

# Garbage Disposal vs. Composting

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## ***Garbage Disposal***

Sewer pipes in Canton connect to the Massachusetts Water Resources Authority (MWRA); sewage flows underground to Boston, and is processed by the MWRA at the Deer Island Wastewater Treatment Plant. David Duest, the director at Deer Island, was clearly pleased to discuss the facility with me on the phone.

The plant extracts solids from the wastewater and puts them into an anaerobic digester, where microorganisms break down organic material in the absence of oxygen. This process creates biogas - 70% methane, particularly bad for the environment - over 98% of which is captured; it is burned to create electricity that powers the plant, ***making it 65% free from the electrical grid.***

The MWRA's processing removes over 85% of pollution from the solids that are not digested, which are then turned into fertilizer pellets that meet "all state and federal standards for biosolids (sludge-derived) fertilizer, including the strictest limits on metals." These are marketed for landscaping applications.

However, unless it is properly ground up by a garbage disposal, food waste can clog drains or interfere with wastewater processing. Also, grease should never be put down the sink, because it can clog drains.

## ***Composting***

When composting, microbes work on the organic matter, but the biogas goes off into the atmosphere. The advantages of composting lie elsewhere.

Black Earth Compost provides curbside pickup for a fee in many communities, including Canton. They take all food waste, including things that should not go into a garbage disposal (e.g. bones, artichokes, parsley stems, rice, pasta, egg and nut shells, grease) plus other items such as paper towels, leaves and garden waste. Each customer may request a voucher for one bag of their top-quality compost annually.

In an email to me, Andrew Brousseau of Black Earth made these key points about the garbage disposal vs. composting issue:

- The reason [Black Earth] recycles food waste is to capture the nutrients (N, P, K, Ca, Si, Mg, Mn, etc.) to reuse them to grow food again. Composting creates a product where those nutrients are the cleanest and most available

for growing new food. That's why small vegetable farmers buy our compost to grow food, but you couldn't pay them to put biosolids on their fields.

- Food waste in the sewage lines increases hydrogen sulfide [sewer gas] production, which corrodes city sewer lines.
- Biosolids ... as a fertilizer ... are controversial because of contaminants (heavy metals, PFAS, pharmaceuticals) that are mixed with it because of the sewage.

## ***Conclusions***

In Canton, both the garbage disposal and composting are better for the environment than putting food waste in the trash, and ultimately into a landfill – but in different ways. Biogas recovery addresses climate change, the single most pressing environmental issue, despite warts on the process. Using composted food waste to grow food recycles those nutrients, but a pickup service also has environmental impacts.

Composting is clearly superior for a house that is on either a septic system or a sewer system where biogas is not recovered.

In Canton, the garbage disposal, personal composting, or a composting service is an environmentally responsible choice.