

## Chapter NR 500

### GENERAL SOLID WASTE MANAGEMENT REQUIREMENTS

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**Note:** Corrections made under s. 13.93 (2m) (b) 7., Stats., Register, August, 1997, No. 500, eff. 9-1-97.

**NR 500.01 Purpose.** The purpose of this chapter is to provide definitions, submittal requirements, exemptions and other general information relating to solid waste facilities. This chapter is adopted pursuant to s. 227.11, Stats., and ch. 289, Stats.

**History:** Cr. Register, January, 1988, No. 385, eff. 2-6-88.

**NR 500.02 Applicability.** (1) Except as otherwise provided, this chapter governs all solid waste facilities as defined in s. 289.01 (35), Stats., except hazardous waste facilities as defined in s. 291.01 (8), Stats., and regulated under chs. NR 660 to 679, and metallic mining operations as defined in s. 293.01 (5), Stats., and regulated under ch. NR 182.

(2) This chapter does not apply to the design, construction or operation of industrial wastewater facilities, sewerage systems and waterworks treating liquid wastes approved under s. 281.41, Stats., or permitted under ch. 283, Stats., nor to facilities used solely for the disposal of liquid municipal or industrial wastes which have been approved under s. 281.41, Stats., or permitted under ch. 283, Stats., except for facilities used for the disposal of solid waste.

**History:** Cr. Register, January, 1988, No. 385, eff. 2-6-88; correction in (1) made under s. 13.93 (2m) (b) 7., Stats., Register, May, 1992, No. 437; am. (1), Register, June, 1996, No. 486, eff. 7-1-96; correction in (1) made under s. 13.93 (2m) (b) 7., Stats., Register March 2003 No. 567; correction in (1) made under s. 13.93 (2m) (b) 7., Stats.

**NR 500.03 Definitions.** The following definitions as well as the definitions in chs. 289 and 299, Stats., are applicable to the terms used in chs. NR 500 to 538 unless the context requires otherwise.

(1) "ACL" means alternative concentration limit.

(2) "Active facility life" means the period of operation beginning with the initial receipt of solid waste at a facility until the department issues a closure and long term care license in accordance with s. NR 520.04 (3) or, if a closure and long term care license is not required, until the facility ceases to accept waste and has completed all closure activities in accordance with chs. NR 500 to 538 and any applicable plan approvals.

(3) "Air curtain destructor" means a solid waste facility that combines a fixed wall, open pit and mechanical air supply which uses an excess of oxygen and turbulence to accomplish the smokeless combustion of clean wood, brush, stumps or trees.

(4) "Airport" means a public-use airport open to the public without prior permission and without restrictions within the physical capacities of available airport facilities.

(5) "Alternative concentration limit" has the meaning specified in s. NR 140.05 (1m).

(6) "Anti-seep collar" means a device which is attached to a leachate transfer pipe to prevent the migration of leachate along the pipe.

(7) "Applicant" means a person applying for a license or approval for a solid waste facility.

(8) "Approved facility" has the meaning specified in s. 289.01 (3), Stats.

(9) "Approved plan of operation" means a plan of operation approved under s. 289.30 (3), Stats.

(9m) "Areas of special natural resource interest" has the meaning in s. 30.01 (1am), Stats., and as identified in s. NR 1.05.

(10) "Areas susceptible to mass movement" means those areas characterized as having an active or substantial possibility of mass movement where the movement of earth material at, beneath, or adjacent to the landfill, because of natural or human-induced events, results in the downslope transport of soil and rock material by means of gravitational influence. Areas of mass movement include, but are not limited to, landslides, avalanches, debris slides and flows, solifluction, block sliding, and rock fall.

(11) "Aquifer" means a geologic formation, group of formations or part of a formation which are saturated and can transmit economic quantities of groundwater.

(12) "Asbestos" means any material which contains fibrous chrysotile, crocidolite, amosite minerals or the fibrous varieties of antophyllite, tremolite and actinolite.

**Note:** Asbestos containing material is further defined in subs. (25), (26), and (91).

(13) "Assessment monitoring" means groundwater monitoring conducted at Subtitle D wells in accordance with s. NR 508.04 when a groundwater standard is attained or exceeded at a Subtitle D well.

(14) "ASTM method", "ASTM standard" or "ASTM-" means a method or standard recognized and published by ASTM International.

(14m) "ASTM International" means American Society for Testing and Materials International, located at 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, (610) 832-9585, [www.astm.org](http://www.astm.org)

(15) "Background groundwater quality" has the meaning specified in s. NR 140.05 (3).

(16) "Base grade" means the elevation of a facility or portion of a facility following placement of the liner but prior to the placement of any granular drainage blanket.

(17) "Baseline" means groundwater quality at a point that is measured after the parameters have stabilized following installation of a monitoring well.

(18) "Bedrock" means all rock formations at or beneath the land surface.

(19) "Beneficial use" or "beneficial reuse" means the utilization of a solid waste or an industrial by-product in a productive manner.

(20) "Bird hazard" means an increase in the likelihood of a bird and aircraft collision that may cause damage to the aircraft or injury to its occupants.

(20m) "Borrow source" means a location where nonmetallic mining, as defined in s. NR 135.03 (13), is conducted for soils and aggregates used in landfill construction, operation and closure.

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

(21) "Building materials" means non-combustible construction material including brick, concrete and drywall.

(22) "Bulk blood and body fluids" means drippable or pourable quantities or items saturated with whole blood or blood components, blood specimens, semen, vaginal secretions, cerebrospinal fluid, synovial fluid, amniotic fluid, peritoneal fluid, peritoneal dialysate, pericardial fluid, pleural fluid and other body fluids visibly contaminated with blood.

(23) "Capital expenditures" has the meaning specified in s. 289.41 (1) (am), Stats.

(24) "Captive insurance company" means a closely-held company owned by one or more organizations, parents, whose original purpose was and may continue to be, to insure some or all of the risks of shareholders or affiliated organizations.

(25) "Category I nonfriable asbestos containing material" has the meaning specified in s. NR 447.02 (1) (a).

**Note:** Section NR 447.02 (1) (a) defines category I nonfriable asbestos-containing matter to mean "asbestos-containing packings, gaskets, resilient floor covering and asphalt roofing products containing more than 1% asbestos as determined using the method specified in Appendix E to Subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy, incorporated by reference in s. NR 484.04, that, when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure."

(26) "Category II nonfriable asbestos containing material" has the meaning specified in s. NR 447.02 (1) (b).

**Note:** Section NR 447.02 (1) (b) defines category II nonfriable asbestos-containing matter to mean "any material, excluding Category I nonfriable ACM, containing more than 1% asbestos as determined using the method specified in Appendix E to Subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy that, when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure."

(27) "Certificate of deposit" means a certificate issued by a bank or financial institution acknowledging receipt of a specified sum of money in a special kind of time deposit, drawing interest and requiring written notice for withdrawal.

(28) "CFR" means the code of federal regulations.

(29) "Class A compost" means compost derived from source-separated compostable materials that meets the requirements of s. NR 502.12 (16).

(30) "Clay" means all soil particles less than .005 mm.

(30g) "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.

**Note:** Chapter NR 40 governs the identification, classification and control of invasive species in Wisconsin. Proper screening of compost feedstock materials and achievement of appropriate temperatures and residence times can help prevent the spread of viable seeds or other propagules of invasive species through compost.

(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.

(31) "Clinic" has the meaning given in s. 287.07 (7) (c) 1. a., Stats.

(32) "Closing" has the meaning specified in s. 289.01 (5), Stats.

(33) "Closure" means those actions to be taken by the owner or operator of a solid waste facility to prepare the facility for long-term care and to make it suitable for other uses.

(34) "Closure period" means the 90-day period after the facility ceases to accept waste, unless otherwise specified in the approved plan of operation.

(35) "Closure plan" means a written report and engineering plans detailing those actions that will be taken by the owner or operator to effect proper closure of a solid waste facility.

(36) "Coarse-grained soil environment" means a soil environment in which a majority of the material within 25 feet of the proposed sub-base of the facility has less than 50% by weight passing the #200 sieve and which contains no extensive and continuous deposits of fine-grained or plastic soils.

**Note:** The determination as to whether a soil environment meets the definition of a coarse-grained soil environment shall be based on an interpretation of soil stratigraphy after consideration is given to the deposition and origin of the deposits and their

engineering classification under the unified soil classification system specified in ASTM standard D2487-00 (2000). Copies of the standard may be obtained from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, (610) 832-9585, [www.astm.org](http://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 legislative reference bureau.

(37) "COD" means chemical oxygen demand.

(38) "Collection" means the physical aggregating of solid waste from its primary source and includes all activities up to such time as the waste is delivered to a facility for transfer, processing, treatment or disposal.

(39) "Collection and transportation service" means a solid waste facility which utilizes containers, vehicles or other means for the collection and transportation of solid waste.

(40) "Collection basin lysimeter" means a device which is constructed with a geomembrane for monitoring the unsaturated zone.

(41) "Commercial solid waste" means all types of solid waste generated by stores, offices, restaurants, warehouses, and other non-manufacturing activities, excluding residential and industrial wastes.

(42) "Company" has the meaning specified in s. 289.41 (1) (b), Stats.

(43) "Completeness determination" means a determination by the department that the minimum submittal requirements established by chs. NR 500 to 538 for a plan or report have been met.

(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 complete decomposition by aerobic biological processes to yield carbon dioxide, water, inorganic compounds, and organic matter, leaving no 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.

(46) "Condensate" means the liquid which is generated due to a change in the temperature or pressure of landfill gas.

(47) "Conductivity" means the measurement of a water's ability to transmit an electrical current in micromhos/cm before correcting to 25°C.

(48) "Confining unit" means a geologic formation, group of formations or part of a formation which restricts the movement of groundwater to or from a geologic formation, group of formations or part of a formation with a higher hydraulic conductivity than the confining unit.

(49) "Construct" means to engage in facility construction for a new or expanded solid waste facility including but not limited to the erection or building of new structures, replacement, expansion, remodeling, alteration or extension of existing structures, the acquisition and installation of equipment associated with the new, expanded or remodeled structures, and clearing, grading or liner construction.

(50) "Construction and demolition waste" means solid waste resulting from the construction, demolition or razing of buildings, roads and other structures.

**Note:** Construction and demolition waste typically consists of concrete, bricks, bituminous concrete, wood, glass, masonry, roofing, siding and plaster, alone or in combinations. It does not include waste paints, solvents, sealers, adhesives or similar materials.

(51) "Construction documentation report" means a written report submitted under the seal of a registered professional engineer in the state of Wisconsin documenting that a solid waste facility has been constructed in substantial compliance with a department approved plan of operation or chs. NR 500 to 538.

(52) "Container" means a manufactured receptacle or man-made receptacle used to confine or hold solid waste.

(53) “Containerized storage facility” means a storage facility designed and operated to use containers for the storage and containment of solid waste. A building which is enclosed on 4 sides and has a floor and roof is considered a container for the purposes of this definition.

(54) “Cultural features” means any structure or landscape alteration intended for use by humans.

(56) “Decontamination” means a process of removing disease-producing microorganisms and rendering an object safe for handling.

(57) “Department” means the department of natural resources.

(58) “Design capacity” means the total volume in-place in cubic yards of solid waste disposed of in a land disposal facility together with daily and intermediate cover utilized in the facility, but not including liner material, drainage blanket, final cover or topsoil.

(59) “Design capacity for a facility which burns municipal solid waste” means the facility’s rated capacity or any permit limitation, whichever is less, for burning municipal solid waste. The design capacity for facilities that burn multiple fuel types such as refuse derived fuel, wood and coal will be determined based on the municipal solid waste portion of the fuel.

(60) “Design management zone” has the meaning specified in s. NR 140.05 (6).

(61) “Detection monitoring” means routine groundwater monitoring conducted in accordance with s. NR 507.19.

(62) “Detrimental effect on ground or surface water” means having a significant damaging impact on ground or surface water quality for any present or future consumptive or nonconsumptive uses.

(63) “Director” means the person in the highest ranking position in a medical facility, including but not limited to the administrator, chief executive officer or chair of the board of directors.

(64) “Discarded material” means material that is no longer of use to the generator of the material in the process from which it is generated.

(65) “Discharge area” means an area in which there are upward components of hydraulic head in the aquifer.

(66) “Disinfection” means a process that kills or destroys most disease-producing microorganisms, except spores.

(67) “Displacement” means the relative movement of any 2 sides of a fault measured in any direction.

(68) “Distillate waste product” has the meaning specified in s. 289.44 (1) (a), Stats.

(69) “DMZ” means design management zone.

(70) “DNR” means department of natural resources.

(71) “Dredge material” means any solid waste removed from the bed of any surface water.

(72) “Enforcement standard” has the meaning specified in s. NR 140.05 (7).

(73) “Environmentally sound storage facility” has the meaning specified in s. 289.44 (1) (b), Stats.

(74) “EPA” or “USEPA” means the United States environmental protection agency.

(75) “ES” means enforcement standard.

(76) “Establish” means to bring a new or expanded solid waste facility into existence.

(77) “Expand an existing land disposal facility” means to construct a solid waste disposal facility or dispose of solid waste on land not previously licensed or to dispose of an additional volume of waste beyond the volume previously approved by the department. The term also includes the disposal of approved volumes of solid waste on existing licensed land if done in a manner not in accordance with a department plan approval or in a manner significantly different from past operations unless the department approves the proposed changes in writing.

(78) “Facility” means a solid waste facility.

(79) “False groundwater standard exceedance” means a sample result that exceeds a groundwater standard due to a source other than a solid waste disposal facility or due to laboratory or sampling error.

(80) “Fault” means a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to that on the other side.

(81) “Feasibility report” means a report required under s. 289.23, Stats.

**Note:** A feasibility report for a specific solid waste facility must describe the facility, surrounding area, and proposed operation in terms of land use, topography, soils, geology, groundwater, surface water, proposed waste quantities and characteristics, preliminary facility design concepts, environmental impacts, the need for the facility and waste reduction and recovery alternatives.

(82) “Field blank” means a sample of reagent grade water which is processed in the field in the same manner as the groundwater samples.

(83) “Fill area” means the area proposed to receive or which is receiving direct application of solid waste.

(84) “Filter pack” means the sand, gravel or both in direct contact with or directly above the well screen.

(85) “Final cover” means cover material that is applied upon closure of a landfill.

(86) “Fine-grained soil environment” means a soil environment in which a majority of the material within 25 feet of the proposed sub-base of the facility has at least 50% by weight passing the #200 sieve and which contains no extensive and continuous deposits of coarse-grained or non-plastic soils.

**Note:** The determination as to whether a soil environment meets the definition of a fine-grained soil environment shall be based on an interpretation of soil stratigraphy after consideration is given to the deposition and origin of the deposits and their engineering classification under the unified soil classification system specified in ASTM standard D2487-00 (2000). Copies of the standard may be obtained from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, (610) 832-9585, [www.astm.org](http://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 legislative reference bureau.

(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 is ready and suitable for sale, distribution or use.

(87) “Floodplain” means the land which has been or may be hereafter covered by flood water during the regional flood as defined in ch. NR 116, and includes the floodway and the flood fringe as defined in ch. NR 116.

(88) “Food chain crops” means tobacco and crops grown for human consumption, and pasture, forage and feed grain for animals whose products are consumed by humans.

(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 or the D-6868 standard. “Food residuals” includes vegetable and non-vegetable food residuals, but does not include rendering or slaughterhouse wastes or animal carcasses.

**Note:** Copies of ASTM standards D-6400 and D-6868 may be obtained from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, (610) 832-9585, [www.astm.org](http://www.astm.org). Copies of the standard are available for inspection at the offices of the department of natural resources and legislative reference bureau.

(89) “Fracture frequency” means the average number of natural fractures or bedding planes calculated from a rock core collected from a boring.

**Note:** Fracture frequency is calculated by dividing the number of natural fractures or bedding planes in a rock core by the total length of the core in feet.

(90) “Free liquids” means liquids which readily separate from the solid portion of a waste under ambient temperature and pressure.

**Note:** Free liquids shall be determined using the paint filter liquids test, Method 9095, in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846, third edition, November 1986, as amended by Updates I

in July 1992, II in September 1994, IIA in August 1993, IIB in January 1995, III in December 1996 and IIIA in April 1998. The test methods are available at no cost at [www.epa.gov/epaoswer/hazwaste/test/main.htm](http://www.epa.gov/epaoswer/hazwaste/test/main.htm). Copies of the test methods are available for inspection at the offices of the department of natural resources, the secretary of state and the legislative reference bureau. Copies may be obtained from the superintendent of documents, U.S. government printing office, P.O. Box 371954, Pittsburgh, PA 15250-7954, (866) 512-1800, [www.gpoaccess.gov](http://www.gpoaccess.gov). Copies may also be obtained from the National Technical Information Service, U.S. department of commerce, 5285 Port Royal Road, Springfield, VA 22161, (800) 553-6847, [www.ntis.gov](http://www.ntis.gov).

**(91)** “Friable asbestos material” has the meaning specified in s. NR 447.02 (16).

**Note:** Section NR 447.02 (16) defines friable asbestos material to mean “any material containing more than 1% asbestos as determined using the method specified in Appendix E to Subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy, incorporated by reference in s. NR 484.04, that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure. If the asbestos content of the friable ACM is less than 10%, as determined by a method other than point counting by polarized light microscopy (PLM), the asbestos content shall be verified by point counting using PLM.”

**(92)** “Garbage” has the meaning specified in s. 289.01 (9), Stats.

**(93)** “Gas condensate” means the liquid generated as a result of gas recovery process at the landfill.

**(93m)** “GCL” or “geosynthetic clay liner” means factory manufactured geosynthetic product consisting of a layer of bentonite contained between geotextiles that are attached by adhesion, stitch bonding or needlepunching or a layer of bentonite attached to a geomembrane by adhesion.

**(94)** “Geomembrane” means a highly impermeable membrane made from plastic or rubber-based material by polymerization.

**(95)** “Geotextile” means a porous fabric manufactured from synthetic materials.

**(96)** “Groundwater” means any waters of the state, as defined in s. 280.01 (2), Stats., occurring in a saturated subsurface geological formation of rock or soil.

**(97)** “Groundwater standard” means a preventive action limit, alternative concentration limit or enforcement standard established in accordance with ch. NR 140 and s. NR 507.27.

**(98)** “Hazardous air contaminant” has the meaning specified in s. NR 445.02 (6).

**(99)** “Hazardous substance” has the meaning specified in s. 289.01 (11), Stats.

**(100)** “Hazardous waste” has the meaning given in s. NR 660.10 (52).

**(100m)** “HDPE” means high density polyethylene.

**(101)** “High-volume industrial waste” has the meaning specified in s. 289.01 (17), Stats.

**(102)** “Home generator of infectious waste” means a person who generates infectious waste through self-administration of medication or who receives injected medication at home from other members of the household or from employees of a home care or hospice program.

**(103)** “Holocene” means the most recent epoch of the Quaternary period, extending from the end of the Pleistocene Epoch to the present.

**(104)** “Hospital” has the meaning given in s. 50.33 (2), Stats.

**(105)** “Household waste” means any solid waste including garbage, trash, and sanitary waste in septic tanks which is derived from households, including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas.

**(106)** “Human tissue” means tissue removed from human beings. Human tissue does not include hair or nails, but does include teeth.

**Note:** A tooth containing mercury amalgam may be both an infectious waste and a hazardous waste. See s. NR 526.11 (2) (f) for how to manage teeth containing mercury amalgam.

**(107)** “Hydraulic connection” means groundwater interflow within the zone of saturation occurring between 2 formations which may or may not be separated by an intermediate layer.

**(108)** “Incinerator” means a processing facility designed and operated for controlled burning of solid wastes primarily to achieve volume and weight reduction or to change waste characteristics. Incinerator does not include a facility that uses solid waste as a supplemental fuel where less than 30% of the heat input to the facility is derived from such supplemental fuel.

**(109)** “Industrial waste” means solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under chs. NR 660 to 679. Industrial waste may include, but is not limited to, waste resulting from the following manufacturing processes; electric power generation; fertilizer and agricultural chemicals; food and related products and by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing and foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste.

**(110)** “Infectious waste” has the meaning given in s. 287.07 (7) (c) 1. c., Stats.

**(111)** “Infectious waste generator” means a person or group of persons under the same corporate ownership and located on the same property who produces infectious waste.

**(112)** “Infectious waste treatment” means rendering an infectious waste non-infectious. For human tissue, this term means rendering the waste both non-infectious and unrecognizable as human tissue. For sharps, this term means rendering the sharp non-infectious and rendering the sharp broken and not able to be reused, such as by a grinding or shredding process.

**(114)** “Initial site report” means a report submitted under ch. NR 509 which describes a proposed solid waste disposal facility in sufficient detail to allow the department to give a written opinion on whether or not a feasibility report should be prepared.

**(115)** “In-situ testing” means hydraulic conductivity tests performed on the in-place soils.

**(116)** “Interest bearing accounts” means escrow accounts, trust accounts or cash deposits with the department.

**(117)** “Intermediate size construction and demolition waste landfill” means a landfill with a design capacity of at least 50,000 cubic yards but no more than 250,000 cubic yards and used for the disposal of only construction and demolition wastes.

**(118)** “Karst terranes” means areas where karst topography, with its characteristic surface and subterranean features, is developed as the result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present in karst terranes include, but are not limited to, sinkholes, sinking streams, caves, large springs, and blind valleys.

**(119)** “Land disposal facility” means a solid waste facility where solid waste is placed in a landspreading facility, a landfill, or surface impoundment facility for disposal purposes.

**(120)** “Landfill” means a land disposal facility, not classified as a landspreading facility or surface impoundment facility, where solid waste is disposed on land by utilizing the principles of engineering to confine the solid waste to the smallest practical area, to reduce it to the smallest practical volume, and to cover it with a layer of earth or other approved material as required.

**(120g)** “Landfill organic stability” means a landfill has reached an organically stable state when landfill gas production has effectively ceased, landfill leachate levels have no significant organic component, the organic fraction of the waste mass will not readily decompose when placed in ideal moisture and temperature conditions, and there is no longer any measurable settlement of the landfill surface.

**(120r)** “Landfill stability” means a landfill has reached a stable state when maintenance and engineering systems are no longer necessary to protect human health and the environment.

**(121)** “Landspreading facility” means a land disposal facility where solid waste is discharged, deposited, placed or injected in thin layers onto the land surface of the facility, or is incorporated into the top several feet of the surface soil, for agricultural, silvicultural or waste disposal purposes.

**(122)** “Leachate” means water or other liquid that has percolated through or contacted solid waste or gases generated by solid waste.

**(123)** “Leachate collection and removal system” means a system capable of collecting and removing leachate or other liquids from a solid waste facility.

**(123m)** “Leachate drainage basin” means the areal extent of the liner over which leachate gravity drains to a single extraction point, generally a sump and sideslope riser, as well as all of the waste vertically overlying this area.

**(124)** “Leachate monitoring system” means a system used to monitor the elevation, quantity or quality of leachate and other liquids generated within a solid waste facility.

**(124e)** “Leachate recirculation” means the controlled introduction into the waste mass of a landfill of leachate derived from the same landfill.

**(124g)** “Licensed professional engineer” means a professional engineer registered or licensed with the Wisconsin department of safety and professional services.

**(124h)** “Licensed professional geologist” means a professional geologist registered or licensed with the Wisconsin department of safety and professional services.

**(124m)** “Light petroleum products” means gasoline, diesel fuel, no. 1 or no. 2 fuel oil, kerosene, aviation gasoline, jet fuel, or a mixture of 2 or more of these materials.

**(125)** “Limit of detection” has the meaning specified in s. NR 149.03 (41).

**Note:** Section NR 149.03 (41) defines “limit of detection” to mean the lowest concentration or amount of analyte that can be identified, measured, and reported with confidence that the concentration is not a false positive value.”

**(126)** “Limit of quantitation” has the meaning specified in s. NR 149.03 (42).

**Note:** Section NR 149.03 (42) defines “limit of quantitation” to mean “the lowest concentration or amount of an analyte for which quantitative results can be obtained.”

**(127)** “Limits of filling” means the outermost limit at which waste from a facility has been disposed of, or approved or proposed for disposal.

**(128)** “Liner” means a constructed, continuous layer of natural or artificial materials placed beneath and on the sides of a surface impoundment, landfill, or landfill cell, which restricts the downward or lateral movement of leachate.

**(129)** “Liquid waste” means any waste material that is determined to contain “free liquids” as defined by Method 9095, Paint Filter Liquids Test, in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846, third edition, November 1986, as amended by Updates I in July 1992, II in September 1994, IIA in August 1993, IIB in January 1995, III in December 1996 and IIIA in April 1998.

**Note:** The test methods are available at no cost at [www.epa.gov/epaoswer/hazwaste/test/main.htm](http://www.epa.gov/epaoswer/hazwaste/test/main.htm). Copies of the test methods are available for inspection at the offices of the department of natural resources, the secretary of state, and the legislative reference bureau. Copies may be obtained from the superintendent of documents, U.S. government printing office, P.O. Box 371954, Pittsburgh, PA 15250-7954, (866) 512-1800, [www.gpoaccess.gov](http://www.gpoaccess.gov). Copies may also be obtained from the National Technical Information Service, U.S. department of commerce, 5285 Port Royal Road, Springfield, VA 22161, (800) 553-6847, [www.ntis.gov](http://www.ntis.gov).

**(130)** “Lithified earth material” means all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock that formed by crystallization of magma or by induration of loose sediments. This term does not include man-made materials, such as fill, concrete, and asphalt, or unconsolidated earth materials, soil, or regolith lying at or near the earth surface.

**(131)** “Lithostratigraphic unit” means a geologic formation that has a substantial degree of overall uniformity including such characteristics as color, mineralogic composition and grain size.

**(132)** “Long-term care” has the meaning specified in s. 289.01 (21), Stats.

**(133)** “Low-flow sampling technique” means the collection of a groundwater sample from a monitoring well using equipment that draws the sample into the equipment and discharges the sample to the sample container at a rate of less than 350 milliliters/minute.

**(134)** “Lower explosive limit” means the lowest percent by volume of a mixture of explosive gases in air that will propagate a flame at 25°C and standard atmospheric pressure.

**(135)** “Lysimeter” means a device used for collecting samples of soil moisture from the unsaturated zone.

**(136)** “Major appliance” has the meaning specified in s. 287.01 (3), Stats.

**Note:** Section 287.01 (3), Stats., defines “major appliance” to mean “a residential or commercial air conditioner, clothes dryer, clothes washer, dishwasher, freezer, microwave oven, oven, refrigerator, furnace, boiler, dehumidifier, water heater or stove”.

**(137)** “Major phase” means a horizontal portion of the landfill which is designed to be constructed at one time.

**(138)** “Major soil unit” means any soil layer which is greater than 2 feet thick and is laterally extensive beneath the proposed or existing limits of filling, or which affects the local hydrogeologic flow system.

**(139)** “Manifest” has the meaning given in s. 299.51 (1) (am), Stats.

**(140)** “Materials recovery facility” has the meaning specified in s. 287.27 (1), Stats.

**Note:** The definition of a materials recovery facility, as given in s. 287.27(1), Stats., provides “In this section, ‘materials recovery facility’ means a facility where the materials specified in sub. (4) (b) or s. 287.07 (3) or (4), not mixed with other solid waste, are processed for reuse or recycling by conversion into a consumer product or a product which is used as a raw material in a commercial or industrial process. ‘Materials recovery facility’ does not include a facility operated by a pulp or paper mill which utilizes fiber or paper that has been separated from waste for use as a raw material in a commercial product.”

**(141)** “Maximum horizontal acceleration in lithified earth material” means the maximum expected horizontal acceleration depicted on a seismic hazard map, with a 90% or greater probability that the acceleration will not be exceeded in 250 years, or the maximum expected horizontal acceleration based on a site-specific seismic risk assessment.

**(142)** “Medical facility” means a hospital, clinic or nursing home.

**(143)** “Medical waste” has the meaning given in s. 299.51 (1) (b), Stats.

**Note:** Medical waste does not mean all of the waste produced in a medical setting. Waste materials from a medical setting which do not meet the definition of “infectious waste” in statutes are considered to be “medical waste” only if the generator mixes them with infectious waste or manages them as though they are infectious waste.

**(144)** “Medical waste incinerator” has the meaning given in s. 287.07 (7) (c) 1. cr., Stats.

**(145)** “Medical waste reduction policy” is a policy developed by a medical facility and designed to reduce the amount of medical waste generated within that medical facility, to prevent the mixing of infectious waste with waste which is not infectious and to promote practical alternatives to disposable items in the medical setting.

**(146)** “Method blank” has the meaning specified in s. NR 149.03 (15) (b).

**Note:** Section NR 149.03 (15) (b) defines “method blank” to mean “a sample of a matrix devoid of or having a consistent concentration or amount of the analytes of interest processed simultaneously with and under the same conditions, preparatory and analyses steps as the associated samples.”

**(147)** “Microbiological laboratory waste” means cultures derived from clinical specimens or laboratory equipment which has come in contact with these cultures.

**(148)** “Monitoring” means all procedures used to systematically inspect and collect data on the performance of a facility relating to leachate and gas production or the effect on the quality of the air, groundwater, surface water, unsaturated zone or soils.

**(149)** “Monofill cell for residue produced by burning municipal solid waste” means a landfill or a specified area within a landfill for residue disposal which is designed to prevent mixing of residue and wastes which produce acidic leachates and which is designed to prevent leachate from adjacent cells from coming into contact with the residue.

**(150)** “Municipal solid waste” means:

(a) Household waste, or

(b) Solid waste from commercial or industrial sources that does not contain hazardous waste and does not contain any process waste which is the direct or indirect result of the manufacturing of a product or the performance of a service such as dry cleaners or paint shops. “Municipal solid waste” does not include waste wood, papermill sludge, sewage sludge, tires or industrial process wastes.

**(151)** “Municipal solid waste combustor” means any solid waste treatment facility that is used to burn municipal solid waste or products derived from municipal solid waste, alone or in conjunction with other materials.

**(152)** “Municipal solid waste landfill” means a landfill which receives, or has received in the past, municipal solid waste. A municipal solid waste landfill may also receive other types of non-hazardous waste such as industrial solid waste and demolition waste. A municipal solid waste landfill may be publicly or privately owned.

**(153)** “Noncombustible materials” means solid waste which will not support combustion in the ambient atmosphere.

**(154)** “Noncontainerized storage facility” means a storage facility which is not a containerized storage facility.

**(155)** “Noninterest bearing accounts” means letters of credit, performance bonds or forfeiture bonds.

**(155m)** “Nonrecyclable compostable paper” means compostable 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.

**(156)** “NRCS” means natural resources conservation service.

**(157)** “Nursing home” has the meaning given in s. 50.01 (3), Stats.

**(158)** “One-time disposal” means the disposal of no more than 10,000 cubic yards of approved types of agricultural or demolition solid waste on a one-time basis over a project life of not more than 6 months. Examples are the disposal of concrete, brick, stone, asphalt, wood, trees, logs, brush and material from demolished buildings.

**(159)** “Open burning” has the meaning specified in s. 289.51 (1) (b), Stats.

**(160)** “Operating record” means the record maintained by the owner or operator of a municipal solid waste facility in accordance with Subtitle D, 40 CFR 258.29.

**(161)** “Operator” means the person who is responsible for the overall operation of a solid waste facility, or for part of a solid waste facility.

**(162)** “OSHA” means the occupational safety and health administration.

**(163)** “Owner” means the person who owns a solid waste facility, or part of a solid waste facility.

**(164)** “Paint filter liquids test” means the test used for determining whether a waste contains free liquids as defined by Method 9095, Paint Filter Liquids Test, in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846, third edition, November 1986, as amended by Updates I in July 1992, II in September 1994, IIA in August 1993, IIB in January 1995, III in December 1996 and IIIA in April 1998.

**Note:** The test methods are available at no cost at [www.epa.gov/epaoswer/hazwaste/test/main.htm](http://www.epa.gov/epaoswer/hazwaste/test/main.htm). Copies of the test methods are available for inspection at the offices of the department of natural resources, the secretary of state and the legislative reference bureau. Copies may be obtained from the superintendent of documents, U.S. government printing office, P.O. Box 371954, Pittsburgh, PA 15250-7954, (866) 512-1800, [www.gpoaccess.gov](http://www.gpoaccess.gov). Copies may also be obtained from the

National Technical Information Service, U.S. department of commerce, 5285 Port Royal Road, Springfield, VA 22161, (800) 553-6847, [www.ntis.gov](http://www.ntis.gov).

**(165)** “PAL” means preventive action limit.

**(166)** “Parent material” means the slightly altered or unweathered material from which the soil was formed.

**(167)** “Patient day” means a period of service between the census-taking hours on 2 successive calendar days, including in-patient census and out-patient surgical days.

**(168)** “Percent recovery” means the volume of soil or rock remaining in a sampling device relative to the total volume of soil or rock penetrated by the sampler.

**(169)** “Perched groundwater” means any waters of the state, as defined in s. 281.01 (18), Stats., occurring in an isolated, saturated zone located in the unsaturated zone.

**(170)** “Piezometer” means a well which is used to measure groundwater elevations and water quality beneath the water table. A piezometer is sealed within the aquifer and typically has a well screen of 2 to 5 feet.

**(171)** “Piezometer nest” means 2 or more piezometers within 10 feet of each other at the ground surface which are screened at different depths.

**(172)** “Piezometric surface” means a surface that represents the level to which water will rise in a piezometer.

**(173)** “Place of public gathering” means a structure which is open to the public.

**(174)** “Plan of operation” means a report submitted for a solid waste facility that describes its location, design, construction, documentation, monitoring, sanitation, operation, maintenance, closing and long-term care.

**(175)** “Point of standards application” has the meaning specified in s. NR 140.05 (15).

**(176)** “Poor foundation conditions” means those areas where features exist which indicate that a natural or human-induced event may result in inadequate foundation support for the structural components of a landfill.

**(177)** “Population equivalent” has the meaning specified in s. 289.51 (1) (c), Stats.

**(178)** “Preventive action limit” has the meaning specified in s. NR 140.05 (17).

**(179)** “Private alcohol fuel production system” has the meaning specified in s. 289.44 (1) (c), Stats.

**(180)** “Private water supply well” is part of a private water supply system as defined in s. NR 812.07 (78).

**(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.

**(182)** “Proof of financial responsibility” means a bond, letter of credit, deposit, escrow account, trust account, net worth method, or other financial commitment made payable to or for the benefit of the department and approved by the department, ensuring that sufficient funds will be available to comply with the closure and long-term care requirements of chs. NR 500 to 538 and the approved plan of operation.

**(183)** “Public water supply well” is part of a public water supply system as defined in s. NR 811.02 (21).

**(184)** “Public use airport” has the meaning in s. 114.002 (18m), Stats.

**(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.

**(185m)** “PVC” means polyvinyl chloride.

(186) “Quality control flag” means a letter or symbol attached to a reported result indicating failure to meet quality control criteria.

(187) “Radioactive material” has the meaning given in s. DHS 157.03 (299).

(188) “Radioactive waste” means those wastes defined in federal code 10 CFR 60.2 and 61.3.

(189) “Recharge zone” means an area in which there are downward components of hydraulic head in the aquifer.

(190) “Recyclable materials” means the items listed in s. 287.07 (1m) to (4), Stats.

(191) “Recycling” has the meaning specified in s. 289.43 (1), Stats.

(192) “Recycling facility” means a facility where waste is recycled and may include a facility where waste has been generated.

(193) “Refuse” has the meaning specified in s. 289.01 (28), Stats.

(194) “Registered professional engineer” means a professional engineer registered or licensed with the Wisconsin department of safety and professional services.

(195) “Registered professional geologist” means a professional geologist registered or licensed with the Wisconsin department of safety and professional services.

(196) “Remedial action options report” has the meaning specified in s. NR 700.03 (49).

**Note:** Section NR 700.03(49) defines “remedial action options report” to mean “a report which identifies and evaluates various remedial options with the goal of selecting an option in compliance with the requirements of s. NR 722.11.”

(197) “Representative sample” means any sample of a universe or whole, such as groundwater or soils, which reliably exhibits the average properties of the universe or whole.

(198) “Residue produced by burning municipal solid waste” means the residue produced in a municipal solid waste combustor designed and operated for controlled burning of solid wastes primarily to achieve volume and weight reduction or to change waste characteristics. This includes facilities such as boilers which also capture energy in the form of steam, electricity, heat, gas, oil or char from the burning of waste. Residue produced by burning municipal solid waste includes, but is not limited to, slag, ash, fly ash, reacted and unreacted scrubber lime, and soot. Residue produced by burning municipal solid waste does not include bypass waste which is rejected prior to burning.

(199) “Rock” means lithified earth material as defined in sub. (130).

(200) “RQD” means the rock quality designation calculated from a rock core collected from a boring.

**Note:** RQD is the ratio of the length of a rock core, adding only the intact pieces of core recovered greater than 10 centimeters long, to the total length cored. RQD ranges from 0 to 100 percent and should only be applied to cores greater than 5.4 centimeters in diameter.

(201) “Run-off” means any rainwater, leachate or other liquid that drains over land, from any part of a solid waste facility.

(202) “Run-on” means any rainwater, leachate, or other liquid that drains over land onto any part of a solid waste facility.

(203) “Salvageable material” means junk cars, machinery or equipment, scrap metal or other junk or scrap materials which are of further usefulness mainly as a raw material for reprocessing, or as imperfect stock from which replacement or spare parts can be extracted.

(204) “Sampling period” means the month in which a sample is collected.

(205) “Saturated zone” means that part of the earth’s crust in which all voids are filled with water excluding the capillary zone.

(206) “Seasonal high groundwater” means the set of groundwater level readings taken during which the highest water level occur in the majority of the groundwater wells within 300 feet of the proposed limits of filling.

(207) “Seasonal population” means the seasonal transient population in addition to the year round population.

(208) “Seismic impact zone” means an area with a 10% or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percentage of the earth’s gravitational pull, will exceed 0.10g in 250 years.

(209) “Sharps” means medical equipment or clinical laboratory articles that may cause punctures or cuts. Sharps include, but are not limited to, contaminated, unused and disinfected items listed in s. NR 526.05 (1) (a).

(209m) “Single-application landspreading” means landspreading where contaminated soil from only one remedial action site is all the contaminated soil that is ever applied onto an area of a property.

(210) “Site investigation report” means a report prepared in accordance with s. NR 716.15.

(211) “Site investigation work plan” means a work plan prepared in accordance with s. NR 716.09.

(212) “Sludge” means any solid, semi-solid or liquid waste generated from a municipal, commercial or industrial wastewater treatment plant, water supply treatment plant or air pollution control facility.

(213) “Small size construction and demolition waste landfill” means a landfill with a design capacity of 50,000 cubic yards or less and used for the disposal of only construction and demolition wastes.

(214) “Soil” means material that has been physically and chemically derived from the bedrock by nature.

(214m) “Soil barrier layer” means a soil layer or set of layers that is constructed as a subgrade for a GCL and which provides a smooth surface and hydration water source for the GCL, reduces flow through the barrier system, reduces settlement stresses on a GCL and geomembrane and minimizes geochemical effects on a GCL.

(215) “Solid waste” has the meaning specified in s. 289.01 (33), Stats.

(216) “Solid waste disposal” has the meaning specified in s. 289.01 (34), Stats.

(217) “Solid waste facility” has the meaning specified in s. 289.01 (35), Stats.

(218) “Solid waste storage” has the meaning specified in s. 289.01 (38), Stats.

(219) “Solid waste treatment” has the meaning specified in s. 289.01 (39), Stats.

(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, rendering or slaughterhouse wastes, animal carcasses, other solid waste, or hazardous waste.

(220) “Specific conductance” means the measurement of a water’s ability to transmit an electrical current in micromhos/cm corrected to 25°C.

(221) “Stabilization of waste” means any chemical, physical or thermal treatment of a waste, either alone or in combination with biological processes, which results in a significant reduction of pathogenic organisms including viruses.

(222) “Stabilization of a land disposal facility” means the process of waste settlement and associated land surface maintenance to insure that the majority of settlement has occurred, that pockets or depressions caused by settlement have been refilled or regraded, and that the final land surface contours represent a stable condition for closure and facility maintenance purposes.

(223) “Sterilization” means a process by which all forms of microbial life, including spores, viruses and fungi are destroyed.

(224) “Storage facility” means a solid waste facility for the storage of solid waste, on a temporary basis in such a manner as not to constitute ultimate disposal of solid waste.

(225) “Structural components” means liners, leachate collection systems, final covers, run-on/run-off systems, and any other component used in the construction and operation of the landfill that is necessary for protection of human health, welfare and the environment.

(226) “Sub-base grade” means the elevation of the facility or portion of the facility which has been excavated to its lowest level prior to the placement of any liner system.

(227) “Sub-soil horizon” means the soil horizon adjacent to and usually directly below the topsoil.

(228) “Subtitle D” means the United States Resource Conservation and Recovery Act (RCRA) Subtitle D solid waste disposal facility criteria as set forth in 40 CFR parts 257 and 258.

(229) “Subtitle D well” means a designated well installed at a landfill that accepts municipal solid waste and whose location and depth have been approved by the department specifically for monitoring purposes under Subtitle D of RCRA, 40 CFR parts 257 and 258.

(230) “Surface impoundment facility” means a storage or land disposal facility with a natural topographic depression, artificial excavation or dike arrangement which is used for storage or disposal of waste fluids, semi-solids or wastes containing free liquids.

(231) “SW-846” means the document “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846, third edition, November 1986, as amended by Updates I in July 1992, II in September 1994, IIA in August 1993, IIB in January 1995, III in December 1996 and IIIA in April 1998.

**Note:** The test methods are available at no cost at [www.epa.gov/epaoswer/hazwaste/test/main.htm](http://www.epa.gov/epaoswer/hazwaste/test/main.htm). Copies of the test methods are available for inspection at the offices of the department of natural resources, the secretary of state and the legislative reference bureau. Copies may be obtained from the superintendent of documents, U.S. government printing office, P.O. Box 371954, Pittsburgh, PA 15250-7954, (866) 512-1800, [www.gpoaccess.gov](http://www.gpoaccess.gov). Copies may also be obtained from the national technical information service, U.S. department of commerce, 5285 Port Royal Road, Springfield, VA 22161, (800) 553-6847, [www.ntis.gov](http://www.ntis.gov).

(231m) “Take of an endangered or threatened species” has the meaning defined in s. NR 27.01 (8).

(232) “Tank” means a stationary device not including manholes, designed to contain an accumulation of leachate or other waste which is constructed primarily of nonearthen materials, such as wood, concrete, steel or plastic, which provide structural support.

(233) “25-year, 24-hour storm” means a storm of 24-hour duration with a probable recurrence interval of once in 25 years as determined under s. NR 205.05.

(234) “Termination” has the meaning specified in s. 289.01 (40), Stats.

(235) “Top of the bedrock surface” means the top of the uppermost rock formation.

**Note:** The presence of bedrock shall be indicated when a majority of the drill cuttings or excavated material consist of either angular rock fragments, as in the case of crystalline bedrock, or rock fragments composed of individual grains or rock particles that are cemented together to form an aggregate, as opposed to single sediment particles, such as sand.

(236) “Topsoil” means natural loam, sandy loam, silt loam, silty clay loam or clay loam humus-bearing soils or other material that will easily produce and sustain dense growths of vegetation

capable of preventing wind and water erosion of the material itself and of other materials beneath.

(237) “Total suspended particulates” means particulate matter as measured by the method described in Appendix B of 40 CFR part 50.

(237m) “Trace chemotherapy waste” means items contaminated with antineoplastic chemotherapy drugs, including drug dispensing devices, gloves and other items that have come into contact with chemotherapy drugs.

(238) “Transfer facility” means a solid waste facility at which transferring of solid waste from one vehicle or container to another, generally of larger capacity, occurs prior to transporting to the point of processing or disposal.

(239) “Transportation service” means an operation which transports vehicles or containers or both vehicles or other means of conveying solid waste from the primary source of collection and includes all activities up to such time as the waste is delivered to a facility for transfer, processing, treatment or disposal.

(240) “Treatment area” has the meaning given in s. 287.07 (7) (c) 1. e., Stats.

(241) “Trip blank” has the meaning specified in s. NR 149.03 (32).

**Note:** The term “trip blank” has been eliminated from ch. NR 149. The concept is no longer defined or discussed in ch. NR 149. However, “trip blank” is understood to mean a sample of reagent grade water or methanol, which is used to determine possible contamination of sample bottles from volatile organic chemicals while in transit to and from the laboratory.

(242) “Ultra low-level radioactive waste” means a waste generated at a wastewater or water treatment facility treating groundwater containing radium.

(243) “Uniformity coefficient” means the number resulting from dividing the grain size diameter in millimeters at the point where 60% of the material is finer by weight by the grain size diameter in millimeters at the point where 10% of the material is finer by weight.

(244) “Unsaturated zone” means the zone between the land surface and the water table in which the pore spaces contain water at less than atmospheric pressure, as well as air and other gases.

(245) “Unsaturated zone monitoring system” means a system used to measure soil moisture quantity or quality in the unsaturated zone beneath a regulated facility.

(246) “Unstable area” means a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill structural components responsible for preventing releases from a landfill. Unstable areas can include poor foundation conditions, areas susceptible to mass movements, and karst terranes.

(247) “USCS” means the unified soil classification system.

(248) “USDA” means the United States department of agriculture.

(248m) “USDOT” means the United States department of transportation.

(249) “U.S. government securities” means treasury bills, treasury bonds, treasury certificates, treasury notes and treasury stocks guaranteed by the federal government.

(250) “USGS” means the United States geological survey.

(251) “UW” means the university of Wisconsin.

(252) “U.W.-Extension” means the university of Wisconsin extension.

(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, food retailers and food processors, and includes compostable packaging, utensils, tableware, kitchenware, and containers that meet either the ASTM - D-6400 or the D-6868 standard.



**Note:** Copies of ASTM standards D-6400 and D-6868 may be obtained from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, (610) 832-9585, [www.astm.org](http://www.astm.org). Copies of the standard are available for inspection at the offices of the department of natural resources and legislative reference bureau.

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

**(254)** “VOC” means volatile organic compounds.

**(255)** “Water table” means the upper surface of the saturated zone where the hydrostatic pressure is equal to atmospheric pressure.

**(256)** “Well” means any drillhole or other excavation or opening constructed for the purpose of obtaining or monitoring groundwater.

**(257)** “Well nest” means 2 or more wells installed within 10 feet of each other at the ground surface and constructed to varying depths.

**(258)** “Wetlands” means those areas where water is at, near or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation, and which have soils indicative of wet conditions.

**(259)** “WGNHS” means the Wisconsin geological and natural history survey.

**(260)** “Woodburning facility” means a solid waste facility at which open burning of dry unpainted untreated wood, stumps, trees or other woody materials is performed. This term does not include air curtain destructors, incinerators, or municipal solid waste combustors.

**(261)** “WPDES permit” means a Wisconsin pollution discharge elimination system permit issued by the department under ch. 283, Stats., for the discharge of pollutants.

**(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 vegetative material no greater than 6 inches in diameter. This term does not include stumps, roots or shrubs with intact root balls”.

**Note:** Chapter NR 40 governs the identification, classification and control of invasive species in Wisconsin. Proper screening of compost feedstock materials and achievement of appropriate temperatures and residence times can help prevent the spread of viable seeds or other propagules of invasive species through compost.

**(263)** “Zone-of-saturation landfill” means a landfill where the base grade is located below the water table in a fine-grained soil environment and is designed and operated to maintain inward groundwater gradients to the extent possible.

**(264)** “Zoonotic infectious agent” means an infectious agent which can be transmitted from an animal to a human. Zoonotic infectious agents include *Bacillus anthracis* (anthrax), *Brucella abortus* (brucellosis), *Chlamydia psittaci* (psittacosis), *Coxiella burnetii* (Q fever), *Lyssa virus* (rabies), *Mycobacterium bovis* and *Mycobacterium tuberculosis*.

**History:** Cr. Register, January, 1988, No. 385, eff. 2-6-88; am. (86), cr. (12m), (33m), (41m), (85m), (86m), (114m), (149m) and (155m), Register, May, 1992, No. 437, eff. 6-1-92; cr. (116m), Register, September, 1993, No. 453, eff. 10-1-93; am. (intro.), (61), (67), cr. (12r), (14g), (14m), (15m), (30m), (35m), (37m), (62e), (62i), (62r), (67g), (67m), (67i), (84d), (84h), (84i), (84o), (84s), (84w), (89m), (96m), (107i), (107r), (109m), (119m), (130m), (139m), (159), Register, October, 1994, No. 466, eff. 11-1-94; r. and recr., Register, June, 1996, No. 486, eff. 7-1-96; am. (intro.), (2), (43), (51) and (182), Register, December, 1997, No. 504, eff. 1-1-98; cr. (124m) and (209m), Register, September, 1998, No. 513, eff. 10-1-98; corrections in (23), (187) and (188) made under s. 13.92 (2m) (b) 7., Stats., Register March 2003 No. 567; CR 04-113: am. (19) and (140) Register June 2005 No. 594, eff. 7-1-05; CR 04-077: cr. (100m), (120g), (120r), (123m), (124e) and (185m) Register November 2005 No. 599, eff. 12-1-05; CR 05-020: am. (intro.), (129), (164), (194), (195), (231) and (259), cr. (9m), (14m), (20m), (93m), (124g), (124h), (214m), (231m), (237m) and (248m), r. and recr. (14), r. (29) and (55) Register January 2006 No. 601, eff. 2-1-06; corrections in (100), (109), (125), (126), (146) and (187) made under s. 13.92 (4) (b) 7., Stats.; correction in (124g), (124h), (194), (195) made under s. 13.92 (4) (b) 6., Stats., Register February 2012 No. 674; CR 10-128: cr. (20r), (29), (30g), (30r), (44m), am. (45), cr. (86m), (88m), (155m), am. (185), cr. (219m), am. (253), cr. (253m), am. (262) Register May 2012 No. 677, eff. 6-1-12.

**NR 500.04 Initial site inspection.** Any person intending to establish a new solid waste facility or expand an existing solid waste facility shall contact the department’s district or area office

as appropriate to arrange for an initial site inspection in accordance with ch. NR 509 for the purpose of evaluating compliance with the applicable locational criteria and performance standards of ch. NR 502 and s. NR 504.04. This inspection shall be completed prior to submittal of an initial site report or a plan of operation report.

**History:** Cr. Register, January, 1988, No. 385, eff. 2-6-88; am., Register, June, 1996, No. 486, eff. 7-1-96.

**NR 500.05 General submittal requirements.** Unless otherwise specified, all submittals for review and approval of any initial site report, feasibility report, plan of operation, site investigation report, remedial action options report, construction documentation report or closure plan shall include the following:

**(1) REVIEW FEE.** The appropriate review fee specified in s. NR 520.04 shall be identified. The department will send an invoice for the plan review fee to the contact for the facility upon receipt of the submittal. Payment in check or money order shall be sent to the department’s bureau of finance within 30 days after receipt of the invoice.

**(2) COVER LETTER.** A letter detailing the desired department action or response.

**(3) PAPER AND ELECTRONIC COPIES.** Unless otherwise specified, 4 paper copies and one electronic copy of the plan or report prepared pursuant to the appropriate section of chs. NR 500 to 538, and an additional electronic copy of any plan sheets or drawings submitted as a part of the plan or report. Three paper copies shall be submitted to the department’s field office responsible for the area in which the facility is located and one paper copy, one electronic copy, and the additional electronic copy of associated plans or drawings shall be submitted to the bureau of waste management in Madison unless otherwise specified by the department. The complete electronic copy of the report and the separate electronic copy of any plan sheets or drawings shall be provided in formats and on media acceptable to the department.

**(4) CERTIFICATION.** (a) The reports and plan sheets shall be under the seal of a licensed professional engineer. In addition, the following certification shall be included:

“I, \_\_\_\_\_, hereby certify that I am a licensed professional engineer in the State of Wisconsin in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 500 to 538, Wis. Adm. Code.”

(b) Initial site reports, feasibility reports, plans of operation, site investigation, remedial action options reports and any other reports where interpretation of geology or hydrogeology is necessary shall be under the seal of a licensed professional geologist. In addition, the following certification shall be included:

“I, \_\_\_\_\_, hereby certify that I am a licensed professional geologist in the State of Wisconsin in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code; that the preparation of this document has not involved any unprofessional conduct as detailed in ch. GHSS 5, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 500 to 538, Wis. Adm. Code.”

**(5) TECHNICAL PROCEDURES.** All technical procedures used to investigate a solid waste facility shall be the current standard procedures as specified by ASTM International, United States geological survey, USEPA’s standard methods for the examination of water and wastewater, or other equivalent or appropriate methods approved by the department. Test procedures used shall be specified. Any deviation from a standard method shall be explained in detail with reasons provided.

(6) VISUALS. Maps, figures, photographs and tables to clarify information or conclusions. The visuals shall be legible. All paper copies of maps, plan sheets, drawings, isometrics, cross-sections and aerial photographs shall meet the following requirements:

(a) No larger than 32 inches by 44 inches and no smaller than 8 1/2 inches by 11 inches.

(b) Be of appropriate scale to show all required details in sufficient clarity.

(c) Be numbered, referenced in the narrative, titled, have a legend of all symbols used, contain horizontal and vertical scales, where applicable, and specify drafting or origination dates.

(d) Use uniform scales.

(e) Contain a north arrow.

(f) Use mean sea level as the basis for all elevations.

(g) Contain a survey grid based on monuments established in the field which utilizes a coordinate system and datum acceptable to the department. Examples of acceptable coordinate systems include state plane, Universal Transverse Mercator, and Wisconsin Transverse Mercator.

(h) Show original topography and the grid system on plan sheets showing construction, operation or closure topography. For complex plans, existing conditions within the landfill area may be shown by lighter lines or may be eliminated.

(i) Show survey grid location and reference major plan sheets on all cross-sections. A reduced diagram of a cross-section location plan view map shall be included on the sheets with the cross-sections.

(7) TABLE OF CONTENTS. A table of contents listing all sections of the submittal.

(8) APPENDIX. An appendix listing names of all references, all raw data, testing and sampling procedures and calculations.

**History:** Cr. Register, January, 1988, No. 385, eff. 2-6-88; am. (intro.), (1), (3), (4) and (6) (h), Register, June, 1996, No. 486, eff. 7-1-96; am. (3) and (4), Register, December, 1997, No. 504, eff. 1-1-98; CR 05-020: am. (3), (4), (5), (6) (intro.), (a), (f) and (g) Register January 2006 No. 601, eff. 2-1-06.

**NR 500.06 License applications.** Unless otherwise specified, no person may operate or maintain a solid waste facility without a license from the department. A submittal for initial licensing or relicensing of any solid waste facility shall include:

(1) LICENSE FEE. The appropriate fee as specified in s. NR 520.04 in check or money order payable to the department. Except as provided in s. NR 500.065, license fees are not transferable, prorable or refundable.

(2) APPLICATION FORM. A completed copy of the appropriate application form.

(3) FINANCIAL RESPONSIBILITY. For all land disposal facilities with plans of operation approved under s. 289.30, Stats., proof of financial responsibility as specified in s. NR 520.05.

(4) AFFIDAVIT OF FACILITY REGISTRY. Submittal on form 4400-067 that proof that a notation of the existence of the facility has been recorded in the office of the register of deeds in each county in which a portion of the facility is located. Owners of landfills applying for relicensure need only submit this form if the legal description of the landfill has changed from that identified on a previously submitted form 4400-067.

**Note:** This form may be obtained from the Department of Natural Resources, Bureau of Waste Management, 101 S. Webster Street, P.O. Box 7921, Madison, WI 53707-7921, (608) 266-2111, [waste.management@dnr.state.wi.us](mailto:waste.management@dnr.state.wi.us).

(5) NONCOMPLIANCE WITH PLANS OR ORDERS. A submittal for initial licensing of a new or expanded solid waste disposal facility shall contain the following information:

(a) Identification of all persons owning a 10% or greater legal or equitable interest in the applicant or in the assets of the applicant, including shareholders of a corporation which is an applicant and partners of a partnership which is an applicant.

(b) Identification of all other Wisconsin solid or hazardous waste facilities for which the applicant or any person identified in par. (a), is named in, or subject to an order or plan approval issued by the department.

(c) Identification of all other Wisconsin solid or hazardous waste facilities which are owned by persons, including corporations and partnerships, in which the applicant or person identified in par. (a) owns or previously owned a 10% or greater legal or equitable interest or a 10% or greater interest in the assets.

(d) A statement indicating whether or not all plan approvals and orders relating to all facilities identified in pars. (b) and (c) are being complied with.

**Note:** If noncompliance with an order or plan approval occurs while the applicant has or had a 10% or greater legal or equitable interest in the facility and is continuing, the department is prohibited from licensing the new or expanded solid waste disposal facility, unless the applicant provides proof of financial responsibility under s. 289.34 (3), Stats., to assure that compliance is achieved.

**History:** Cr. Register, January, 1988, No. 385, eff. 2-6-88; am. (1) (intro.), Register, June, 1996, No. 486, eff. 7-1-96; am. (1) and cr. (5), Register, September, 1998, No. 513, eff. 10-1-98; CR 05-020: am. (4) Register January 2006 No. 601, eff. 2-1-06.

**NR 500.065 License issuance. (1) INITIAL APPLICATIONS.** The department shall make a determination on an initial application for a solid waste facility license within 65 business days of receipt of all of the information specified in s. NR 500.06. If a determination is not made on the application within 65 business days, the department shall refund the license application fee paid by the applicant.

(2) RENEWALS. The department shall make a determination on a license renewal application for a solid waste facility license within 65 business days of receipt of all of the information specified in s. NR 500.06, or by the end of the current license period, whichever occurs later. If a determination is not made within these time constraints, the department shall refund the license renewal application fee paid by the applicant.

**History:** Cr. Register, September, 1998, No. 513, eff. 10-1-98.

**NR 500.07 Review times.** Except as otherwise provided in chs. NR 500 to 538, the department shall review and approve, deny or deem incomplete requests for plan approvals or exemptions within 65 business days after receiving the request. For the purposes of determining department compliance with review times specified in chs. NR 500 to 538 and ch. 289, Stats., the review time starts when the appropriate copies and review fee are received.

**History:** Cr. Register, January, 1988, No. 385, eff. 2-6-88; am., Register, June, 1996, No. 486, eff. 7-1-96; am., Register, December, 1997, No. 504, eff. 1-1-98.

**NR 500.08 Exemptions. (1) GENERAL.** The following facilities are exempt from all requirements of chs. NR 500 to 538:

(a) Facilities used for the disposal of solid waste from a single family or household on the property where it is generated.

(b) Riprapping projects using inert solid waste materials approved by the department under s. 30.12, Stats., or in submerged shorelands in Lake Michigan, the title to which has been granted by the state to a municipality.

(2) OTHER FACILITIES. The following facilities shall be established in conformance with the locational requirements of s. NR 504.04 (3) (c) and (4) (a) to (f) and shall be operated and maintained in a nuisance-free and aesthetic manner but are exempt from licensing and the requirements of chs. NR 500 to 538:

(a) Facilities where only clean soil, brick, building stone, concrete or reinforced concrete not painted with lead-based paint, broken pavement, and wood not treated or painted with preservatives or lead-based paint are disposed.

(b) Facilities for the exclusive disposal of spoils from sand, gravel or stone and crushed stone quarry operations and similar nonmetallic earth materials.

(c) Facilities for the disposal of wood residue from a saw mill, debarker or equivalent industry which produces less than 5,000

board feet of lumber per year or equivalent and the total disposal facility volume is less than 500 cubic yards of wood residue.

(d) Facilities where railroad ties or utility poles are used as structural timbers for landscaping purposes in accordance with generally accepted practices.

(e) Facilities where untreated, unpainted wood wastes including wood chips, bark, and sawdust are handled and stored properly and used for landscaping or trail surface course purposes in accordance with generally accepted practices.

(f) Facilities where glass is processed or used as an aggregate replacement in asphalt pavement and subbase material under roadways subject to the following:

1. Glass may not be used in areas where the glass will be exposed and may pose a safety threat or in areas that will be frequently disturbed.

2. The amount of contaminants present with the glass such as labels, caps and metal rings shall be minimized to the extent necessary to prevent interference with the performance of the asphalt or roadbed aggregate. Asphalt and roadbed aggregate containing glass shall be designed and used in accordance with generally accepted engineering practice. The glass shall have sufficient properties to perform the function of the aggregates it replaces. The use of glass particles greater than 1/2 inch in size requires written department approval.

3. Glass shall be collected and stored in a nuisance free manner. Glass stockpiles shall have controlled access to prevent the general public from coming in contact with the glass piles. The number of stockpiles shall be kept to a minimum and may not be spread over a large area. Stockpiles shall be placed on a hard, all weather surface such as asphalt or concrete.

**(3) DREDGED MATERIAL EXEMPTIONS.** The following facilities are exempt from the licensing and plan review requirements of chs. NR 500 to 538 but shall be developed in accordance with the following requirements:

(a) Facilities for the disposal of nonhazardous dredged material consisting of less than 3000 cubic yards from Lake Michigan, Lake Superior, the Wisconsin river, the Sheboygan river, the Milwaukee river, the Brule and Menominee rivers, the Fox river, the Mississippi river, or from any inland lakes or ponds treated with arsenicals provided the facility complies with the performance standards specified in s. NR 504.04 (4).

(b) Facilities for the disposal of non-hazardous dredged material from rivers not listed in par. (a) provided the facility complies with the performance standards specified in s. NR 504.04 (4).

(c) Facilities for the disposal of nonhazardous dredged material from inland lakes or ponds that have not been treated with arsenicals provided the facility complies with the performance standards specified in s. NR 504.04 (4).

**(4) EXEMPTIONS FROM SOLID WASTE RULES.** Exemptions from the requirements of chs. NR 500 to 538 may be granted in writing by the department in special cases except as otherwise provided. A person may apply for an exemption by providing the department with a written request along with the appropriate documentation which demonstrates that the proposal will not cause environmental pollution as defined in s. 299.01 (4), Stats. The department shall take into account such factors as the population of the area being served, the amount of waste being generated, the geologic and hydrogeologic conditions at the facility, the design of the facility, the operational history of the facility, the physical and chemical characteristics of the waste and any other information which may be appropriate. The department shall review and make a written determination on the exemption request within 65 business days after receipt of a complete request and the appropriate review fee under ch. NR 520 unless a different time period is provided by law.

**(5) BENEFICIAL REUSE.** (a) The department may grant exemptions from the requirements of ch. 289, Stats., for the purpose of allowing or encouraging the recycling of solid wastes. Any

exemptions granted under this section shall be issued in writing in accordance with the requirements of s. 289.43, Stats.

(b) Facilities where wood ash is stored, handled, transported or landspread provided either of the following is met:

1. Wood ash is derived from the combustion of untreated wood with no additives, preservatives or other alterations other than kiln drying from generators who produce 10 dry tons or less of ash per year and is managed in a nuisance free manner.

2. Wood ash is managed in accordance with s. NR 518.04 (6).

**(6) REMEDIATION ACTION EXEMPTION.** The following facilities are exempt from solid waste program regulatory requirements under ch. 289, Stats., and chs. NR 500 to 538:

(a) Facilities for the treatment, storage or disposal of solid waste which is excavated for the primary purpose of conducting a site investigation or implementing an interim or remedial action in compliance with the requirements of chs. NR 700 to 726 and which is returned to the same property from which it was excavated in compliance with the requirements of ch. NR 718; and

(b) Facilities for the treatment, storage or disposal of excavated contaminated soil which are operated in compliance with the requirements of ch. NR 718.

**History:** Cr. Register, January, 1988, No. 385, eff. 2-6-88; cr. (6), Register, April, 1994, No. 460, eff. 5-1-94; am. (1) (intro.), (2), (3) (intro.), (4) and (5), cr. (2) (d), (e), (f) and (3) and (5) (c), r. (3) (a), renum. (3) (b) to be (3) (a), Register, June, 1996, No. 486, eff. 7-1-96; am. (1) (intro.), (2) (intro.), (3) (intro.), (4), (6) (intro.), r. (5) (b) and renum. (5) (c) to be (5) (b), Register, December, 1997, No. 504, eff. 1-1-98; am. (3) (a), Register, September, 1998, No. 513, eff. 10-1-98; CR 05-020: am. (2) (a) Register January 2006 No. 601, eff. 2-1-06.

**NR 500.09 Construction inspection.** The department may require as a condition of a grant of exemption, the approval of a feasibility report, plan of operation, groundwater monitoring plan, closure plan, site investigation report and remedial action options report or a modification to any approval that critical construction steps of a facility, as specified in the approval, be inspected by the department. The applicant shall pay an inspection fee as specified in s. NR 520.04 (5).

**History:** Cr. Register, January, 1988, No. 385, eff. 2-6-88; am., Register, June, 1996, No. 486, eff. 7-1-96.

**NR 500.10 Exemption for use of municipal solid waste as a fuel.** The department may grant exemptions in writing from any of the requirements of chs. NR 500 to 538 for municipal solid waste combustors and any other solid waste facilities which manage the residue from municipal solid waste combustors. The department also may issue an approval for solid waste which has been processed into a fuel for a municipal solid waste combustor which exempts the combustor and any facility which manages the combustor residue from regulation under chs. NR 500 to 538. Such exemptions may be granted under this section. The department shall consider the following criteria in determining whether an exemption shall be granted under this section:

- (1) The source of the waste to be used as fuel.
- (2) The variability of the waste to be used as fuel.
- (3) The physical and chemical properties of the waste to be used as fuel.
- (4) The quantity of the waste to be used as fuel.
- (5) The percentage of the total fuel mix contributed by the municipal solid waste.
- (6) The physical and chemical properties of the residue.

**History:** Cr. Register, May, 1992, No. 437, eff. 6-1-92; correction made under s. 13.93 (2m) (b) 1., Stats., Register, May, 1995, No. 473; am. (intro.), Register, June, 1996, No. 486, eff. 7-1-96; am. (intro.), Register, December, 1997, No. 504, eff. 1-1-98.

**NR 500.11 Enforcement.** If the department has reason to believe that a violation of the requirements of ch. 289, Stats., or chs. NR 500 to 538 has occurred, it may take enforcement action as authorized under subch. VIII of ch. 289, Stats., or as authorized in applicable enforcement provisions for landfill and solid waste disposal program requirements in chs. NR 500 to 538.

**History:** CR 05-020: cr. Register January 2006 No. 601, eff. 2-1-06.