

Composting Facilities Eligible for Exemption

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Waste & Materials Management
P .O. Box 7921
Madison, WI 53707-7921

SUMMARY: This document summarizes requirements for certain composting facilities that, under ss. NR 502.12(2), (3), (4), (5), (6) or (7), Wis. Adm. Code, are exempt from many rule requirements.

NOTICE: This document is intended solely as guidance and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. This guidance does not establish or affect legal rights or obligations and is not finally determinative of any of the issues addressed. This guidance does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decisions made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.

DEFINITIONS , s. NR 500.03(44), (45) & (253), Wis. Adm. Code

- **Composting** must be aerobic decomposition by microorganisms or soil invertebrates. Materials must be reduced into component compounds, with primary by products of carbon dioxide & water.
- **Compost** must be decomposed by composting to the extent that the material will not reheat due to action of microorganisms when subject to optimum oxygen, moisture, nutrients and temperature.
- **Vegetable food waste (or discards)** is raw or cooked vegetable or fruit food waste, from residences, cafeterias, restaurants and food processors. This includes vegetable and fruit food containers of readily biodegradable materials, if the containers have been used and contaminated with food. (Doesn't include: agricultural crop residue, animal products, food containers composed of non-readily biodegradable materials, or process wastes from food container manufacturing.)

SUMMARY OF REQUIREMENTS

Feedstocks	Facility Size or Type	General, NR 502.04	Location, NR 502.12(8)	License	Minimum Operation & Design, NR 502.12(10) & (11)
yard materials, clean chipped wood, vegetable food discards, & manure	50 cy or less	performance standards, sub. (1); closure, subs. (3)(a) & (b)	no	no	no
farm crop residue & manure	On-site farm	performance standards, sub. (1)	no	no	no
farm animal carcasses	On-site farm	performance standards, sub. (1)	no	no	yes
yard materials	20,000 cy or less	performance standards, sub. (1); initial site inspection, sub. (2); closure, subs. (3)(a) & (b);	yes	yes	yes
vegetable food discards	500 cy or less	performance standards, sub. (1); initial site inspection, sub. (2); closure, subs. (3)(a) & (b)	yes	yes	yes

DESCRIPTION OF REQUIREMENTS

Performance standards, s. NR 502.04(1), Wis. Adm. Code: A composting facility may not locate where there is reasonable probability the facility would cause any of the following:

- Detrimental effect on surface water,
- Adverse impact on wetlands,
- Detrimental effect on groundwater, or
- Adverse impact on critical habitat.

Initial site inspection, s. NR 502.04(2), Wis. Adm. Code: An initial site inspection request letter must identify all of the following:

- Applicant & authorized contact;
- Type of facility & operation proposed; &
- Property ownership & location by quarter by quarter section.

Additional requirements:

- Technical procedures, visuals, table of contents and appendix must meet ss. NR 500.05(5) to (8).
- Identify any critical habitat areas, and state or local natural areas within 1 mile.
- Identify any historical, scientific or archaeological areas within the vicinity.

Locational criteria, s. NR 502.12(8), Wis. Adm. Code:

FACILITY TYPE		MINIMUM SEPARATION or SETBACK BACK DISTANCE (feet)							
feedstocks	size	groundwater table	public wells	private wells	lake	river	property line	highways	airports
yard materials & clean chipped wood	20,000 cy or less	5	1,200	250	250	250	100	1,000	none
vegetable food discards	500 cy or less	5	1,200	250	250	250	100	1,000	5,000 or 10,000

Notes: Floodplain locations are prohibited.

Locational criteria do not apply to:

- single family;
- on-site farm crop residue, manure or animal carcasses; or
- yard waste, clean chipped wood, vegetable food waste, and manure, less than 50 cubic yards (cy) at one time.

Minimum operational standards, s. NR 502.12(10):

Wastes must be source separated at the point of generation; sort further if needed.

De-bag wastes within 24 hours.

Grass clippings, manure and food waste from processing: incorporate within 72 hours.

Animal carcasses and food waste not from processing, comply with all of the following:

- Incorporate on the same day as received.
- Cover with at least 6 inches of high carbon material upon incorporation.
- Prevent animals from reaching animal carcasses & food wastes.

Size reduce for adequate particle surface area. Mix and aerate to ensure adequate oxygen at all times.

Minimum C:N ratio of 12:1 (optimum is 20:1 to 40:1). Maximum windrow size and minimum spacing according to equipment capability.

Wet for dust control and efficient composting (optimum moisture is 50 to 60% by wt.).

Stabilize compost to eliminate pathogenic organisms and ensure materials don't reheat.

Compost must be free of sharp particles and toxic substances.

Minimum design standards, s. NR 502.12 (11):

Use slope, vegetation, ditches and retention basins to minimize erosion. Slope area to prevent ponding, and use berms or ditches to prevent run on. Discharge run-off to a gently sloped grassed area.

Size operations based on the process residence times.

On-site farm crop residue, manure or animal carcasses: Composting at the farm site where the wastes are generated is exempt from all other Waste Management Program rules (including some of the rules listed above), if all the following are met:

- Operate nuisance free and environmentally sound.
- Meet performance standards in s. NR 502.04(1).
- Landspread the compost in compliance with s. NR 518.04(1)(b) or (i).
- If composting animal carcasses, comply with s. 95.50(1), Stats., and meet minimum operation and design standards in s. NR 502.12(10) & (11).
- If yard waste or clean chipped wood are accepted from off site, meet all the following:
 - Mix the yard waste and clean chipped wood with the farm wastes to increase the carbon to nitrogen ratio and porosity.
 - Meet minimum operation and design standards in s. NR 502.12(10) & (11).
 - Do not exceed 10,000 c.y. at one time, total combined wastes and compost.

“On-site farm composting” is described in s. NR 502.12(5)(d) as follows: "All the farm wastes composted are generated from agricultural operations either under common ownership or management, or adjacent farm property."

Agricultural wastes from large-scale animal operations may be subject to additional requirements under the WDNR Watershed Program.

SUMMARY OF ADDITIONAL REQUIREMENTS FOR NON-EXEMPT COMPOSTING FACILITIES

Plan submittal, additional operation and design standards, construction documentation, and monitoring and reporting requirements apply to the following types of composting facilities:

- yard waste greater than 20,000 c.y.
- vegetable food waste greater than 500 c.y.

A facility that composts feedstocks not described in this guidance is normally regulated as a Solid Waste Processing Facility under s. NR 502.08, Wis. Adm. Code.

Contact 608/266-2111 or DNRWasteMaterials@Wisconsin.gov for further information.

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