

# Food Scrap

## The Rhode Island Compost Initiative

Greg Gerritt

*“Compost is organic matter that has been decomposed and recycled as a fertilizer and soil amendment. Compost is a key ingredient in organic farming. At its most essential, the process of composting requires simply piling up waste outdoors and waiting a year or more. Modern, methodical composting is a multi-step, closely monitored process with measured inputs of water, air and carbon- and nitrogen-rich materials. The decomposition process is aided by shredding the plant matter, adding water and ensuring proper aeration by regularly turning the mixture. Worms and fungi further break up the material. Aerobic bacteria manage the chemical process by converting the inputs into heat, carbon dioxide and ammonium. The ammonium is further converted by bacteria into plant-nourishing nitrites and nitrates through the process of nitrification.”* [Wikipedia](#)

Recycling food waste to create fertilizer makes sense, but creating a viable large scale composting system for the City of Providence (or the State of Rhode Island) is a large undertaking. In 2008 the Greater Providence Urban Agriculture Task Force formed the Compost Initiative, a partnership between the Southside Community Land Trust and the Environment Council of Rhode Island to explore strategies for promoting composting.

Rhode Island is experiencing an agricultural renaissance. We see this in the growth of local farms, farmers markets, and community and individual gardens in the city. This emerging agriculture requires compost. The Compost Initiative began by exploring how to turn food scrap in the city into compost for community gardens but the mission quickly grew to embrace the idea that all the food scrap in the state should be composted and returned to the land to grow food.

The Initiative researched the structure of large compost industries in places like California and Europe, examining the differences between those places and Rhode Island. In Rhode Island the legislatively mandated tipping fees at the Central Landfill are too low to make diverting organic matter from the landfill and into compost facilities economical. In California and Europe, high tipping fees support the development of necessary infrastructure for the diversion of food scrap into a composting system.

Currently Rhode Island has a variety of businesses and municipalities that compost on a fairly large scale. Earthcare Farm in Charlestown is the only operation currently focusing on the composting of putrescibles, to use the technical term for food scrap, and produces a wonderful product that growers love, but Earthcare does not have the capacity to absorb

a significant proportion of Rhode Island’s food scrap. The other large scale composters in Rhode Island focus on leaf and yard waste composting. Several communities support municipal leaf composting operations, and there are a variety of commercial operations operating in the milieu of the landscaping industry.

Full scale household composting (source separated organics household collection) is at least several years off in Rhode Island. The \$32.00 per ton tip fee at the landfill leaves no margin to pay for extra collections and the necessary extra processing of organics. But we do have an opportunity to develop facilities to handle commercial food scrap from the food industry; restaurants, supermarkets, and other food oriented businesses. As much as 50% of restaurant trash is food scrap, so the incentive to compost is high. And with the local food movement being an integral part of the success of the restaurant industry in Providence, the chefs know that getting the food scrap back onto the land is important to their business.

To catalyze the industry, the Compost Initiative has organized two Rhode Island Compost conferences. The first year (2010), 60 people attended, in 2011, the conference attracted more than 200 attendees including municipal officials and farm and food industry professionals. The conferences have



A Compost pile at City Farm in South Providence. To learn more about City Farm go to [www.southsideclt.org/cityfarm](http://www.southsideclt.org/cityfarm). Photo: EcoRI.

created a network of people thinking about the development of a compost industry in Rhode Island and momentum is building.

A relatively recent development in the U.S. is the use of anaerobic digesters to process food scrap. In a sealed chamber with no oxygen, a different set of bacteria create large quantities of methane which can be used to generate electricity. The nutrient rich residue left after digestion can either be composted or pelletized into organic fertilizer. In a big boost for Rhode Island's compost industry, Orbit Energy of North Carolina has received the first of a series approvals needed to build an anaerobic digester/electric power plant with a capacity of 150 tons of food scrap per day by the end of 2012. This would handle about half of the food scrap that could be expected to be collected in Rhode Island with a fully developed collection system. We estimate that all of the commercial food scrap from all sources in Rhode Island would generate 150 tons per day, but Orbit expects to also bring in commercial food scrap from Massachusetts.

With that part of the system slowly swinging into place, the Compost Initiative is now focusing on how to develop the rest of the infrastructure for commercial food scrap with the specific intent of creating compost specifically for agriculture and to prepare the way for the eventual collection of compostables from households. We have started conversations with faculty and staff at Johnson and Wales University (JWU). JWU is a center for the culinary arts and composting fits directly with the hospitality industry's efforts to green itself. Composting would significantly reduce the amount of waste JWU produces (and disposes of at a considerable cost)

and it gives them an opportunity to integrate composting into the whole culinary/hospitality curriculum. The conversations are making a difference. Professors and instructors in the Culinary departments are starting to ponder kitchen layouts for the easy collection of compostables. And the JWU's brownfield restoration at their Harborside campus provides an opportunity for JWU to incorporate their own compost into the restoration of the site.

Beyond discussions with Orbit, Rhode Island Resource Recovery Corporation, and Johnson and Wales, the Compost Initiative continues to talk to everyone who will listen, seeking those Rhode Islanders who have something to offer to the effort. We are talking to restaurants in various culinary hot spots around the state to see if they can join together to create compost sites. And we are suggesting that the hauling industry bring in innovations it has introduced elsewhere to accommodate composting. Worm bin production, corporate cafeteria composting, new tools for collecting compostables, and transforming municipal leaf composting operations into full service operation have all been talked about on occasion.

As Winnie the Pooh says, "from here no one knows where it goes". It is clear that ecological healing is critical to the future of the Rhode Island economy and our communities. Compost is a big part of that. It appears that we shall be able to overcome the obstacles, but how soon, and what it will look like, nobody knows. But in life the destination is hopefully to be recycled, so the journey to compost for Rhode Island invites you along.

*~Greg Gerritt works for the Environment Council of Rhode Island and is coordinator of the Compost Initiative.*



Earth Care Farm in Charlestown moving a compost pile in the middle of winter. The pile was 140 degrees. *Photo: EcoRI.*