



Yard Waste Compost Facility Siting and Management Considerations

w-sw1-03 • November 2006

To be good neighbors, yard waste compost facilities in Minnesota should consider the following practices in addition to following the State compost rules (Minn. R 7035.2836, subparts 1-3) and any local requirements. The “best management practices (BMPs)” listed here are simply suggestions for yard waste compost site operators to consider. They do not carry the force of law, rule, or policy. Nor does the MPCA expect that site operators will implement all of these practices at every yard waste compost site.

Some recommended considerations are:

Siting and Design:

- When selecting a site, ensure that site location, size, and design are appropriate for the volume of compost to be managed; or only manage an appropriate quantity of waste for the size of the facility and the type of equipment that will be used on site.
- Ideally, in order to minimize concerns, complaints, or disruptions in residential neighborhoods, local governments should encourage siting facilities in areas zoned for commercial or light industrial activities.
- In evaluating a potential site, and when determining site size and configuration, consider the potential effects of prevailing winds on odors, dust, noise, and other nuisances.
- If it's necessary to locate a facility near residences, consider setback issues carefully.
- When upgrading or expanding a facility, consider proximity to residences/businesses.
- Ensure that proper perimeter controls are in place at the site--whenever possible, plant trees, and provide fencing as buffer and screening (these measures serve several functions, such as securing the site from illegal dumping, reducing blowing trash, and providing aesthetic benefit). It may be possible to reduce necessary buffer areas by adopting proper management practices, enclosure, or mechanization of the facility.
- Ensure that the site is not in a 100-year flood plain, or on shore land.
- Ensure that the staging area is large enough to accommodate the types of vehicles and traffic levels expected.
- Select surfacing materials, either natural or manufactured, that reduce infiltration of surface water.
- Ensure that access roads are adequate for the sizes of vehicles likely to be traveling to and from the site, and that they are accessible when the site is operating.

On-site Management:

- Develop and maintain an operating plan for the site.
- Develop a contingency plan for the site that will outline processes to be followed in case problems arise.
- Post permanent signs explaining hours of operation, rules for site use, and listing a telephone number for communicating complaints.
- Implement controls to limit unauthorized access. This will help prevent illegal dumping and increase site safety.
- Ensure that adequate personnel and equipment are on site as needed.



Yard Waste Compost Facility Siting and Management Considerations

- Routinely inspect for unacceptable materials.
- Ensure that clear space exists between windrows or other piles to accommodate equipment necessary for site operations and emergency vehicles in case of an emergency.
- Try to achieve and maintain composting process efficiency; this not only will contribute to efficient use of site space, but also will help to control odors.
- To promote the proper composting process and to prevent odors:
 - maintain a proper degree of porosity (65-70% initial porosity) so that oxygen levels are adequate (refer to the University of Minnesota's five-gallon-bucket test at <http://www.extension.umn.edu/distribution/horticulture/components/3296-01.html#02>);
 - Keep moisture levels at 40-60% moisture content by weight; and
 - Maintain the pile or windrow temperatures near the 130-140 °F. range.
- Cure compost for one month or more to stabilize the finished product.
- Turn windrows/piles at least every six months—some composting guidelines suggest that at least four times per year is ideal.
- Employ dust suppression methods when necessary, especially when disturbing compost.
- Ensure that compost site operators are knowledgeable concerning applicable rules, regulations, and site operation procedures.
- Ensure that on-site management capabilities (e.g., staffing and equipment) are adequate for the volume of compost to be managed at the site.
- A water supply is recommended for maintaining proper moisture levels, and for suppressing dust and any on-site fires.
- Divert run-on around composting areas, and consider implementing BMPs such as setbacks, grassy swales, or rain gardens.
- Sites must comply with stormwater regulations.
- Maintain site surfaces and proper moisture levels in composting windrows and/or piles in a manner that prevents area soil surfaces from becoming saturated for extended periods.

Nuisance Control:

- Establish acceptable hours of operation, considering nuisances that could arise from equipment noise or traffic (e.g., 8 a.m.-dusk).
- Site managers should consider establishing an “Odor Committee” among local residents to provide for a process of responding to odor issues.
- Develop a plan for minimizing odors, dust, noise, and other nuisances, taking into account time of day when turning should occur, the volume of compost, wind direction and speed, the presence of any atmospheric inversion, the maturity of the compost, etc.
 - Eliminate on-site ponding by filling in depressions with a stable fill material and re-grading. Attempt to collect and reuse leachate.
 - Process (e.g., haul, place into windrows, move) compostable material within a timeline that minimizes the risks of creating odor, dust, or other potential nuisances.
 - Respond to all complaints in a timely manner.
 - Keep site operations organized, and monitor site boundaries as necessary to identify any operational issues impacting adjoining property.
 - Accept yard waste un-bagged or in biodegradable bags.

