



For a thriving New England

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June 17, 2014

Via E-Mail

Hon. Nicholas A. Mattiello  
Speaker of the House of Representatives

Re: H-7033 Sub A as amended – An Act Relating To Health And Safety – Food Residuals Recycling

S-2315 Sub A as amended – An Act Relating To Health And Safety – Food Residuals Recycling

Dear Speaker Mattiello:

CLF strongly supports H-7033 Sub A and S-2315 Sub A. These bills are not only good for the environment; they are also good for business. Recently a feature article in the Wall Street Journal<sup>1</sup> discussed the bills and included the following quote:

“It makes the case that we make to our investors to back these projects so much stronger when we have this law,” said Amy McCrae Kessler, co-founder of Turning Earth LLC, which plans to build two anaerobic digesters in Connecticut.

Developers want to bring anaerobic digesters and other food-scrap recycling businesses to Rhode Island as well as to Connecticut. These two bills would help them do just that.

More fundamentally, these bills reflect an underappreciated truth: Organic material, including food residuals, is never truly waste. Through both anaerobic digestion and composting, food residuals can be reused or recycled into useful products, benefiting both the private sector and the broader public. These benefits are both economic – increasing local tax bases and saving local businesses and governments money – and environmental – conserving landfill space, enriching Rhode Island’s soil, and avoiding greenhouse gas emissions. For all these reasons, a food residual disposal ban like the one set forth in H-7033 Sub A and S-2315 Sub A just makes sense.

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<sup>1</sup> Ben Leubsdorf, *Food-Waste Recycling Faces Hiccups*, Wall Street Journal, June 5, 2014, <http://online.wsj.com/articles/food-waste-recycling-faces-hiccups-1401998700>; see also Max Greene, *Rhode Island’s Food Scrap Bill Is Good For Business*, CLF Scoop, June 9, 2014, <http://www.clf.org/blog/rhode-island/food-scrap-bill-good-for-business/>.

In fact, the terms of these bills mirror the suggestions of *New England Food Policy: Building a Sustainable Food System*, a comprehensive report that CLF produced in partnership with American Farmland Trust and the Northeast Sustainable Agriculture Working Group. This report includes a chapter that I wrote on the beneficial reuse of organics. After vetting from agricultural groups, state regulators, academic experts, and others, the report's final suggestion on beneficial reuse of organics is this: States should ban the landfilling of food residuals and other organic material. Connecticut, Vermont, and Massachusetts have all done so already; now it's Rhode Island's turn.

### **Beneficial Reuse of Organics**

Organic materials like food residuals are not waste. Instead, they can be reused or recycled into useful products.

Food residuals can be composted, producing a valuable agricultural commodity: Researchers have found that on average, organic soil amendments like compost significantly improve soil quality and agricultural output. Studies show that organic soil amendments decrease soil bulk density while increasing soil nitrogen content, soil water retention, and even crop yields, compared to conventional fertilizers.<sup>2</sup>

Food residuals can also be “fed” to anaerobic digesters, producing heat, electricity, and biosolids that are also useful as soil amendments.

The following paragraphs take a closer look at the benefits of food residuals recycling through both composting and anaerobic digestion.

### **Economic Benefits from Food Residuals Recycling**

Both composting operations and anaerobic digesters can bring new business to Rhode Island. I have spoken with both composting-operation developers and anaerobic-digester developers who are actively looking to site facilities in Rhode Island. New businesses mean new jobs and an expanded tax base.

Composting and anaerobic digestion offer benefits to existing businesses as well. In particular, food residuals recycling facilities tend to offer significant savings on tipping fees (which in turn drive hauling costs). These lower tipping fees reflect the reality that food residuals are not waste. Food residuals recycling facilities make useful products or generate electricity, rather than mixing organic material with discarded plastics and metals and waiting for this mixture to break

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<sup>2</sup> S. Brown, K. Kurtz, C. Cogger & A. Bary, *Land Application – a true path to zero waste?*, Washington State University, October 2009, <https://fortress.wa.gov/ecy/publications/publications/0907059.pdf>; see also S Thompson & S Tanapat, *Modeling waste management options for greenhouse gas reduction*, *J. of Env. Informatics*, January 2005, 6:16-24.

down in lined cells. And, again, this reality means lower tipping fees for food residuals producers. Here is a closer look:

The basic commercial tipping fee at the Central Landfill is \$75 per ton.<sup>3</sup>

Tipping fees charged by anaerobic digesters appear to range from approximately \$20<sup>4</sup> to \$50<sup>5</sup> per ton. One business analysis of anaerobic digestion suggests that a tipping fee reduction of \$10 per ton is necessary to cover the costs of source separation so anaerobic digestion can compete with landfill or other tipping fees (meaning that an anaerobic digester's tipping fee of \$65 per ton would be on par with the cost of commercial tipping at Landfill).<sup>6</sup> Tipping fees for even an expensive anaerobic digester are \$25 per ton less than the basic commercial rate at the Central Landfill, so even accounting for the costs of source separation businesses should see significant economic benefits from sending food residuals to digesters instead of the landfill.

Tipping fees at composting operations can range significantly. A standout composting operation in Rhode Island is Mike Merner's Earth Care Farm. Earth Care Farm offers a tipping fee of \$0 for most carbon sources (for example, leaves, sawdust, and coffee grounds), and nitrogen-source fees ranging from \$30 for food residuals to \$60 for putrescible materials like clam bellies and offal.<sup>7</sup> A Penn State analysis of composting economics set the average tipping fee at \$36 per ton.<sup>8</sup> Using the highest of these values – \$60 per ton – composting tipping fees offer a savings of \$15 per ton over the basic commercial rate at the Central Landfill (and again this \$60 rate assumes food residuals comprising only clam bellies and offal – higher savings are likely for most food residuals producers). This savings rate means that even accounting for the costs of source separation businesses should see significant economic benefits from sending food residuals to composting operations instead of the landfill.

Even though the economic benefits of food residuals recycling are clear, a food residuals disposal ban is still necessary for two reasons. First, the ban as drafted would create a strong incentive for developers to bring new food residuals recycling operations to Rhode Island. The law would ensure a customer base for new facilities (except for those that cannot compete with

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<sup>3</sup> Rhode Island Resource Recovery Corporation Approved FY 2014 Rate Codes and Prices, <http://www.rirc.org/content/getfile.php?o=document&id=354>. The lowest available rate for commercial waste is \$42 per ton for producers entering a contract to provide over 60,000 tons per year. *Id.*

<sup>4</sup> Kristi Moriarty, *Feasibility Study of Anaerobic Digestion of Food Waste in St. Bernard, Louisiana*, U.S. Environmental Protection Agency & National Renewable Energy Laboratory (Jan. 2013), [http://www.epa.gov/osw/consERVE/foodwaste/docs/feasibility\\_stdy\\_st\\_bernrd\\_la.pdf](http://www.epa.gov/osw/consERVE/foodwaste/docs/feasibility_stdy_st_bernrd_la.pdf).

<sup>5</sup> Renewable Waste Intelligence, *Business Analysis of Anaerobic Digestion in the USA* (March 2013), <http://www.2g-cenergy.com/pdfs/more-chp/Biogas%20AD%20Market%20Report%20March%202013.pdf>.

<sup>6</sup> *Id.*

<sup>7</sup> Earth Care Farm Agricultural Composting 2013 Tip Fee and Price Schedule, <http://www.earthcarefarm.com/fees.htm>.

<sup>8</sup> Nadine Davitt, *Economic Analysis of Composting*, Penn State University Organic Materials Processing and Education Center (Dec. 8, 2005), <http://www.csrees.usda.gov/nea/plants/pdfs/cafeteriaware/davitt.pdf>.

other new or existing facilities). This assurance removes a lot of risk for new food residuals recycling businesses. Second, the ban would spur commercial food residuals producers to act. Across the entire commercial and industrial spectrum, there are plenty of potential savings to businesses that are never realized due to institutional inertia. The food residuals disposal ban as drafted would ensure that commercial food residuals producers overcome that inertia.

### **Environmental Benefits from Food Residuals Recycling**

Food residuals recycling benefits the environment in two major ways: First, it avoids turning food residuals into an environmental management problem – a significant strain on dwindling landfill space – and instead recognizes them as an environmental management solution – replenishing soils. And second, keeping food residuals out of the Landfill reduces the production and emission of the potent greenhouse gas methane.

When they are landfilled, food residuals are an environmental management problem. The Central Landfill is set to be full in 2038. Nationally, food residuals are the single largest landfill component by weight. Keeping food residuals out of the landfill will extend its life significantly.

When they are beneficially reused, food residuals are an environmental management solution. Products generated from recycled food residuals help to rebuild soils. Again, studies show that organic soil amendments decrease soil bulk density (decreasing soil bulk density is a good thing<sup>9</sup>) while increasing soil nitrogen content (e.g. nutrients for plants), soil water retention, and even resulting in higher crop yields compared to conventional fertilizers.<sup>10</sup> It is likely that locally produced soil amendments will be used locally as well, helping to support our burgeoning local food movement and increasing the resiliency of our regional food system.

Additionally, when we send food residuals and other organic material to landfills, they decompose and give off methane, a greenhouse gas more than 30 times as potent as carbon dioxide. In fact, landfills are the third-largest source of methane emissions in the United States, responsible for the equivalent of over 100 million metric tons of carbon dioxide per year.<sup>11</sup> One study has estimated that diverting 75% of organics from the waste stream to composting “would cause a dramatic decrease in methane, to as much as one-quarter the business-as-usual rate” from the waste-management sector.<sup>12</sup> And using compost as an agricultural soil amendment does not

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<sup>9</sup> According to the USDA’s Natural Resources Conservation Service, “High bulk density is an indicator of low soil porosity and soil compaction. It may cause restrictions to root growth, and poor movement of air and water through the soil.” [http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs142p2\\_053256.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053256.pdf)

<sup>10</sup> S. Brown, K. Kurtz, C. Cogger & A. Bary, *Land Application – a true path to zero waste?*, Washington State University, October 2009, <https://fortress.wa.gov/ecy/publications/publications/0907059.pdf>; see also S Thompson & S Tanapat, *Modeling waste management options for greenhouse gas reduction*, *J. of Env. Informatics*, January 2005, 6:16-24.

<sup>11</sup> *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 – 2011*, U.S. EPA (April 12, 2013), <http://epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2013-Main-Text.pdf>.

<sup>12</sup> See Thompson & Tanapat, *supra* note 1.

just avoid methane emissions from landfills – it actually increases the soil’s capacity to store more carbon, helping to keep it out of the atmosphere.<sup>13</sup>

Add to this the fact that there are near-constant fugitive methane emissions at the Central Landfill – one of the facts underlying CLF’s citizen suit for Clean Air Act violations at the landfill – and keeping methane-producing food residuals out of the landfill makes even more sense.

### **Rhode Island Can Join Other New England States as a National Leader**

Municipalities have experimented with food residuals disposal bans for years to great success,<sup>14</sup> but only recently have states taken up the call. States leading this effort are Rhode Island’s New England neighbors: Connecticut, Vermont, and Massachusetts. Rhode Island has a chance to join its neighbors in becoming one of the first states to scale up a model that makes good sense.

In 2011, Connecticut mandated that large generators of food waste separate organic materials from other solid waste and ensure that such source-separated organic materials are recycled at a permitted composting facility not more than 20 miles away.<sup>15</sup> After two years of success, an expanded version of the law passed last year took effect in January of this year. Vermont enacted a ban on landfill disposal of organic material in 2012.<sup>16</sup> The Vermont law has initially mandated diversion by the largest producers of organics, including hospitals and grocery stores.<sup>17</sup> By 2020 the ban will go into full effect, reaching all individuals and municipalities.<sup>18</sup> And in January of this year, Massachusetts joined Connecticut and Vermont by banning landfill disposal of organics from commercial sources, effective October 1.<sup>19</sup> This ban followed extensive revision of Massachusetts’s composting regulations in 2013, designed to ensure safe composting inputs and outputs while allowing composting operations greater flexibility to take on more food scrap and other organic material.<sup>20</sup> Rhode Island is similarly in the process of revising its

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<sup>13</sup> See Brown et al., *supra* note 1.

<sup>14</sup> San Francisco, California was a major driver of the organics-diversion movement. It enacted a series of robust policies causing municipal and commercial food scraps to be collected and composted. The resulting compost is sold to farms and vineyards to widespread benefit. See Jane Kay, *S.F.’s Scraps Bring Joy to Area Farmers*, S. F. Chronicle, Apr. 1, 2009, <http://www.sfgate.com/bayarea/article/S-F-s-scraps-bring-joy-to-area-farmers-3246412.php>. The result has been 80 percent diversion of organics from landfilling and a significant reduction in municipal waste. See Jeremy Carroll, *San Francisco Reports Record 80% Diversion Rate*, Waste & Recycling News, Oct. 5, 2012, <http://www.wasterecyclingnews.com/article/20121005/NEWS02/121009939/san-francisco-reports-record-80-diversion-rate>.

<sup>15</sup> S.B. 1116, 2011 Sess. (Conn. 2011), available at <http://www.cga.ct.gov/2011/ACT/PA/2011PA-00217-R00SB-01116-PA.htm>.

<sup>16</sup> 10 V.S.A. § 6605k(b).

<sup>17</sup> *Id.*

<sup>18</sup> *Id.* at § 6605k(c).

<sup>19</sup> *Final Amendments to 310 CMR 19.000 Regulations*, Mass. Dep’t of Env’tl. Protection (Jan. 31, 2014), <http://www.mass.gov/eea/docs/dep/service/regulations/wbreg14.pdf>.

<sup>20</sup> See 310 CMR §§ 16.00 et seq. (2012).



composting regulations. Due to the broad conversation going on in the General Assembly and in DEM about how Rhode Island should deal with food residuals, the state is poised to join or outpace its New England counterparts in setting a trend that appears likely to take hold nationally.

**Summary**

Because keeping food residuals out of the Central Landfill makes economic and environmental sense and provides Rhode Island with the opportunity to be a national leader on the important issue of organics diversion, CLF strongly supports H-7033 Sub A and S-2315 Sub A.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Max Greene".

Max Greene  
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