

COMPLETE GUIDE TO



In Support of the City of Newburyport



Developed by ACES (Alliance of Climate and Environmental Stewards)



www.aces-alliance.org

Composting is one of the best ways we can reduce our carbon footprint and positively impact climate change.

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Why Composting in Newburyport is Important

“One of our most significant challenges for society and our community is disposing of the ever-increasing volume of waste of all forms. Organic waste from the production of foods from our tables and kitchens adds to the weight of our trash and disposal costs. **Composting reduces costs and positively impacts our carbon footprint as it reduces methane emissions and enhances soils, water retention and provides carbon sequestration**” - Molly Ettenborough, Recycling and Energy Manager, Newburyport

Current situation for waste management and disposal

Waste disposal presents an increasingly difficult and costly problem for municipalities.

- Landfills are full and closing, and incinerators are near 100% capacity,
- There is a state moratorium on building additional incinerators,
- Some Massachusetts waste is being shipped out of state, and
- Municipalities face rapidly rising and uncontrolled costs for disposal, collection and hauling.

Organic waste is estimated to account for 25-50% of the weight of solid waste and presents an opportunity to divert significant tonnage out of the trash and recycling waste streams. Accordingly, in support of the City's Toward Zero Waste program, the Alliance of Climate and Environmental Stewards (ACES) established a project team to develop this plan for increasing composting in Newburyport.

Perspectives from ACES Youth Corps Members

Sam Cooper (NHS '21) “Not only does composting teach younger generations to be thoughtful when disposing of waste, it also forces us to learn a crucial lesson we encounter everyday: accountability. While composting waste is beneficial unto itself, we more importantly learn responsibility and honesty which carry over into other aspects of life.”

Sophie Burns (NHS '22) “Composting is a very important practice because it will allow younger generations to actually have a future. Food waste results in 8% of all global greenhouse gas emissions, so deferring that food waste to a facility that can successfully break it down without creating harmful emissions will help diminish the effects of climate change. Everybody needs to compost because even the smallest action can make such a big difference.

Newburyport composting practices today

Currently almost 600 Newburyport households subscribe to Black Earth's curbside composting service. A number of residents also drop off compostable waste at a designated location in the city, and about 100 Earth Machines (composting bins) have been purchased from the City. There are an unknown number of people practicing backyard composting through means other than Earth Machines.

A recent survey of Newburyport residents indicates an interest to increase knowledge about composting and awareness of composting. Survey results also show a willingness among non-composters to pay for a curbside composting service. We believe by working with current composters across the City, we can encourage others to join this endeavor. We plan to launch an education and awareness campaign targeting Newburyport residents, as well as businesses and non-profits serviced per the City's waste disposal contract.



Goals for increasing composting in Newburyport

- **Vision 2030:** Composting will be widely practiced among all residents, non-profits, businesses and public entities across Newburyport.
- **Phase One Goal:** At least 900 residential households, nonprofits, and businesses on the City waste disposal contract will regularly practice composting.
 - This will be achieved via the roll out of an education and awareness campaign, to include non-profits and churches who provide meal services.
 - We will evaluate the results of the campaign by May 2021 in preparation for Phase Two.
- **Phase Two Goal:** To support the City Council, Mayor and relevant city departments in collaborating to develop policies designed to further incentivize composting among residential, public, non-profit and commercial entities.

Program Resources

Recognizing the significant budgetary issues faced at the local, state and federal level due to Covid-19, the campaign will be run at minimal cost, relying on volunteers and with any funding needs secured through available state grants.

Frequently Asked Questions

Why compost at all?

Composting can significantly reduce the volume of disposable trash other than recycling, therefore having a significant impact on overall disposal costs. Composting reduces strong greenhouse methane gas emissions (compared to landfilling) and puts carbon in the soil as humus, a rich nutrient-filled material.



How can I compost in Newburyport?

There are at least three ways through the city, others can be found online.

1. **CURBSIDE PICK UP SERVICE** - Black Earth Compost - <https://blackearthcompost.com/composting-guide-and-faq/> is the curbside program you see around the city. Composting this way allows all food, including meat, cheese and bones, but you would not be making your compost. The cost for this weekly pickup program is \$1.89/week but this cost will be reduced as more residents subscribe. Most people use a 13-gallon latched bin (13" w x 13" l x 27" h) with locking lid and wheels available from Black Earth for \$24.00 with biodegradable bag inserts (Fig.1a). Many find a second 3-gallon size kitchen countertop container convenient (Fig.1b). A benefit of this program is you have the option of receiving a free bag of Black Earth finished compost annually for your garden.
2. **FREE DROP-OFF** - A second composting option is similar to the first option with Black Earth except that instead of curbside pickup, when your compost container is full, you can drop the contents off at a free compost collection bin located at 115 Water Street, the Newburyport Waste Water Treatment Facility. Phase Two will include an evaluation of additional drop off sites.



Figure 1a. 13-gallon curbside compost bin



Figure 1b. 3-gallon kitchen composting container w/liner

3. **BACKYARD** - The Earth Machine is a durable backyard compost bin (Fig.2) designed to compost food and yard waste. It will produce an all-natural soil conditioner, which provides gardens with much needed nutrients, while helping to retain moisture in the soil. Typically, it has an 80-gallon storage capacity, has a twist locking lid and is easy to maintain. Of course, it produces larger amounts of compost material for your garden. Earth machines may be purchased by residents of Newburyport at the Yard Waste Facility at a subsidized rate.



Figure 2. Earth Machine

Why composting and not my kitchen garbage disposal?

Decreased use of garbage disposals means saving water and electricity while preserving the quality of our waterways. Without organics in the mix, the wastewater treatment plant can function more efficiently saving costs on operation while also helping marine wildlife and habitat.

Is composting smelly?

Does your kitchen trash bin smell? Now consider removing all organic matter including spoiled food, leftovers, coffee filters, meat, bones, dairy, lobster shells, soiled pizza boxes, paper towels, napkins and certified compostable service ware from that kitchen trash. They can be put in a countertop compost container on your kitchen counter and then in an outdoor composting bin. Composting bins have locking lids with tight seals that trap any smells inside. Compare this to your kitchen trash bin which only has a top that overlaps the sides of the bin and you will realize that putting your compostable food in compost containers and removing it from the kitchen more frequently will actually *reduce* unwanted kitchen odors. In a recent [Newburyport survey](#), composters indicated odor was not an issue.



Does composting attract wild animals?

No. As described above, the sealable design of the compost bins' lids reduces odor, so there is no smell that would attract animals. Users of curbside composting have not reported animals breaking into their composting bins, as animals might when attracted to food waste in standard trash cans.

What about recycling? Does that help?

Yes, but not enough. Recycling helps protect the environment and conserves natural resources. Recycling also saves energy, creates jobs, and creates new demand. The City and its residents are required by State Law to recycle, as there are more than a dozen waste bans that bar residents from disposing of paper, many plastics, cardboard and other material in the trash. However, at present *we are paying for recycling*. The end materials may be purchased, but prices vary depending on the global market.

What constitutes much of our food waste?

In the U.S. 30-40% of our food is thrown out! Natural byproducts of eating include peelings, cores, spoiled food, bones and leftovers. Natural food waste and related materials are the heaviest part of our garbage, accounting for between 25-50% of the weight. Food waste usually ends up in one of two places: a landfill where it produces methane, which is 100 times more warming to our atmosphere than carbon dioxide, or an incinerator where the heat has to be cranked way up for it to burn, a process which uses more energy and emits gases.



How do we know composting would work here in Newburyport?

From 2015 to 2017, the City ran a curbside composting pilot in partnership with Black Earth Compost. Approximately 429 households participated over the course of the pilot, receiving free curbside composting pick up during this period. Based on both quantitative and qualitative feedback from participants, the program was a resounding success. Residents loved participating, felt good about their efforts, noted a drastic decrease in their trash volume and weight, and wanted to continue with the program. Two key findings from periodic surveys to the pilot group found that nearly 30% of the group decreased the volume of their trash output by 50% or more by participating in the program. An additional 44% of the group reported at least a 20% decrease in trash. About 600 households now subscribe to this curbside service. Our short-term goal is to increase the number of subscribers to 900 households.



For More Information

General Resources

BIOCYCLE - <https://www.biocycle.net/biocycle/>

Biodegradable Products Institute- <https://www.bpiworld.org/page-190309>

Black Earth Compost - <https://blackearthcompost.com/>

[What can I put in my Black Earth Compost Bin?](#)

Newburyport City Website - <https://www.cityofnewburyport.com/recycling-energy-resiliency-sustainability>

Federal and State Guidance

Maine Program: https://www.maine.gov/dacf/php/nutrient_management/compost.shtml

Massachusetts State Guidance - <https://www.mass.gov/doc/teaching-residents-about-composting-outline-talking-points/download>

Massachusetts State Information - <https://www.mass.gov/composting-organics>

Massachusetts State Draft 2030 Solid Waste Plan – <https://www.mass.gov/doc/draft-2030-solid-waste-master-plan/download>

NY State Association for Reduction, Reuse and Recycling - <https://www.nysar3.org/page/nys-organics-summit-100.html>

NY State Programs: <https://www.dec.ny.gov/chemical/98069.html>

US Environmental Protection Agency - <https://www.epa.gov/recycle/composting-home>

Municipal Guidance

Boston's Plans to Expand Composting: <https://www.bostonherald.com/2019/06/19/boston-plans-expansion-of-composting-and-recycling-programs/>

Boston's new rules (2014): <https://www.bostonglobe.com/magazine/2014/09/25/massachusetts-new-composting-rules-what-they-really-mean/SM9KF0Rw7l1Gq8KZTx5dL/story.html>

Real Estate Boston - <http://realestate.boston.com/news/2019/04/17/push-curbside-composting-programs/>

What can(not) be composted? <https://newburyportorganicspilot.wordpress.com/what-can-be-composted/>

Educational Plans

Building a Composting Bin: <https://www.practicallyfunctional.com/how-to-build-a-diy-compost-bin/>

Writing a Plan – The Green Team <https://www.thegreenteam.org/wp-content/uploads/2012/08/Compost-Lesson-Plan-2012.pdf>

Recycle Now - <https://www.recyclenow.com/reduce-waste/composting/why-compost>

Program developed by the Alliance of Climate and Environmental Stewards
to support of the City of Newburyport and its Toward Zero Waste Program
Please send any questions to
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ACES WEB SITE: <https://www.aces-alliance.org>

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