be responsible for funding waste reduction, reuse and recycling programs and whose salaries it would fund.

Sewage sludge

Sewage sludge should be anaerobically digested, then monofilled in special landfill cells. Land application of sewage sludge is toxic, biohazardous, and spreads contaminants such as PFAS onto agricultural land. Sewage sludge composting, land application, or sale as bagged fertilizer or soil amendment must be banned. Sewage sludge incineration (including pyrolysis / "biochar" schemes), due to climate and air pollution hazardous, must also be banned.

On April 15, 2022, the Maine state legislature passed a law to ban the use of sewage sludge and industrial biosolids as fertilizer, as this sludge has been the source of widespread PFAS contamination of soil and water, forcing family farms to discontinue sales of crops and livestock products. In New York, these so-called "biosolids" (a term chosen by a PR company to rename sewage sludge to make it seem more appealing) continue to be applied to farmland and made into fertilizer. Neither farmland nor aquifers can be remediated from PFAS contamination. Composting and anaerobic digestion are incapable of detoxifying this material.

The Climate Action Plan should acknowledge that some wastes cannot have any "beneficial use," due to toxicity issues. We oppose the Climate Scoping Plan Draft recommendations for the beneficial use of biosolids (municipal sewage sludge and industrial

sludges), due to their contamination with harmful substances. We also oppose the recommendation that the state operate co-digestion programs at anaerobic digesters (presumably at wastewater treatment plants) with existing capacity for organics deemed difficult to compost, such as post-consumer food scraps, and fats, oils, and grease. Co-digestion of food scraps and sewage sludge render a larger volume of materials unsuitable for land application than anaerobically digesting sewage sludge alone.

Due to methane leakage at digesters, and for many other reasons, source separated organics (food scraps and yard waste) should ideally be handled with aerobic composting preferred over anaerobic digestion, except where urban applications and lack of land make digestion more appropriate. Digester gas should only be used in hard to electrify sectors and should not be injected into leaky natural gas lines. Most sectors can now be electrified to avoid carbon emissions and other pollutants resulting from combustion. Heavy trucking, planes, shipping, and industrial heating are starting to be electrified, but where that is not yet practical, methane gas from digestion should be used in these applications. Other sectors should simply be electrified and not continue to use methane that gets justified through the greenwashing and public relations associated with "biogas" – especially where that use relied on aging and leaky gas distribution infrastructure. After all, methane is 82 times more potent than CO2 over a 20-year time frame, and studies have shown that just about 2-3% leakage in a methane gas system makes the burning of this gas worse than coal for the climate. The gas distribution system will never have all its leaks fixed because the cost of replacing such an extensive system is greater than the cost of replacing it with non-burn applications.

Respectfully submitted,

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On behalf of:

Energy Justice Network

Clean Air Action Network of Glens Falls

Grassroots Environmental Education

Westchester Alliance for Sustainable Solutions

WESPAC Foundation

[Additional organizational signers to be added.]