



READY TO CLOSE-THE-NUTRIENT-LOOP? COMPOSTING FOOD SCRAPS IS NOW FARMING!

June 2021

Background

Since July 1, 2020, the Vermont Universal Recycling Law (URL) has required every household to separate and recycle all of their food residuals (10 V.S.A. § 6605k). The Poultry Farmers for Compost Foraging (PFCF) practice compost foraging in the management of food residuals. They import food residuals and allow chickens access to those composts while eliminating most of their feed costs (the #1 expense in poultry production). With the support of Rural Vermont and Vermonters for a Clean Environment, the group successfully advocated to overturn a 2018 decision by returning jurisdiction to the Vermont Agency of Agriculture, Food, and Markets (AAFM) from the Agency of Natural Resources (ANR). S. 102, now [Act 41](#), defines composting food residuals as farming, rather than solid waste management, so that all legal ag-exemptions or presumptions in Vermont and under federal law apply (incl. tax and zoning laws, water quality laws like the RAPs, Act 250 exemption, eligibility for support programs, etc.). The farming status maintains the viability of this practice while also encouraging more poultry farmers throughout Vermont to create valuable soil amendments by incorporating food residuals into their operations.

How does it work?

Act 41 amends the definition of “farming” under Act 250 and the Required Agricultural Practices (RAPs) to include composting of food residuals, meaning that an on-farm composting operation will be subject to the same regulations as the rest of the farm.

The bill allows for the importation of up to **2,000 cubic yards¹** per year of food residuals or food processing residuals if:

1. **more than half of the compost is used on the farm where it is produced**
 - A “farm” has to meet the RAP threshold: at least 4 contiguous acres in size; producing at least \$2,000 annual gross income from the sale of agricultural products; or (for example) having at least 100 laying hens or 250 broilers.
 - 51% of the compost has to be land applied on the farm (“principally used”)

OR

2. **the compost is produced on a small farm that raises or manages poultry**
 - A “small farm” that has at least 10 acres devoted to farming
 - At least 100 but no more than 24,999 laying hens (see RAPs, 6 V.S.A. § 4871).

If you fit this description, you are you are exempt from needing a registration or certification from the Solid Waste Management Program. You will instead be under the jurisdiction of the Agency of Agriculture, Food and Markets. If you have any questions about if you qualify or the transition to AAFM, you may contact Cary Giguere from AAFM at (802) 828-6531 or cary.giguere@vermont.gov.

¹ Approximately 1,000 tons, or 667 pickup truck loads.

Which agency has jurisdiction?

It's official! As of May 20, 2021, Act 41 is in effect and jurisdiction has switched to AAFM for farms annually composting up to 2,000cy of food residuals (see summary below). The interim ANR rules for small composting facilities will apply until AAFM adopts rules by January 1, 2023.

What does it cost?

Farmers will need to register their compost product(s) annually as "soil amendments" with the Agency of Agriculture at the cost of \$85 per product.

What tiers are there & what rules apply?

1. **Up to 42cy per year of food residuals**
Homesteads/farms that compost are exempt
2. **Up to 1,000cy per year of food processing residuals**
Farms that compost those need to comply with the [RAPs, especially section 6.09](#)
3. **Up to 2,000 cy per year of food or food processing residuals**
Since May 20th 2021 (Act 41, 2021) farms in this tier are (back) under AAFM jurisdiction. The ANR Solid Waste Rules for Small Composting Facilities apply until AAFM issues rules by January 1, 2023.
4. **More than 2,000cy of food or food processing residuals**
Compost Operations of this tier or larger remain under ANR jurisdiction.

There's one hitch!

*Act 41 prohibits the establishment of on-farm composting facilities downtown and in village centers, new town centers, neighborhood development areas, or growth centers designated under 24 V.S.A. chapter 76a unless the municipality has **expressly allowed** composting in the designated area under the **municipal zoning or subdivision bylaws or in an approved municipal plan.***

Questions about on-farm composting? Email caroline@ruralvermont.org



On-farm composting at Perfect Circle Farm, 2019.



INTERIM ANR SOLID WASTE RULES FOR SMALL COMPOSTING FACILITIES

June 2021

Definition of “Small Composting Facility”

A farm that composts not more than 2,000 cubic yards per year of food residuals or food processing residuals (equivalent to a total of 5,000 cubic yards per year or less of total organic materials when including bulking agents).

1. Siting

To treat leachate and run-off from composting activities, compost areas shall not be sited or operated within:

- a. 300 feet from all residences not owned by the applicant and from all public buildings;
- b. 100 feet from all property lines and edge of public roads; and
- c. 300 feet from the nearest public or private water supplies not owned by the applicant;
- d. 100 feet from surface water; etc.

2. Design

The minimum design standards include slope considerations and the goal to divert storm water run-off into vegetative areas and away from surface waters. Consult with Compost Technical Services who offer technical assistance to food scrap composters in Vermont. Support options include everything from initial site planning and assessment, to permitting support, custom management plans, and systems design.

Contact: 802-224-6888 | james@composttechnicalservices.com

3. Recordkeeping Requirements

The compost facility shall keep records for the following activities at the facility office **in a dry and secure location available for review for five years.**

At a minimum, records on the following shall be retained:

- a. Temperature records for active compost piles sufficient to demonstrate compliance with the treatment requirements:
 - i. If composting food residuals, the temperature of the compost windrows shall be monitored during the treatment process in accordance with an approved facility management plan. The temperature should be monitored at one foot and three foot depths at least every 15 linear feet of windrow while achieving the treatment standards established in § 6-1105(d)(2)(G).
 - ii. If composting food residuals in an aerated static pile, passive aerated pile or in vessel method, temperatures records shall be kept for the 3-day treatment period.
- b. Weekly amounts, recorded in either tons or cubic yards, and types, of incoming compost feedstock;
- c. Annual amount of compost produced in cubic yards;
- d. Annual amount of physical contaminants disposed of, and;
- e. Copies of all analytical results for maturity, bacteriological and metals testing as required by § 6-1105(d)(2)(H) above.

4. Operating Standards

The goal is to properly compost materials at temperatures that destroy pathogens!

a. **Feedstocks and compost recipe standards** include:

- i. The following materials are allowed²:
 1. Pre and post consumer food residuals
 2. Bulking agents
 3. Waste silage
 4. Leaf and yard waste
 5. Farm waste, excluding liquid manure
- ii. Inspection of feedstocks;
 1. Inspect your feedstocks upon delivery to the facility. All non-compostable material has to be removed (manually or mechanically) and has to be disposed of at a certified solid waste facility.
Note: *less than 1% non-compostable materials by volume (e.g. plastics) are allowed which must be easily removable prior to, during, or after the composting process. "Exempt are only minor amounts that do not pose any harm to human health or the environment."*
- iii. Food residuals and food processing residual specific management:
 1. The residuals shall be incorporated into the compost mix the same day the residuals arrive at the facility; or
 2. The residuals shall be in a sealed container, or immediately covered with finished compost or untreated wood and incorporated into the compost mix within 72 hours of the residuals arrival at the facility.
- iv. The clean high carbon bulking agents are limited to those listed as exempt high carbon bulking agents in ANR SW Rules, namely:
 1. Clean wood chips and shavings;
 2. Bark wood chips;
 3. Straw;
 4. Shelled corn cobs;
 5. Corn stalks;
 6. Shrub trimmings;
 7. Clean dry leaves, excluding any leaves vacuumed or accumulated from roadways;
 8. Coarse sawdust;
 9. Nut shells;
 10. Pine needles – brown;
 11. Non-legume hay – dry;
 12. Heavily-bedded horse manure (C:N) ratio of 22-50:1
- v. All recipes shall be designed to ensure that the initial compost mix results in:
 1. A carbon to nitrogen (C:N) ratio of 20:1 to 40:1
 2. A bulk density of less than 1,200 pounds per cubic yard
 3. A pH in the range of six to eight S.U.

*Important
to avoid
nuisance*

² Subject to the Accepted Composting Practices,

<https://dec.vermont.gov/sites/dec/files/wmp/SolidWaste/Documents/120321.ApprovedFeedstocksCompostingPractices.pdf>

- vi. Compost piles shall be optimized for the composting methods and equipment used and shall be sized to maximize operational maneuverability and to minimize compaction and odor potential.
- b. **Treatment of food and food processing residuals**
 - i. If using a turned windrow system, the temperature must be maintained at 131 degrees Fahrenheit (55 degrees Celsius), or higher, for at least 15 days. Windrows must be turned **not fewer than five times** with a minimum of 3 days between turnings to ensure that all materials reach this temperature. The 15 days do not have to be consecutive.
 - ii. If using an actively or passively aerated static pile or the within vessel method (including bins), the temperature must be maintained at 131 degrees Fahrenheit (55 degrees Celsius), or higher, for at least three consecutive days.
- c. **Compost stability.** All finished compost shall meet the following prior to marketing or distribution for sale:
 - i. Temperature decline to near ambient conditions (less than 100° F) provided that the decline is not the result of improper management of the composting process. Composting records shall indicate appropriate schedules for turning, monitoring of moisture within the required range, and an appropriate mix of composting feedstocks.
 - ii. One test to ensure that compost falls within the required levels for fecal coliform, salmonella, and metals will be required annually.
 - Note: If the Agency suspects that compost is being distributed off-site before it matures, at least two maturity tests will be required annually.*
- d. **Facility operator training.** The facility operator shall complete an approved operator training course within six (6) months of filing the registration with the Secretary.
- e. **Prohibited activities include:**
 - i. Discharge of any waste or wastewater into surface waters or wetlands.
 - ii. Construction of any basin, trench, pond, or depression with the purpose of discharging run-off or leachate to groundwater.
 - iii. Management that causes objectionable offsite odors, noise, vectors or other nuisance conditions.
 - iv. The composting of animal mortalities, slaughterhouse waste, or offal. **Note:** *Animal mortalities are already under AAFM purview and management requirements are in Section 6.08 of the RAP's.*
 - v. The creation of a threat to public health and safety or the environment.
- f. **Screening of finished compost.** The finished compost shall be screened to remove any remaining physical contaminants.
- g. The Secretary may require additional testing of finished compost, groundwater, leachate and run-off as necessary to protect human health and the environment.