

Chapter NR 500 GENERAL SOLID WASTE MANAGEMENT REQUIREMENTS

NR 500.03 Definitions

(20r) “Botanical residuals” means compostable materials and associated mineral soils derived from commercial and noncommercial horticultural activities such as greenhouse and plant nursery operations.

(29) “Class A compost” means compost derived from source-separated compostable materials that has been produced according to the requirements of this subchapter and which meets the requirements of s. NR 502.12 (16).

(30h) “Clean chipped wood” means unpainted, untreated and unlaminated wood that has been chipped, ground or shredded into small pieces and is free from contamination by bonding agents, dyes, finishes, chemical preservatives, or physical contaminants such as metal or plastic.

(30r) “Clean sawdust” means sawdust from processing of unpainted, untreated and unlaminated wood that is free from contamination by bonding agents, dyes, finishes, chemical preservatives or physical contaminants such as metal or plastic.

(44) “Compost” means a material which has been decomposed by composting to the extent that the material will not significantly reheat due to action of microorganisms when subjected to optimum oxygen, moisture, nutrients, and thermal conditions.

(44m) “Compostable” means susceptible to decomposition by biological processes during composting to yield carbon dioxide, water, inorganic compounds and biomass at a rate consistent with other compostable materials, leaving no visible, distinguishable or toxic residue.

(45) “Composting” means the biological degradation and transformation of organic solid waste under controlled conditions designed to promote aerobic decomposition. “Composting” includes vermicomposting.

(86m) “Finished compost” means compost that has been processed sufficiently to meet the maturity and stability criteria in Table 2 of s. NR 502.12, and that has been further screened or refined such that it is ready for sale, distribution or use.

(88m) “Food residuals” means unconsumed raw or cooked compostable material that results from handling, preparation, cooking, sale or consumption of food, and includes whole, ground and pulped food scraps, as well as compostable food packaging, utensils, tableware, kitchenware and food containers that meet either the ASTM – D-6400 (2004) or the D-6868 (2003) standard. “Food residuals” includes vegetable and non-vegetable food residuals.

Note: Copies of ASTM standards D-6400-04 and D-6868-03 may be obtained from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, (610) 832-9585, www.astm.org. Copies of the standard are available for inspection at the offices of the department of natural resources, the secretary of state and the revisor of statutes.

(155a) “Nonrecyclable compostable paper” means paper that is unrecyclable because it has been soiled or is not of a grade that is acceptable to the local recycling program serving the place of generation.

(181) “Processing facility” means a solid waste facility at which solid waste is baled, shredded, pulverized, composted, classified, separated, combusted or otherwise treated or altered by some means to facilitate further transfer, processing, utilization or disposal. Processing facilities do not include operations conducted by scrap metal, paper, fiber or plastic processors which are excluded from the definition of “solid waste facilities” in this section.

(185) “Putrescible waste” means solid waste which contains organic matter capable of being decomposed by microorganisms and of such a character and proportion as to be capable of supporting a disease vector population or attracting or providing food for birds. It does not include high-volume industrial waste.

(219m) “Source-separated compostable material” means compostable materials that are separated from non-compostable material at the point of generation for use in composting and are kept separate from municipal solid waste. Source-separated compostable material includes food residuals; farm and non-farm crop residues; botanical residuals; aquatic plants; vegetative food processing residues such as those from cannery and brewing activities; fish harvesting and processing residuals; yard residuals; farm and herbivorous animal manure, excluding deer and elk manure, and associated animal bedding; clean chipped wood; clean sawdust; non-recyclable compostable paper; and other similar materials approved in writing by the department. This term does not include biosolids, domestic wastewater, sewage sludge or septage, high-volume industrial waste, other solid waste or hazardous waste.

(253) “Vegetable food residuals” means food residuals consisting of raw or cooked waste fruit and vegetable material from residences, food establishments such as cafeterias, restaurants, food wholesalers and retailers, and food processors, and includes compostable packaging, utensils, tableware, kitchenware and containers that meet either the ASTM - D6400 (2004) or the D-6868 (2003) standard.

Note: Copies of ASTM standards D-6400-04 and D-6868-03 may be obtained from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, (610) 832-9585, www.astm.org. Copies of the standard are available for inspection at the offices of the department of natural resources, the secretary of state and the revisor of statutes.

(253m) “Vermicomposting” means the controlled and managed process by which live worms convert organic matter into dark, fertile granular excrement.

(262) “Yard residuals” means yard waste as defined in s. 287.01 (17), Stats., as well as incidental spoiled fruit and vegetables from noncommercial sources.

Note: Section 287.01 (17), Stats., defines “yard waste” to mean “leaves, grass clippings, yard and garden debris and brush, including clean woody vegetation material no greater than 6 inches in diameter. This term does not include stumps, roots or shrubs with intact root balls”.

Chapter NR 502 SOLID WASTE STORAGE, TRANSPORTATION, TRANSFER, INCINERATION, AIR CURTAIN DESTRUCTORS, PROCESSING, WOOD BURNING, COMPOSTING AND MUNICIPAL SOLID WASTE INCINERATORS

NR 502.08 Solid waste processing facilities.

(2) EXEMPTIONS. The following facilities are exempt from all requirements of this chapter, except as specified:

(a) Incinerators, air curtain destructors, woodburning facilities, composting facilities and municipal solid waste combustors regulated under ss. NR 502.09 to 502.13.

NR 502.12 Yard, farm, food residuals and source-separated compostable material composting facilities. (1) GENERAL. No person may operate or maintain a composting facility for yard residuals, farm crop residue, farm animal manure, animal carcasses, food residuals including vegetable food residuals, or source-separated compostable material except in accordance with the requirements of this section.

Note: Pursuant to s. NR 243.15 (8), the Department may choose to regulate composting facilities associated with livestock operations that are subject to the requirements of ch. NR 243 under that operation’s Wisconsin Pollution Discharge Elimination System permit instead of under s. NR 502.12.

Note: Facilities for composting waste types other than yardresiduals, farm crop residue, farm animal manure, animal carcasses, food residuals or source-separated compostable materials are regulated under s. NR 502.08. Local ordinances may apply to facilities regulated under this section.

(2) HOUSEHOLD EXEMPTION. Facilities for composting only solid waste from a single family or household, a member of which is the owner, occupant or lessee of the property where the facility is located, are exempt from the requirements of s. NR 502.04, the

licensing requirement and all requirements of this chapter, provided the facility is operated in a nuisance-free and environmentally sound manner.

(3) LIMITED EXEMPTION FOR SOURCE-SEPARATED COMPOSTABLE MATERIAL COMPOSTING FACILITIES WITH CAPACITY OF 50 CUBIC YARDS OR LESS. Facilities for composting source-separated compostable materials that do not exceed 50 cubic yards at one time, including collected raw materials and compost being processed but excluding finished compost less than 6 months old, are exempt from the requirements specified in s. NR 502.04 (2) to (6), locational criteria, plan of operation submittal, licensing and all other requirements of this chapter provided the following are met:

(a) The performance standards specified in s. NR 502.04 (1) and the minimum operational standards specified in sub. (10).

(b) The facility is operated in a nuisance-free and environmentally sound manner.

(4) LIMITED EXEMPTION FOR FARM CROP RESIDUE OR MANURE COMPOSTING FACILITIES. Facilities for on site composting of farm crop residue or manure, except deer and elk manure, directly from agricultural operations are exempt from the requirements of s. NR 502.04 (2) to (6), locational criteria, plan of operation submittal, licensing and all other requirements of this chapter, provided all of the following requirements are met:

(a) The performance standards in s. NR 502.04 (1).

(b) The facility is operated in a nuisance-free and environmentally sound manner.

(c) All the farm crop residue and manure composted are generated from agricultural operations either under common ownership, common management or located adjacent to each other, and the composting occurs on the property of one of these agricultural operations.

(d) The compost is utilized for agricultural landspreading, at the same farm or at another farm, in accordance with s. NR 518.04 (1) (b) or (i).

(e) Source-separated compostable material other than farm crop residue and manure may be accepted from off site for use in the composting process if the following requirements are met:

1. The minimum operational and design standards in subs. (10) and (11).

2. The recordkeeping requirements of sub. (15) (a) 3.

3. The combined volume of farm crop residue, farm animal manure, and source-separated compostable material on site at one time may not exceed 10,000 cubic yards, including collected raw materials and compost being processed but excluding finished compost less than 6 months old. The volume of food residual inputs to the composting process may not exceed 25 percent of the total combined volume of raw material inputs. Inputs shall be mixed to achieve an initial carbon to nitrogen ratio of at least 20 to 1.

4. The reporting requirements in sub. (15) (b).

Note: Composting facilities that accept manure or are located at a livestock operation may be subject to additional state requirements in chs. NR 151 and 243 and in ATCP 51, as well as local regulations for manure storage and shoreland and floodplain zoning. Other local ordinances may apply to facilities regulated under this section. Public distribution of the compost may be regulated by the department of agriculture, trade and consumer protection (DATCP). The following landspreading operations are exempt under s. NR 518.04 (1) (b), (h) and (i), respectively, provided the material is applied as a soil conditioner or fertilizer in accordance with accepted agricultural practices and the facility is operated and maintained in a safe, nuisance-free manner:

- Farms on which only nonhazardous agricultural residuals resulting from the operation of a farm, including farm animal manure, are landspread.
- Landspreading of uncomposted yard residuals.
- Landspreading composted source-separated compostable material.

(5) LIMITED EXEMPTION FOR ON SITE FARM ANIMAL CARCASS COMPOSTING FACILITIES.

Facilities for on site farm composting of animal carcasses other than deer or elk are exempt from the requirements in s. NR 502.04 (2) to (6), locational criteria, plan of operation submittal, licensing and all other requirements of this section, provided they are in compliance with s. 95.50 (1), Stats., and all of the following:

- (a) The performance standards in s. NR 502.04 (1).
- (b) The minimum operational and design standards in subs. (10) and (11), excluding the size reduction requirements in sub. (10) (c).
- (c) Only animal carcasses, farm animal manure, farm crop residue, yard ~~waste~~ residuals and clean chipped wood are composted at the facility.
- (d) All the farm wastes composted are generated from agricultural operations either under common ownership, common management or located adjacent to each other, and the composting occurs on the property of one of these agricultural operations.
- (e) The compost is utilized for agricultural landspreading, at the same farm or at another farm, in accordance with s. NR 518.04 (1) (b) or (i), except that compost made using ruminant animal carcasses may not be utilized at another farm.
- (f) If yard residuals or clean chipped wood are accepted from off site, the following requirements shall be met:

1. The yard residuals or clean chipped wood shall be mixed with farm wastes to increase the carbon to nitrogen ratio and porosity of the composting process.
2. The combined volume of animal carcasses, farm animal manure, farm crop residue, yard residuals and clean chipped wood on site at one time may not exceed 10,000 cubic yards, including collected raw materials, compost being processed but excluding finished compost less than 6 months old.

(6) LIMITED EXEMPTION FOR YARD RESIDUALS COMPOSTING FACILITIES. Facilities for composting yard residuals and clean chipped wood that do not exceed 20,000 cubic yards at one time, including raw materials and compost being processed, but excluding finished compost less than 6 months old, are exempt from the requirements in s. NR 502.04 (3) (c), (4), (5) and (6), plan of operation submittal and all other requirements of this chapter, provided all of the following requirements are met:

(a) The performance standards and closure requirements in s. NR 502.04 (1) and (3) (a) and (b).

(b) For new or expanded facilities, compliance with the locational criteria in sub. (8). New or expanded facilities with a capacity greater than 1,000 cubic yards shall comply with the initial site inspection requirements in s. NR 502.04 (2).

(c) The minimum operational and design standards in subs. (10) and (11), the recordkeeping requirements of sub. (15) (a) 3, and the reporting requirements in sub. (15) (b).

(d) An operating license for the facility is issued by the department.

(e) The compost is applied to land, either on site or off site, in accordance with s. NR 518.04 (1) (i), or is otherwise used for horticultural, landscaping or erosion control purposes.

(7) LIMITED EXEMPTION FOR SOURCE-SEPARATED COMPOSTABLE MATERIAL COMPOSTING FACILITIES OF 5,000 CUBIC YARDS OR LESS. Facilities for composting source-separated compostable material that exceed 50 cubic yards but do not exceed 5,000 cubic yards at one time, including raw materials and compost being processed, but excluding finished compost less than 6 months old, are exempt from the requirements in s. NR 502.04 (3) (c), (4), and (5), subs. (12) and (14), and the monitoring requirements of sub. (15) (a) 1 and 2, provided all of the following requirements are met:

(a) The performance standards and closure requirements in s. NR 502.04 (1) and (3) (a) and (b).

(b) For new or expanded facilities, the initial site inspection requirements in s. NR 502.04 (2) and the locational criteria in sub. (8).

(c) The minimum operational and design standards in subs. (10) and (11), the plan submittal requirements in sub. (13), the recordkeeping requirements of sub. (15) (a) 3, and the reporting requirements in sub. (15) (b).

(d) An operating license for the facility is issued by the department.

(e) The compost is applied to land, either on site or off site, in accordance with s. NR 518.04 (1) (i), or is otherwise used for horticultural, landscaping or erosion control purposes.

(8) LOCATIONAL CRITERIA FOR COMPOSTING FACILITIES. (a) Unless exempt under sub. (2), (3), (4) or (5), new or expanded compost facilities regulated under this section may not be located in any of the following areas unless an exemption has been granted in writing by the department under par. (c):

1. Within a floodplain.
2. Within 5 feet of the seasonal high groundwater table.
3. Within 250 feet of any private water supply well, or within 1,200 feet of any public water supply well.
4. Within 250 feet of any navigable river or stream.
5. Within 1,000 feet of the nearest edge of the right-of-way of any state trunk highway, interstate or federal aid primary highway or the boundary of any public park or state natural area under ss. 23.27 (1) and 23.28 (1), Stats., unless the facility is screened by natural objects, plantings, fences or other appropriate means so that it is not visible from the highway, park or state natural area.
6. Within 10,000 feet of any airport runway used or planned to be used by turbojet aircraft or within 5,000 feet of any airport runway used only by piston type aircraft or within other areas where a substantial bird hazard to aircraft would be created. This criterion is applicable only when the facility will be used for handling putrescible waste.

(b) In addition to the restrictions in par. (a):

1. Facilities exempt under sub. (6) or (7) may not be located within 250 feet of any navigable lake, pond or flowage, or within 100 feet of land owned by a person other than the owner or operator of the facility, and

2. Facilities not exempt under sub. (2), (3), (4), (5), (6) or (7) may not be located within 500 feet of any navigable lake, pond or flowage, or within 250 feet of land owned by a person other than the owner or operator of the facility.

(c) The department may grant exemptions from par. (a) 2. to 6., only upon demonstration by the applicant of circumstances which warrant the exemption. Exemption from compliance with par. (a) 1. may not be granted.

Note: Compost facilities associated with livestock operations that are required to have a wastewater discharge permit under the Wisconsin Pollution Discharge Elimination System and that handle manure, animal feed or other agricultural materials may be subject to additional locational requirements in chs. NR 151, NR 243 or ATCP 51.

(10) MINIMUM OPERATIONAL STANDARDS FOR COMPOSTING FACILITIES. Unless exempt under sub. (2) or (4), no person may operate or maintain a composting facility regulated under this section except in accordance with the following minimum operational requirements:

(a) Raw materials accepted for composting shall be source separated at the point of generation so that they have not been mixed or otherwise contaminated with nonapproved waste types, particularly materials which are not readily-compostable. Prior to incorporation into the composting process, the raw materials shall be sorted as needed to ensure that materials which are not readily compostable are removed unless alternate operational methods are used in conjunction with equipment to produce a compost product virtually free of physical and chemical contaminants.

Note: Compost product which contains physical or chemical contaminants such as plastic, glass, metal scraps or regulated concentrations of heavy metals or organic compounds, may require controlled disposal under an approved landspreading plan or at a landfill.

(b) Raw materials in noncompostable bags shall be debugged within 24 hours of receipt at the facility. Raw materials in compostable bags shall be processed such that the contents of the bags are exposed to air within 24 hours of receipt at the facility. Stored waste shall be managed in accordance with the requirements applicable to the composting process. The following operational standards shall also be met for the wastes specified:

1. Grass clippings-and food residuals from canned, frozen or preserved fruit or vegetable processing operations shall be incorporated into windrows or another composting process within 72 hours of receipt at the facility, unless odor becomes a problem at the facility in which case these materials shall be incorporated within 24 hours.

2. Animal carcasses, fish harvesting and processing residuals, manure and food residuals which are not from canned, frozen or preserved fruit or vegetable processing operations shall be incorporated into windrows or another composting process on the same operating day as received at the facility. Upon initial incorporation of these residuals, composting windrows or piles shall be covered with a minimum 6 inch layer of

compost, high carbon material such as wood chips, or other suitable material to control odor and vectors.

3. All animal carcasses and food residuals shall be managed to prevent access by dogs and wild animals.

(c) Compost raw materials shall be size reduced if necessary to provide adequate particle surface area for effective composting.

(d) Materials within the composting process shall be thoroughly mixed and aerated as frequently as necessary, and windrow height, structure and porosity shall be designed and maintained, to ensure that adequate oxygen is available at all times within the windrow to prevent the process from becoming anaerobic.

Note: To maintain aerobic composting and prevent odor, aeration is needed whenever the process temperature rises to 150°F or more, or when the oxygen level drops to 15% or less. Windrows consisting primarily of leaves and wood waste are likely to require turning at least monthly from spring through fall.

(e) Materials shall be mixed into the composting process to provide a minimum initial carbon to nitrogen ratio of 20:1.

Note: For aerobic composting, the optimum carbon to nitrogen ratio ranges from approximately 20:1 to 40:1.

(f) Maximum windrow size and minimum windrow spacing shall match the capability and requirements of the equipment utilized at the facility.

(g) Material within the composting process shall be wetted as needed to control dust and maintain a moisture content conducive to efficient composting.

Note: For aerobic composting, the optimum moisture content is 50 to 60% by weight.

(h) Materials resulting from composting shall be:

1. Stabilized to eliminate pathogenic organisms and to ensure that the materials do not reheat upon standing.

2. Free of sharp particles which could cause injury to persons handling the material.

3. Free of toxins in amounts or concentrations which could cause detrimental impacts to public health or the environment.

Note: Pathogens are defined in ch. NR 204 as “disease causing organisms, including but not limited to certain bacteria, protozoa, viruses and viable helminth ova.” Appropriate methods for pathogen elimination during composting are specified in 40 CFR, Part 257, Appendix II, Section B:

1. For in-vessel or static aerated pile composting, maintain a continuous minimum temperature of 55°C, or 131°F, for a minimum of 3 consecutive days.

2. For windrow composting, attain a minimum temperature of 55°C, or 131°F, on a minimum of 15 days, which are not required to be consecutive, and turn the windrow a minimum of 5 times during the high temperature periods.

(i) Compost product storage time shall be minimized to maintain the quality of the compost and the product shall be marketed as necessary to prevent excessive stockpiling.

(j) The facility shall be operated in a nuisance-free and environmentally sound manner.

Note: Landspreading of composted leaves, grass, brush, and other source-separated compostable material is exempt from department landspreading regulations under s. NR 518.04(1)(i) provided the material is applied as a soil conditioner or fertilizer in accordance with accepted agricultural practices and the facility is operated and maintained in a safe, nuisance-free manner. Public distribution of the compost may be regulated by the department of agriculture, trade and consumer protection (DATCP).

(11) MINIMUM DESIGN STANDARDS FOR COMPOSTING FACILITIES. Unless exempt under sub. (2), or (3), no person may construct or maintain a composting facility regulated under this section except in accordance with the following minimum design standards:

(a) Run-off from the composting area shall be discharged to a gently sloping vegetated area of sufficient size to prevent erosion and any discernible confined and discrete discharge of liquids or suspended solids to surface water from the composting area.

(b) Slope, vegetation and surface water containment ditches and retention basins shall be used at the facility as needed to minimize erosion and maintain diffused surface drainage.

(c) Composting shall take place on an area sloped sufficiently to prevent ponding, and measures such as berms or ditches shall be used to prevent storm water run-on.

(d) If inspections performed under sub. (15) (a) 4. indicate improvements in stormwater controls are needed to meet the requirements of pars. (a) through (c), the owner and operator of the facility shall make the needed improvements as soon as practicable.

(e) The overall composting facility shall be of sufficient size to allow processing of materials as necessary to avoid nuisance conditions, and shall have adequate room for material stockpiles, windrows of manageable dimensions for maintaining aerobic conditions, curing piles, staging of finished compost, and equipment.

Note: Composting facilities that accept manure or are located at a livestock operation may be subject to additional state requirements in chs. NR 151 and 243 and in ATCP 51, as well as local regulations for manure storage and shoreland and floodplain zoning. Other local ordinances may apply to facilities regulated under this section.

(12) ADDITIONAL OPERATIONAL AND DESIGN STANDARDS FOR NONEXEMPT COMPOSTING FACILITIES. Unless exempt under sub. (2), (3), (4), (5), (6) or (7), new or expanded composting facilities regulated under this section shall comply with the following additional operational and design standards:

(a) All run-off that contacts compost, materials being composted or raw materials staged for composting shall be managed as leachate and shall be directed to either a collection basin or a tank. Leachate may be used in the composting operation for moisture addition. All other leachate shall be treated at a wastewater treatment facility permitted to accept it.

(b) All composting, and all storage of uncomposted raw materials other than leaves, clean chipped wood, clean sawdust and other raw materials with initial carbon-to-nitrogen ratios greater than 30:1 shall take place on a low permeability pad constructed of asphalt, concrete, recompacted clay or other material approved by the department.

(c) At a minimum, the leachate collection capacity shall be designed for a 25 year, 24 hour storm event as defined in s. NR 205.05.

(13) PLAN SUBMITTAL REQUIREMENTS FOR NONEXEMPT AND CERTAIN EXEMPT COMPOSTING FACILITIES. Unless the facility is exempt under sub. (2), (3), (4), (5), or (6), applicants for all new or expanded composting facilities regulated under this section shall submit a plan of operation report and obtain department approval of the plan of operation report prior to construction of the new or expanded facility. Unless an exemption is granted by the department in writing, the plan shall be submitted in accordance with s. NR 500.05, except that facilities exempt under sub. (7) need not comply with s. NR 500.05 (4). The plan shall provide a design which complies with subs. (10), (11) and, as applicable, (12), and contain the following minimum information:

(a) The location of the property where the facility is proposed to be located.

(b) A brief description of the project, including the area served, an estimate of the annual tonnage and volume of material to be processed and identification of the materials to be used in the compost process.

(c) A description and drawing of the proposed facility, including location and size of windrows, or other composting process, on site traffic and process flow, the property boundaries, routes to transport raw materials and finished compost to and from the facility and present land use within 1/4 mile of the facility.

(d) A description of the procedures for processing the material prior to incorporation into the windrow, or other composting process, such as de-bagging or size reduction.

(e) For each raw material proposed to be composted, either laboratory or literature data documenting the carbon, nitrogen and moisture content and pH.

(f) A proposed raw material mix for composting, with calculations or laboratory data documenting the carbon, nitrogen and moisture content of the mix.

(g) A specification of the maximum size, including volume, height and width, for staging piles, composting windrows or other composting processes, curing piles, and finished compost storage. If the materials on site at any one time will exceed either 40,000 cubic yards of yard residuals and clean chipped wood, 10,000 cubic yards of source-separated compostable materials other than yard residuals and clean chipped wood, or 5,000 cubic yards of food residuals, an estimate of closure costs shall be provided with the plan of operation report, and prior to licensure, proof of financial responsibility shall be provided for the closure costs, including the removal, transport and ultimate disposal of all waste material and compost at the site. Proof of financial responsibility shall be provided in accordance with ss. NR 520.06 through 520.13.

(h) A specification of the methods of measuring critical parameters within the windrow and other composting processes, and a description of methods that will be used to ensure the critical parameters are met. Critical parameters addressed shall include carbon to nitrogen ratio, temperature, moisture content, oxygen content, pH and stability. The specification shall describe methods to be used for maintaining aerobic conditions during the composting process, including turning equipment and frequency for passive ventilation, and equipment and residence time for mechanical ventilation, as well as actions to be taken in response to odors and composting process upsets.

(i) A description of the type of vehicles used for transporting raw materials and finished compost to and from the facility, and a description of the type of equipment for turning or mixing and screening.

(j) A discussion of potential markets for the compost and material specifications necessary to be met for these markets, such as nutrient content, pH, particle size, appearance, moisture holding capacity or other pertinent specifications.

(k) Identification of any noncompostable waste, such as bags, which will be generated from the composting operation, and the name and location of solid waste disposal facilities at which any waste generated from the composting operation will be disposed of.

(L) Specification of the design, construction and documentation to be used for the low permeability pad, including materials, thicknesses and testing.

(m) A description of the planned sampling frequency and testing parameters for the finished compost.

(n) A stormwater pollution prevention plan that meets the requirements of s. NR 216.27 for a tier 2 facility and, if construction or expansion of a composting facility will involve one acre or more of land disturbance, a construction erosion control plan that meets the requirements of s. NR 216.46 to 216.49.

(o) Identification of local zoning and permit requirements that apply to the proposed facility.

(p) Proposed procedures for amending the plan in the event changes to the approved plan are needed.

(14) CONSTRUCTION DOCUMENTATION FOR NONEXEMPT COMPOSTING FACILITIES. (a) For facilities other than those exempt under sub. (2), (3), (4), (5), (6) or (7), the department may require owners and operators of new or expanded composting facilities regulated under this section to submit a construction documentation report to the department and obtain department approval of the construction documentation report prior to operation of the facility.

(b) Unless an exemption is granted by the department in writing, the construction documentation report shall be prepared in accordance with the department’s plan approval and the requirements in s. NR 500.05. The construction documentation report shall be approved by the department prior to obtaining a license and prior to accepting waste at the facility.

(15) MONITORING, RECORDKEEPING AND REPORTING. (a) Unless exempt under sub. (2), (3), (4), (5), (6) or (7), owners and operators of composting facilities regulated under this section shall complete monitoring and reporting in accordance with the plan of operation approval and the following requirements:

1. Samples of the finished compost shall be collected every 2,000 tons or 4,000 cubic yards, with a minimum of one sample per year, unless a different frequency is approved in writing by the department. Samples of finished compost shall be tested for the parameters in Tables 1 and 2.

Note: Only class A compost under sub. NR 502.12 (16) is subject to the limits in Tables 1 and 2.

a. Samples shall be collected, handled and analyzed in accordance with methods listed in “Test Methods for Evaluation of Compost and Composting” published in 2002 by the United States Composting Council or other methods approved by the department. Samples shall be tested at a laboratory certified under the United States Composting Council’s Seal of Testing Assurance program or at another laboratory approved in writing by the department.

Note: “Test Methods for Evaluation of Compost and Composting” (2002) and a list of laboratories certified under the Seal of Testing Assurance program are available from the United States Composting Council, 1 Comac Loop 14 B1, Ronkonkoma, NY 11779, (631) 737-4931, www.compostingcouncil.org.

b. Test results shall be made available upon request to the department, potential users of the compost, and to the general public.

2. Unfiltered leachate samples shall be taken from the collection basin or tank, and tested quarterly for the first 4 quarters and annually thereafter for BOD₅, COD, field pH, field conductivity corrected to 25°C, nitrates+nitrite-nitrogen, and total dissolved solids.

3. Compost pile turning frequency and temperature readings as appropriate to the composting method used shall be documented and maintained to demonstrate pathogen reduction and odor control activities.

4. The facility shall be visually inspected by the owner or operator quarterly to evaluate stormwater discharge quality and performance of discharge controls, and twice per year to identify non-stormwater discharges.

(b) Unless exempt under sub. (2), (3), (4), or (5), the owner and operator of a composting facility regulated under this section shall prepare and submit an annual report to the department by March 1 on forms supplied by the department. The annual report shall include at least the following information:

1. Name and address of the facility.
2. Calendar year covered by the report.
3. Annual quantities and types of raw materials received and compost produced, in tons. Tonnage estimates may be based on volume records where scale weights are not available.
4. Annual quantity of compost sold, distributed or used, in tons.
5. Copies of laboratory analyses of composted material.
6. Any additional information required as a condition of the plan of operation approval.

Note: Copies of the annual reporting form may be obtained from the department of natural resources, bureau of waste and materials management, 101 South Webster Street, P.O. Box 7921, Madison, Wisconsin 53707-7921, (608) 266-2111, DNRwastematerials@wisconsin.gov, or online at <http://dnr.wi.gov/org/aw/wm/publications/>.

(16) CLASS A COMPOST. Finished compost may be designated and distributed as class A compost if it meets all of the following requirements:

(a) Composed entirely of materials meeting the definition of “source-separated compostable materials” in s. 500.03 (219m).

(b) Produced by one of the processes to reduce pathogens described in subd. 1 to 3, with temperature and retention time monitored and recorded each day until the temperature and retention time criteria are met:

1. Windrow method consisting of an unconfined composting process utilizing periodic aeration and mixing. Aerobic conditions shall be maintained during the composting process. A temperature of 55°C, or 131F shall be maintained in the windrow for at least fifteen days. The windrow shall be turned at least five times during the high-temperature period.

2. Mechanically aerated static pile method consisting of an unconfined composting process utilizing mechanically forced aeration of insulated compost piles. Aerobic conditions shall be maintained during the composting process. The temperature of the compost pile shall be maintained at a continuous minimum of 55°C, or 131°F, for at least three consecutive days.

3. In-vessel method consisting of a confined compost process utilizing mechanical mixing of compost under controlled conditions. The minimum retention time in the vessel shall be 72 hours with the temperature maintained at 55°C, or 131F.

(c) Tested in accordance with sub. (15) (a) 1. a. and b.

(d) Does not exceed any of the limits specified in Tables 1 or 2.

Table 1
Test parameters for nonexempt compost facilities and class A compost

| Parameter | Limit for class A compost (mg/kg dry weight) |
|-----------------------|--|
| Arsenic | 14 |
| Cadmium | 6.1 |
| Chromium | 120 |
| Copper | 400 |
| Lead | 95 |
| Mercury | 1.2 |
| Molybdenum | 15 |
| Nickel | 49 |
| Selenium | 4.9 |
| Zinc | 820 |
| Physical contaminants | < 1 percent |
| Fecal Coliform | Either 1000 MPN/g of total solids (dry wt) fecal coliform or 3 MPN/4g of total solids (dry wt) salmonella |
| Salmonella | |

Table 2
Maturity and stability testing for nonexempt facilities and class A compost

| Characteristic | Test procedure | Limit for Class A compost |
|--|--|--|
| Maturity (both methods) | Carbon:Nitrogen ratio Seedling emergence and vigor bioassay | 10 – 20:1 Indices above 80% |
| Stability (one of the following methods) | Respirometry (carbon dioxide evolution) Dewar self-heating test Solvita test | Up to 5 mg CO ₂ -C/g volatile solids/day 0 – 20°C temperature rise Index value 6 or greater |

Chapter NR 518 LANDSPREADING OF SOLID WASTE

NR 518.04 Exemptions. No person may operate or maintain a solid waste landspreading facility unless the person has obtained written approval from the department under s. NR 518.06, except as otherwise provided in this section.

(1) GENERAL. The following landspreading facilities are exempt from the requirements of this chapter provided the solid waste or solid waste derived product is utilized as a soil conditioner or fertilizer in accordance with accepted agricultural practices and the facility is operated and maintained in a safe, nuisance-free manner:

(b) Farms on which only nonhazardous agricultural solid wastes resulting from the operation of a farm, including farm animal manure, are disposed of.

(i) Facilities used for the landspreading of composted source-separated compostable material.