

Vermont Compost and Biogas Information System and Data Viewer

CENTRAL VERMONT SOLID WASTE MANAGEMENT DISTRICT

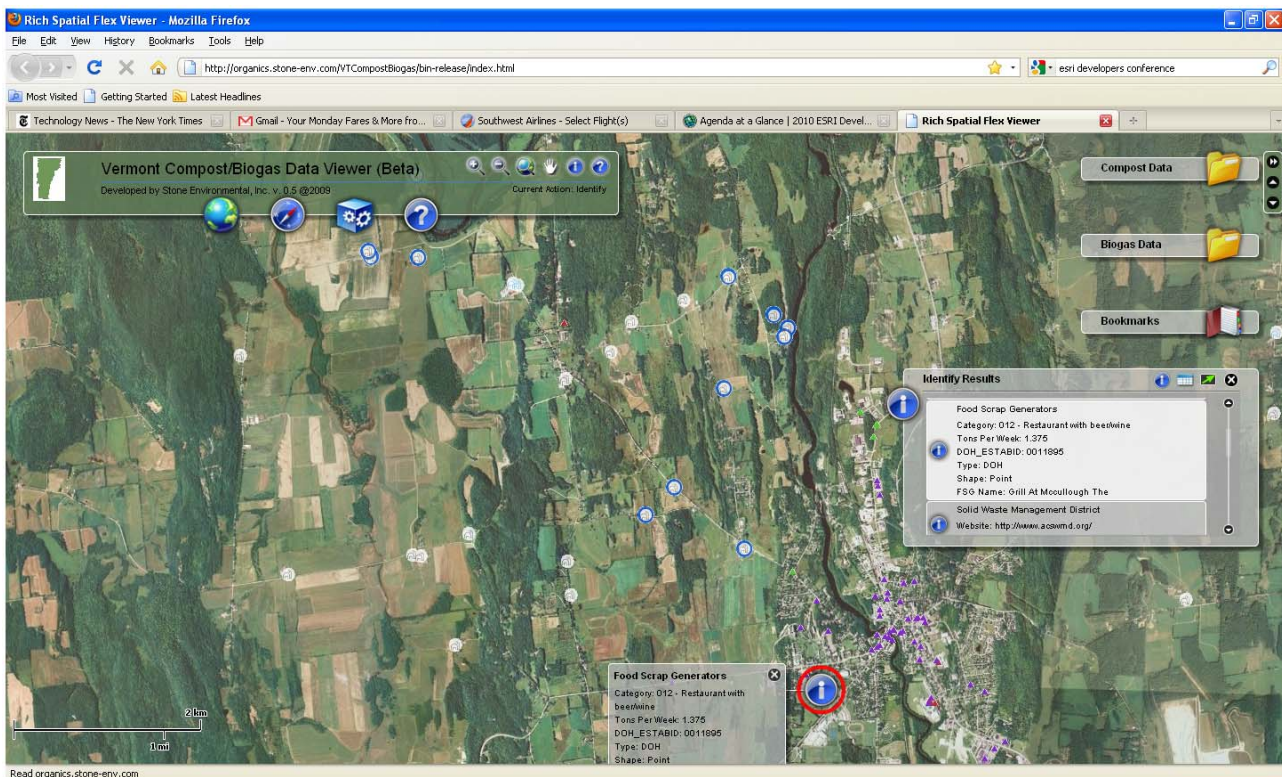
2004 – 2010

URL: [HTTP://ORGANICS.STONE-ENV.COM/VTCOMPOSTBIOGAS/BIN-RELEASE/INDEX.HTML](http://organics.stone-env.com/vtcompostbiogas/bin-release/index.html)

A primary goal of the Central Vermont Solid Waste Management District is to reduce waste in its member communities to zero. Since 2004, Stone has helped the District move closer to success by developing information management tools and systems to track and process regional waste more efficiently. As a result of two grants in 2008 that funded an extension of the District's regional work to the entire state, Stone designed and built the web-based *Vermont Compost / Biogas Data Viewer*.

A grant from the US Department of Energy through the Vermont Sustainable Jobs Fund provided funding to research the feasibility of supplying food scraps to a methane digester at Vermont Technical College.

At the same time, the State of Vermont's Waste Management Division provided additional funds to develop a web-based application to help Vermont waste management districts better understand the density and distribution of food scrap generators in their districts.



Information about food scraps generation in Middlebury, Vermont.

Stone produced an inventory of Vermont food scrap generation sites and estimated volumes, compost facility sites, and sites that could potentially meet the permit criteria for siting a composting facility, and made the inventory available on the web.

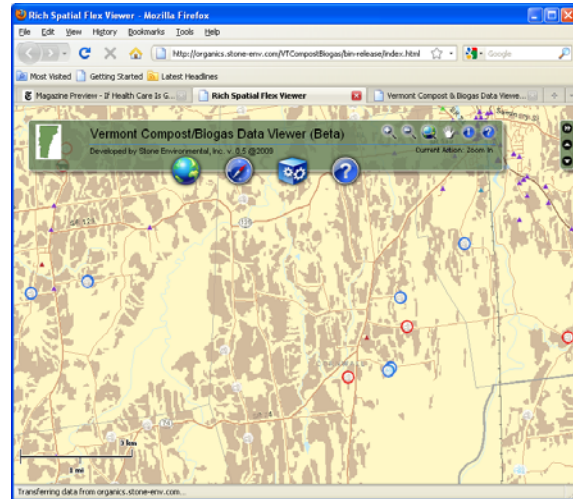
The *Data Viewer* serves a number of diverse user communities, including:

- Vermont's Waste Management Division managing organic waste streams and compost facilities;
- Vermont's solid waste management districts looking to reduce material going to landfills;
- Farmers interested in either composting or exploring biogas potential; and
- Individuals, organizations, and businesses interested in
 - density and distribution of food scrap generators;
 - locations of farms;
 - locations of existing composting facilities;
 - distance to 3-phase power for all farms;
 - potential areas for siting composting facilities that meet permit criteria; and
 - farms that have existing anaerobic digesters.

All users can obtain detailed information about individual food scrap generators in Vermont.

Data Collection

Stone collected data from sources including the Vermont Department of Health's food establishments list and commercially available databases of Vermont businesses for information about food scraps generators; a farms database compiled with information from the state Agency of Agriculture & Markets and the E911 E-sites structure data; major utilities for information about 3-phase power lines; the Vermont Center for Geographic Information for the permit criteria analysis data. All food scraps generators and farms were geocoded in order to identify farms in close proximity to 3-phase power lines; farms that have land suitable for permitting as composting facilities; and the feasibility or availability of sufficient food scraps to support either farm composting or biogas generation.



Potential Compost Siting Areas

Data Viewer

The *Data Viewer* was built with ESRI's ArcGIS Server software, using their FLEX API Rich Internet Application tools. The result is an extensible, graphically inviting mapping and information retrieval tool that is accessible over the web to any user at any time.

Compost Datasets

The *Data Viewer* provides access to a number of datasets.

- Compost Facilities
- Food Scrap Generators
- Compost Facility 10 mile Service Areas
- Solid Waste Management Districts
- Potentially Suitable Compost Sites
- Potential Food Scraps in 10-mile Service Area
- Potential Food Scrap Waste Per Town

Biogas Datasets

- Farm Anaerobic Digester Sites
- Vermont Farms – Farm Size
- Vermont Farms – Distance to 3-Phase Power
- Food Scrap Generators

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