

# COMPOSTING FOR WASTE REDUCTION & SOIL HEALTH

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## WHY IT MATTERS

Returning organic waste to the land as a **soil amendment** raises land productivity, improves soil health, and increases the soil's capacity to sequester carbon from the atmosphere. To accomplish this, a closed-loop system is needed that reduces organic waste and builds local composting capacity.

America's farmland is eroding faster than nature's ability to restore it,<sup>1</sup> and organic compost material is a valuable resource for soil health and carbon sequestration that should not be wasted. At 24%, food is the largest component of waste sent to landfills.<sup>2</sup> Composting programs divert biodegradable material from landfills and incinerators and instead turn it into a valuable product. Less than one percent of all waste is composted.<sup>3</sup>

For localities, composting improves recycling rates; reduces waste and costs to taxpayers; diverts organic waste that emits methane pollution from landfills;<sup>4</sup> produces a soil amendment that raises revenues;<sup>5</sup> and conserves landfill space. The authority of local governments in Virginia to require organic waste diversion from solid waste streams in waste management systems is currently limited. Black and low-income communities are most likely to have toxic waste facilities placed near them, so organic waste disposal also can help alleviate a source of pollution for environmental justice communities.

Universities, hospitals, retirement communities, and corporations with food services are major producers of food waste. Currently, institutions that want to compost cannot access the infrastructure needed to process organic waste into compost; cannot find a service provider to pick up the organic waste on a regular schedule; or find farmers to use the finished product.

Across Virginia, localities are struggling with costly solid waste management issues and do not have access to composting infrastructure. Diverting biodegradable material can reduce solid waste levels and also help improve recycling rates.

## CURRENT LANDSCAPE

Of the 15 total composting facilities in Virginia, six are equipped to accept food waste, eight accept yard trimmings, two accept sewage sludge, and five accept manure and other agricultural residuals (most facilities accept more than one material). To achieve higher levels of organic waste diversion and serve all communities in Virginia, more processing capacity is needed. The composting market is shift-

ing to smaller, community-scale facilities, and there is growing interest in facilities linked to local agriculture.<sup>6</sup>

The General Assembly established a task force in 2020 to advise on state policy for waste diversion and recycling. Recycling of organic material and infrastructure for composting are key policy concerns.<sup>7</sup> In 2021, the General Assembly requested Department of Environmental Quality (DEQ) "investigate the role of a composting and food donation infrastructure in reducing the volume of waste that is accepted by landfills, including upgrading and refining existing food donation infrastructure, identifying food material and organic waste generators and haulers, comparing the use of in-house composting with regional composting hubs, studying the ideal distance between composting hubs and waste generators, considering the permitting of composting hubs, and exploring markets and systems for composting services and anaerobic digestion."<sup>8</sup>

Executive Order 17 of 2022<sup>9</sup> charged DEQ and the Virginia Department of Agriculture and Consumer Services (VDACS) to develop strategies to reduce food waste from large-scale sources of food surplus through donations to needy individuals, food for animals, or composting. In response, DEQ produced a report in 2023 on food waste reduction strategies<sup>10</sup> Adequate funding and support is needed to implement these recommended strategies.

## OPPORTUNITIES

Research, technical assistance, and funding are needed to advance composting statewide. A capacity and gap analysis study is needed to identify investment opportunities and should include a cost-benefit analysis of potential savings for state institutions if composting is available versus sending food waste to a landfill. Investment recommendations should be framed taking into account environmental justice impacts and potential benefits to communities most impacted by waste issues and lacking capacity and resources.

Technical assistance, incentives, and funding would give municipalities and producers of organic/food waste the resources to implement waste diversion and composting programs.

Funding design and construction upgrades to yard waste composting facilities would enable the processing of food waste and increase the amount of food waste diverted from landfills.

Decentralized community composting facilities

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would provide compost to local farms and community gardens that supply food assistance programs.

Establishing and funding facilities and infrastructure grants under the Agriculture and Forestry Industries Development Fund and Grant Program (AFID) facilities program has the potential to expand organic waste collection, build new composting facilities, and upgrade and expand existing facilities. Including composting as a project category and giving priority to applicants who include composting in their operations would allow Virginia to leverage an existing program for increased composting opportunities.

## TOP TAKEAWAYS

America's farmland is eroding faster than nature's ability to restore it, and organic compost material is a valuable resource for soil health that should not be wasted.

Demand for food waste composting from businesses and institutions greatly exceeds Virginia's collection and composting infrastructure capacity.

Expanding statewide capacity to collect and process organic waste, and the authority of localities in Virginia to require organic waste diversion from solid waste streams in waste management systems would help reduce the solid waste going to landfills and the polluting methane it creates.



Local produce at Bedford County Orchard | Photo by Patti Black

## ENDNOTES

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