

Watershed Agricultural Program Guideline

2.1.18

COMPOST FACILITY PLANNING (East of Hudson)

In the Croton Watershed, farm owners and managers in recent years have had a growing interest in on-farm composting of manure and other agricultural wastes. This is due in part to the high price of manure exportation that is required of farms by most municipalities as well as the growing shift to organic land management practices and the increasing awareness of waste reduction/recycling principles, movements that are taking shape in many communities locally. From a water quality perspective, composting is a process that when done properly eliminates pathogens in manure and converts raw materials into a stable soil amendment with many natural soil and crop enhancing properties. Composting also reduces the volume of waste material by up to 50%. When incorporated into the soil, compost adds organic matter that improves soil structure, drainage and water retention thereby reducing the amount of potentially polluted runoff while increasing crop and pasture yields and quality. Compost is also a value-added agricultural product that can potentially increase a farm's economic viability through sale or by offsetting the cost of commercial fertilizer when applied to pasture and crops.

There are many misconceptions among landowners on the labor, time, equipment and fuel requirements necessary to compost properly. Composting requires frequent temperature and moisture level monitoring and physical turning to effectively decompose the material into a finished product typically anywhere from 3-6 months time. Since 2004, the East of Hudson Program has implemented nine (9) compost facilities and currently has five (5) planned throughout the course of the next two years. Some program participants that have WAC-installed facilities are experiencing various types of challenges since installation. Two (2) farms have expressed dissatisfaction with regard to the amount of labor required to compost and spread the material. Four (4) farms have had difficulty producing a finished product in the desired 3-6 month period of time. Five (5) farms have indicated that the facilities are not sized large enough to handle all the raw and finished material. These dilemmas have caused two (2) farms to abandon composting altogether and use the facility instead as simply waste storage. Five (5) farms have had to stock pile excess material in areas outside the facility where runoff is not adequately controlled or treated.

The following guideline was developed for planners to follow when reviewing waste management options with the Participant and deciding if composting is the most appropriate waste management solution. The guideline also establishes eligibility criteria for new facilities as well as for facility expansion.

Compost Facility Planning

During planning stages of new WFP development and WFP revisions, participants seeking compost facilities as solutions water quality issues identified by the Conservation Planner will be required to meet the following criteria prior to consideration of funding approval:

- 1) The Participant shall possess or obtain the necessary equipment and labor to carry out composting (i.e. compost thermometer, tractor with bucket, windrow turner, or equivalent)

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- 2) The Participant shall establish a trial windrow or pile in a non-sensitive area that is mutually agreed upon by the landowner and Conservation Planner to be managed for one year by the Participant or farm staff
- 3) The Participant shall demonstrate the ability to successfully compost manure and/or other farm wastes that are representative of the material to be managed in a facility within the trial period
- 4) The Participant shall have a current Nutrient Management Plan in place for land applications of compost
- 5) In coordination with the Conservation Planner, the Participant shall develop and implement a plan for the utilization or exportation of the finished compost during the one-year trial phase
- 6) The Conservation Planner will make arrangements for the Participant to visit a farm that is successfully composting to meet with that operator and/or attend a WAC sponsored or WAC approved composting workshop.

Participants interested in composting as a solution to water quality issues identified by the Conservation Planner who do not have the land area for full or partial on-farm utilization of compost and strictly intend to sell 100% of the material will not be eligible for WAC-funded composting facilities, however they may be eligible for waste storage facilities and/or other conservation practices to protect water quality as determined by the Planner.

Compost facilities will be sized to accommodate wastes produced on the farm based on existing conditions (i.e. acres of crops, number of AUs). Facilities will not be sized based on anticipated future operation expansion.

Facilities will only be planned with roofs when the siting requirements of NRCS and/or WAC overland flow standards for wastewater treatment cannot reasonably be met.

Once a compost facility is approved and designed, the Operation and Maintenance Agreement shall include language requiring the removal or utilization of existing stock piles in accordance with a Nutrient Management Plan within 18 months following the completion date of the compost facility if accumulations are present prior to construction.

Compost Facility Expansion

Compost facilities will not be given consideration for expansion by WAC within an 18 month period following the completion date of the compost facility. Facility expansions will only be considered after 18 months and only if the Participant has demonstrated the ability to adequately manage the material and if the operation has expanded and increased their number of AUs or acres under crop production and water quality issues are identified as a result of that expansion.