

Subcommittee: Organics Recycling and Composting

(Abstracted from the State Solid Waste Management Plan, amended December 2006;
Objective - 2 Recycling and Composting)

Move aggressively to strengthen Connecticut's public and private recycling and composting efforts and infrastructure to increase the quantity and quality of recovered materials and to build resilient, highly efficient and continually improving programs to reduce the amount of solid waste Connecticut disposes, both now and in the future.

Overview – Composting

This Plan calls for renewed, reinvigorated, and expanded efforts at recycling and composting. The implementation of new programs to divert more food scraps from the waste disposal stream will be one major strategy. According to the U.S. EPA MSW characterization for 2003, food scraps account for close to twelve percent of the MSW generated in this country. Connecticut is currently recovering only a small part of that waste-stream, therefore the potential to increase food waste recovery is substantial.

Current Organics Recycling and Composting Practices

Composting in Connecticut spans a variety of feedstocks, but the most prevalent organic material currently being composted is leaves. As of March 2006, ninety-four leaf composting facilities were registered with the CT DEP. Twenty-one of these are privately owned and/or operated and the remainder are municipally operated. Thirteen of those are currently inactive. Combined, the active sites have a processing capacity of approximately 666,000 cubic yards of leaves per year. Residents, landscapers, and municipal public works and highway departments use compost produced by these facilities as a soil amendment or mulch. CT DOT has used compost on highway projects and in wetland creation.

Farms can play an integral part in the state's composting effort through sheet leaf composting, the application and incorporation of leaves on cropland actively devoted to agricultural production. In 2005, four farms notified the CT DEP that they planned to accept leaves for sheet leaf composting, with a combined capacity to compost approximately 16,440 cubic yards of leaves. In addition, 26 farms (4 inactive) have agricultural waste management plans approved by the CT DEP for composting such materials as horse manure, animal bedding, leaves, soiled non-recyclable paper, vegetable waste, hay, slaughterhouse waste, fish mortalities, and dead poultry. Combined, the active farm sites have the capacity to process approximately 33,478 cubic yards per year of organic material.

In Connecticut a small number of institutional food scrap composting efforts are underway. The CT Department of Corrections (CT DOC) Prison Complex in Enfield has composted food scraps from the prison sculleries for nine years at a rate of 2000 pounds per day. Working cooperatively, the CT DOT provides wood chips as a bulking agent in exchange for the use of adjacent CT DOC property as a staging area for wood cleared during highway maintenance. This program results in a 50 percent savings on dumpster costs, creates a compost product used on prison grounds and provides jobs and job training for soon to be released inmates.

At a local level, there are several elementary schools that have cafeteria food scrap composting bins on school grounds. Southeast Elementary School in the Town of Mansfield was the model used in the development of the School Composting Manual funded by the CT DEP. Some colleges and universities compost manures, yard trimmings, and/or food scraps on-site. Unique composting efforts are being pursued by others and include activities being

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undertaken by Foodshare that grinds spoiled produce into slurry and delivers it to an organic farm for composting and the City of Middletown which is establishing a vermi-composting (worm composting) project for local commercial and institutional generators. Others in this category include one-day zero waste events where food scraps and bio-based dishware is composted with leaves, animal mortality composting on farms, and the CT DEP's own on-site office food scrap composting program.

The permitting of composting activities varies depending on the type of feedstock, volume, location, and processing technology. Facilities composting only leaves are exempted from solid waste permitting provided they register with the CT DEP. Sheet leaf composting on agricultural land is also exempt and practitioners need only notify the CT DEP. The addition of grass clippings to leaf sites can be approved through the issuance of a general permit registration. On-site composting of source separated organics, such as institutional, school, or home composting, is not regulated as long as the processing capacity falls under one ton/hour pursuant to CGS Section 22a-207(5). On-farm composting is allowed under the agricultural waste management plans approved by the CT DEP. The CT DEP, through the NPDES permit process, regulates sewage sludge (also commonly referred to as bio-solids) composting at two publicly owned wastewater treatment facilities currently operating sludge compost facilities, one in Farmington and the other in Fairfield. Source separated organics recycling facilities taking materials from many different off-site sources and processing or receiving that material at a rate greater than one ton/hour are required to obtain a solid waste volume reduction facility individual permit. Depending on the circumstances, water discharge or storm water management permits may be required at any facility. In all permitting and technical assistance efforts, the Department has required that composting facilities accept only source separated organic materials that will result in a high quality compost.

Current Efforts to Support Recycling and Composting Markets

- CT DEP collaborated on a research project with CT DOT and the Connecticut Transportation Institute at the University of Connecticut. This research demonstrated that compost was effective in controlling soil erosion, growing turf, and amending soil used in planting roadside trees and shrubs. As a result of the research, CT DOT now has a materials specification and a construction detail that allows the substitution of compost for peat in planting backfill.
- The Town of Glastonbury produces a better quality compost from the leaves they compost at their municipal composting site and starting in May 2006 were able to charge for the higher-quality compost rather than give it away for free.

Barriers to Increasing Recycling and Composting

- Barriers specific to recycling/composting source separated industrial, commercial, and institutional organics, such as food scraps, soiled paper and waxed corrugated cardboard can include:
 - Difficulty in siting facilities based on local zoning issues and permitting requirements;
 - State regulatory requirements and fees which do not encourage the development of facilities to process those materials; and
 - A lack of knowledge by the generators of organic materials about the opportunities and benefits of composting.

Recycling and Composting Opportunities and Priorities

- Establish incentives for generators, municipalities, haulers and manufacturers to divert more MSW from disposal.
- Provide sufficient funding to municipalities, regional recycling entities, and state agencies to implement the recycling and composting strategies in the Plan
- Identify national innovative waste diversion programs and develop models that may prove successful to Connecticut.
- Strengthen regional coordination and cooperation.
- Build capacity for market development services and providing incentives for recycling processing businesses and businesses using recycled material.
- Increase the recycling and composting of organic wastes, especially source separated food residuals, generated by the institutional/commercial/industrial sector.

Strategies for Organics Recycling and Composting

Strategy 2-14. Identify the internal barriers and solutions to streamlining the permitting process for source separated organic material recycling, especially for those institutional, commercial and industrial operations that process food scraps, soiled paper and waxed cardboard.

One of the most important strategies to implement successful organics recycling in Connecticut is to build processing capacity for at least an additional 100,000 tons/year of source separated organic materials, especially food scraps, soiled paper and waxed old corrugated cardboard from the industrial, commercial, and institutional sectors. Although it will likely require the siting of some large-scale facilities, this capacity should be achieved through a variety of on-site, farm, municipal and regional facilities. The State, quasi-government agencies, waste generators, organics processors, haulers and residents should share the responsibility for increasing capacity and recycling rates for organics. Some approaches that could be undertaken include:

- Amend state permitting and regulatory requirements to encourage source separated organic material recycling.
- The CT DEP will investigate the feasibility of creating an allowance for the composting of small volumes of some types of food scraps at appropriately sited and managed existing registered leaf composting facilities.
- The CT DEP will seek to partner with the State Department of Agriculture to expand on-farm composting and create an agricultural exemption, that allows agricultural composting operations with approved agricultural waste management plans to add source separated organic material.

Strategy 2-15. The Agency's Solid Waste Management Advisory Committee will be requested to discuss options that could stimulate organics recycling, especially food scraps, soiled paper, and waxed cardboard from the institutional, commercial and industrial sectors.

Among the options that should be considered are the following:

- Conduct a technology workshop to share information and identify opportunities in developing organics recycling in the state.

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- Identifying groups of commercial and institutional generators that generate the most food waste and have the best opportunity to cost-effectively divert food waste from disposal. Such generators would include supermarkets, hospitals and other health care facilities, hotels and convention centers, colleges and universities, and state institutions such as prisons.
- Seek statutory authority to create appropriate economic incentives to attract the siting of large-scale source separated organic material processors to Connecticut.
- Seek federal monies from agriculture and energy agencies that may be available for start-ups, as well as potential state funding that may be available from the Connecticut Clean Energy Fund.
- Identify and seek funding for related research for large-scale organics recycling/composting facilities; of particular interest are anaerobic and aerobic digestion technologies that can handle food waste.

Strategy 2-16. Include compost and compostable materials in a statewide or regional on-line materials exchange to link generators of source separated organic material with processors and compost users.

Create a statewide or support the expansion of regional on-line materials exchange to include a compost component.

Strategy 2-17. Encourage the marketing of compost products for such uses as erosion control, potting soil blends, topsoil blends, playing field mediums, etc.

The CT DEP will continue to work with regional organizations and other State agencies to establish State procurement specifications for compost products (e.g., topsoil, mulch) and standards for the use of these products by State agencies, municipalities, and other political subdivisions

Strategy 2-18. Promote home composting and grasscycling.

Seek funding to re-establish a home compost bin grant program whereby municipalities and non-profits can provide residents with low-cost bins. Promote available technical assistance to residents to encourage composting of food scraps and yard trimmings on-site via brochures, videos, and website. Convert CT DEP's home composting and grasscycling videos to more current CD technology.