

Glossary

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- 2 **ABSORPTION:** The process by which one substance is taken into and included within
3 another substance, as the absorption of water by soil or nutrients by plants.
- 4 **ACTIVE LIFE:** The period from the initial receipt of waste at a facility until certification
5 of closure is received by the cabinet.
- 6 **AERATED PILE COMPOSTING:** See Static Pile Composting.
- 7 **AEROBIC:** Having molecular oxygen as a part of the environment. Growing or
8 occurring only in the presence of molecular oxygen.
- 9 **AEROBIC COMPOSTING:** Decomposition of organic materials by microbes in the
10 presence of oxygen.
- 11 **AGRICULTURAL WASTE:** Any non-hazardous waste resulting from the production
12 and processing of on-the-farm agricultural products, including manures, pruning and
13 crop residues.
- 14 **ALTERNATIVE SYSTEM:** Consist of a sewage pretreatment unit(s), necessary site
15 modifications, waste flow modifications, and a subsurface soil absorption system using
16 other methods and technologies than a conventional or modified system to overcome
17 site limitations.
- 18 **ANAEROBIC:** The absence of molecular oxygen. Growing in the absence of molecular
19 oxygen.
- 20 **ANAEROBIC DIGESTION:** Decomposition of organic materials by microbes in the
21 absence of oxygen.
- 22 **APPLICATION:** The form approved by the Cabinet for applying for a permit, including
23 any additions, revisions or modification.
- 24 **AUTHORIZED REPRESENTATIVE:** The person responsible for the overall operation
25 of a facility or an operational unit.
- 26 **AVAILABLE WATER HOLDING CAPACITY (AWHC):** The capacity of soils to hold
27 water available for use by most plants. In addition, the difference between the moisture
28 level at field capacity and the moisture level at wilting point expressed as inches of
29 water per inch of soil depth.
- 30 **BASE FLOOD:** A flood that is equal or exceeded once in 100 years, or has a one (1)
31 percent or greater chance of occurring.
- 32 **BED ROCK:** The solid rock that underlies the soil.
- 33 **BIOLOGICAL OXYGEN DEMAND (BOD):** The demand for oxygen created by the
34 ability of a waste or wastewater to support biological activity. Measured over a set time
35 (5 days) under a specifically maintained temperature (68°F).

- 1 **BUFFER ZONE**: Area of land between the composting facility and homes or other
2 sensitive land uses, which shields these adjoining uses from the impact of the
3 operation. The buffer zone should include vegetation.
- 4 **CATION**: A positively charged ion in the soil or a solution.
- 5 **CATION EXCHANGE CAPACITY (CEC)**: The sum of the exchangeable cations a soil
6 can absorb expressed in milliequivalents per 100 grams of soil.
- 7 **CERTIFIED COMPOSTING OPERATOR**: A person who holds a valid certificate upon
8 the successful completion of an approved training course and examination that is the
9 individual responsible for ensuring compliance with all permit conditions at a
10 composting facility and who is reasonably available to the site.
- 11 **CERTIFIED LANDFARMING OPERATOR**: A person who holds a valid certificate
12 upon the successful completion of an approved training course and examination that is
13 the individual responsible for ensuring compliance with all permit conditions at a
14 landfarming facility and who is reasonably available to the site.
- 15 **CERTIFIED INSPECTOR (Health Department)**: means a specific individual who
16 has met the requirements for certification contained in KRS 211.360. (902 KAR 10:150
17 Domestic Septage Disposal Site Approval Procedures).
- 18 **CERTIFIED INSTALLER (Onsite Wastewater)**: A specific individual who has met
19 the requirements for certification contained in KRS 221.357.
- 20 **CLAY**: A soil separate consisting of particles less than 0.002 mm in equivalent
21 diameter.
- 22 **CLOSURE**: The time at which a waste treatment, storage, or disposal facility
23 permanently ceases to accept wastes.
- 24 **COMMERCIAL SOLID WASTE**: All types of solid waste generated by stores, offices,
25 restaurants, warehouses, and other service and non-manufacturing activities, excluding
26 household and industrial solid waste.
- 27 **COMPACTION**: The compressing of waste to reduce the volume. Compaction allows
28 for transport that is more efficient.
- 29 **COMPOST**: Solid waste which has undergone biological decomposition of organic
30 matter, been disinfected using composting or similar technologies, been stabilized to a
31 degree which is potentially beneficial to plant growth and which is approved for use or
32 sale as a soil amendment, artificial topsoil, growing media amendment, or similar uses.
- 33 **COMPOSTING FACILITY**: A facility that produces compost using some organic
34 materials from a waste stream.
- 35 **COMPOSTING PAD**: An area within the composting site with a surface upon which
36 the organic materials are processed.

- 1 **CONSTRUCTION PERMIT:** A formal permit issued by the Cabinet to an owner or
2 operator of a waste site or facility that authorizes commencement of site preparation
3 for waste disposal.
- 4 **CONTAMINANT:** A substance capable of polluting a primary material by contact or
5 mixture.
- 6 **CONTAMINATION:** The degradation of naturally occurring air, water, or soil quality
7 either directly or indirectly as a result of human activity.
- 8 **CONTOUR:** Growing crops in which rows and tillage operations are conducted
9 perpendicular to the land slope direction.
- 10 **CONVENTIONAL SYSTEM:** Consist of a sewage pretreatment unit(s), distribution
11 box(es) and lateral piping within rock filled trenches or beds.
- 12 **CROP ROTATION:** The sequence of crops grown on a field over a number of cropping
13 seasons.
- 14 **CUBIC YARD:** The standard measure of waste volume, which roughly assuming an
15 average rate of compaction.
- 16 **CURING:** The final stage of compost processing, after much of the readily metabolized
17 material has been decomposed, in which the compost material further stabilizes.
- 18 **DEEP INCORPORATION:** means land application by subsurface injection, trench
19 disposal, of a furrow-placement cover operation. (902 KAR 10:160 Domestic septage
20 disposal site operation).
- 21 **DENITRIFICATION:** Conversion of nitrate to nitrogen gas.
- 22 **DIGESTION:** The biological decomposition of organic mater in sludge, resulting in
23 partial gasification, liquefaction and mineralization.
- 24 **DISEASE VECTOR:** All insects, birds, rodents or other organisms capable of
25 transmitting pathogens (disease causing organisms).
- 26 **DISPOSAL:** The discharge, deposit, injection, dumping, spilling, leaking, or placing of
27 any waste into or on any land or water so that waste may enter the environment or be
28 emitted into the air or discharged into any water.
- 29 **DOMESTIC SEPTAGE:** means liquid or solid material removed from a septic tank,
30 cesspool, portable toilet, Type III marine sanitation device, or similar treatment works
31 that receives only domestic sewage. Domestic septage shall not include:
- 32 (a) Liquid or solid materials removed from a septic tank;
33 (b) Cesspool;
34 (c) Similar treatment works that receives commercial wastewater processes or
35 individual wastewater processes; or
36 (d) Grease removed from a grease trap at a restaurant of similar grease producing
37 business. (902 KAR 10:150 Domestic Septage Disposal Site Approval
38 Procedures).

- 1 **DRAINAGE CLASS:** Classifies the frequency and duration of soil saturation or partial
2 saturation with water.
- 3 **EFFLUENT:** The liquid discharge of a septic tank or other sewage treatment unit.
- 4 **EPHEMERAL STREAMS:** A stream that flows only in direct response to precipitation
5 (rain, or melting snow and ice) in the immediate watershed and has a channel bottom
6 that is always above the local water table.
- 7 **EUTROPHICATION:** The enrichment of nutrients in water leading to excessive algae
8 or plant growth, followed by death, subsequent decomposition, and depletion of oxygen
9 in the water.
- 10 **EVAPO-TRANSPIRATION:** The combined loss of water from a given area, and during
11 a specific period of time, by evaporation from the soil surface and by transpiration from
12 plants.
- 13 **FACILITY:** All contiguous land, structure, and land improvements used for the treating
14 storing, or disposing of waste.
- 15 **FIELD CAPACITY:** The moisture content of a soil, expressed as a percentage of oven
16 dry weight, after the gravitational, or free water has drained from the soil.
- 17 **FOOD CHAIN CROPS:** Includes tobacco, crops grown for human consumption, and
18 crops grown for feed for animals whose products are consumed by humans.
- 19 **FORCE MAIN:** A pipe through which a liquid is pumped under pressure.
- 20 **FORMAL PERMIT:** A permit issued by the Cabinet for waste facility operations after
21 review of the designated application form and completion of requirements by the
22 applicant.
- 23 **FRAGIPAN:** A restrictive soil layer that is extremely dense and compact but is not
24 cemented or high in clay content.
- 25 **FRICITION HEAD:** Energy lost due to friction between the fluid and the walls of the
26 pipe.
- 27 **FRONT-END LOADER:** A tractor or other vehicle with power-driven loading equipment
28 at the front. This equipment is sometime referred to as a bucket loader.
- 29 **GENERATOR:** Any person, by site, whose act or process produces waste.
- 30 **GRAVEL:** An angular or rounded rock fragment up to three (3) inches in diameter.
- 31 **GREASE:** is defined pursuant to KRS 211.970 and shall not apply to mineral-based oils
32 or greases. (902 KAR 10:150 Domestic Septage Disposal Site Approval Procedures).
- 33 **GRINDER:** A mechanical device used to breakup waste materials into smaller pieces.
34 Grinding devices include hammermills, shears, drum pulverizers, wet pulpers, and rasp
35 mills.

- 1 **GROUNDWATER:** Water contained in the zone of perennial saturation (phreatic zone).
2 It is differentiated from water held in the soil in chemical or electrostatic bonds in the
3 perennially unsaturated zone.
- 4 **HYDRAULIC CONDUCTIVITY:** A quantitative measure of the rate of water
5 movement in soil.
- 6 **HEAVY METALS:** Metallic elements with atomic weights greater than sodium (23) such
7 as lead, mercury, cadmium, and zinc that tend to be toxic to humans, plants, and
8 animals at relatively low concentration and tend to bioaccumulate.
- 9 **HOUSEHOLD SOLID WASTE:** Solid waste, including garbage and trash generated by
10 single and multiple family residences, hotels, motels, bunkhouses, ranger stations, crew
11 quarters and recreational areas such as picnic areas, parks and campgrounds.
- 12 **IMMOBILIZATION:** Conversion of a chemical element from the inorganic form to
13 organic form by bacteria, plants or animals; or the retention on the exchange complex
14 of charged ions.
- 15 **INDUSTRIAL SOLID WASTE:** Solid waste generated by manufacturing or industrial
16 processes that is not a hazardous waste or a special waste as designated by KRS
17 224.868, including, but not limited to, waste resulting from the following manufacturing
18 processes: electric power generation; fertilizer or agricultural chemicals; food and
19 related products or by-products; inorganic chemicals; iron and steel manufacturing;
20 leather and leather products; nonferrous metals manufacturing/foundries; organic
21 chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and
22 miscellaneous plastic products; stone, glass, clay, and concrete products; textile
23 manufacturing; transportation equipment; and water treatment.
- 24 **INORGANIC:** Solid matter in which there are no carbon-to-carbon bonds, such as
25 minerals, which will not undergo biological decomposition.
- 26 **INTERNAL SOIL DRAINAGE:** The downward movement of water through the soil
27 profile.
- 28 **KARST TERRAIN:** A type of topography where limestone is present and is
29 characterized by naturally occurring closed depressions or sinkholes, caves, or disrupted
30 surface drainage, and has well developed underground solution channels formed by
31 limestone dissolution by moving, underground water.
- 32 **LAND APPLICATION:** means:
- 33 (a) The spraying or spreading of domestic septage or domestic septage mixed with
34 grease at a ratio of three (3) parts domestic septage to one (1) part grease onto
35 the land surface;
- 36 (b) The injection of domestic septage below the land surface; or
- 37 (c) The incorporation of domestic septage into the soil. (902 KAR 10:150 Domestic
38 Septage Disposal Site Approval Procedures).

- 1 **LANDFARMING:** The application of waste on or just below the land surface; will not
2 alter the land topography, and will not disturb the soil below three (3) feet from the
3 surface.
- 4 **LANDSCAPE POSITION:** The location of the proposed onsite wastewater treatment
5 system area relative to the surrounding topographic relief of the land surface.
- 6 **LATERAL FIELD:** The area in which the subsurface soil absorption system is installed
7 and is a general term for the system itself.
- 8 **LEACHATE:** Any liquid including suspended or dissolved components in the liquid that
9 has percolated through or drained from waste.
- 10 **LEAVES:** Seasonal deposition from deciduous or coniferous trees, shrubs, bushes and
11 other plants contained in yard waste.
- 12 **LEGUME:** A crop that forms a specific association with bacteria that are capable of
13 transforming nitrogen gas into organic compounds that can provide nitrogen
14 requirements of the plant.
- 15 **MANIFOLD:** A pipe fitting with numerous branches to convey fluids between a large
16 pipe and several smaller pipes.
- 17 **MINERALIZATION:** The biochemical conversion of nitrogen from the organic form to
18 the inorganic form.
- 19 **MINIMUM TILLAGE:** Soil preparation for seeding a crop while leaving more than 30
20 percent of the land surface covered by crop residue.
- 21 **MONITORING:** The act of systematically inspecting and collecting data on operational
22 parameters or on the quality of the air, soil, groundwater, or surface water.
- 23 **MUNICIPAL SOLID WASTE (MSW):** Garbage, refuse, trash and other solid waste
24 from residential, commercial and community activities.
- 25 **NITRIFICATION:** The biochemical conversion of ammonium nitrogen to nitrate
26 nitrogen.
- 27 **NON-COMPOSTABLE:** Materials that will not decompose biologically or whose
28 decomposition products are toxic.
- 29 **N:P:K RATIO:** Refers to the ratio of nitrogen to phosphorus to potassium in a compost
30 product.
- 31 **OPERATING POINT:** The point of intersection of the pump performance curve and
32 the system head curve.
- 33 **OPERATOR:** means a person operating or owning a domestic septage disposal,
34 treatment, or recycling site, including their authorized agent. (902 KAR 10:150
35 Domestic Septage Disposal Site Approval Procedures).
- 36 **ORGANIC MATTER (SOIL):** The relatively resistant fraction of residues and other
37 organic products that forms during biological decomposition in the soil.

- 1 **ORGANIC WASTE:** Waste composed of materials that contain carbon-to-carbon bonds
2 and are biodegradable, including paper, wood, food waste, and yard waste.
- 3 **PATHOGENS:** Organisms capable of producing infection or disease often found in
4 waste materials. The high temperature sustained in the composting process reduces
5 pathogens.
- 6 **PED:** An aggregate of individual grains of sand, silt, and clay into a single unit of soil
7 structure.
- 8 **PERCOLATION:** Downward movement of water through the pores or spaces in rock,
9 soils or filtering media.
- 10 **PERMEABILITY:** The rate that water moves through the soil.
- 11 **PERMITTEE:** Any person holding a valid permit issued by the Cabinet to manage,
12 treat, store, or dispose of waste.
- 13 **pH:** The measure of how acidic (pH less than 7) or basic (pH above 7) a materials is. A
14 pH of 7 is considered neutral.
- 15 **POLLUTANT:** Means and includes dredged spoil, solid, waste, incinerator residue,
16 sewage, sewage sludge, garbage, chemical, biological or radioactive materials, heat,
17 wrecked or discarded equipment, rock, sand, soil, industrial, municipal or agricultural
18 waste, and any substance resulting from the development, processing, or recovery of
19 any natural resource.
- 20 **PORES:** Spaces, or voids between mineral grains and aggregates in the soil.
- 21 **PROPOSED PERMIT:** Document prepared by the Cabinet indicating the Cabinet's
22 tentative decision to issue, deny, modify, revoke, or terminate a permit.
- 23 **PUBLICLY OWNED TREATMENT WORKS (POTW):** Any device or system used in
24 the treatment (including recycling and recovery) of municipal sewage or industrial liquid
25 wastes which is owned by the Commonwealth or a political subdivision of the
26 Commonwealth.
- 27 **PUMP PERFORMANCE CURVE:** A curve, supplied by a pump manufacturer, which
28 gives the performance and operating characteristics of a given pump.
- 29 **PUMP RUNNING TIME:** The time (in minutes) the pump runs for each dose cycle. It
30 is calculated by dividing the volume of dose required (in gallons) by the pumping rate
31 (in gpm).
- 32 **PUTRESCIBLE:** Susceptible to rapid decomposition by bacteria, fungi, or oxidation
33 sufficient to cause nuisances such as odors, gases, or other offensive conditions.
- 34 **RECYCLING:** Any process by which materials that would otherwise become solid waste
35 are collected, separated, or processed and reused to use in the form of raw materials or
36 products including refuse – derived fuel.
- 37 **REPAIR:** Minor replacement or reconstruction of a component of an onsite wastewater
38 treatment system.

- 1 **RESIDUAL NITROGEN:** Nitrogen that remains in the soil after crop harvest that is
2 either immediately available or will become available to succeeding crops.
- 3 **RESOURCE RECOVERY:** A term used to describe the extraction of economically useful
4 materials and/or energy from solid waste. Often refers to the burning of waste for
5 energy.
- 6 **RESTRICTIVE HORIZON:** means a soil horizon that is relatively imperious to the
7 downward movement of water, grease, domestic septage, or mixture because of its
8 cemented, compacted or structural condition. (902 KAR 10:150 Domestic Septage
9 Disposal Site Approval Procedures).
- 10 **RESTRICTIVE LAYER:** Any soil horizon that is slowly or very slowly permeable and
11 underlies more permeable soil horizons.
- 12 **RUN-OFF:** Any rainwater, leachate, or other liquid that drains overland or into the
13 groundwater from any part of a facility.
- 14 **RUNON:** Any rainwater, leachate, or other liquid that drains onto any part of the
15 facility.
- 16 **SAND:** A soil separate consisting of particles between 0.05 mm and 0.002 mm in
17 diameter.
- 18 **SATURATED ZONE:** That part of the earth's crust containing groundwater in which all
19 voids, large and small, are filled with liquid.
- 20 **SCREENING:** The process of passing compost through a screen or sieve to remove
21 large organic or inorganic materials and improve the consistency and quality of the end
22 product.
- 23 **SHALLOW INCORPORATION:** means land application by surface spreading followed
24 by plowing, disking, or harrowing. (902 KAR 10:160 Domestic septage disposal site
25 operation).
- 26 **SHREDDER:** "See Grinder".
- 27 **SHRINK/SWELL POTENTIAL:** The Tendency of a soil to change volume due to the
28 gain or loss of moisture with the rating in proportion to the relative change based on a
29 given volume of soil.
- 30 **SHUT-OFF HEAD:** The head against which a pump will cease to operate.
- 31 **SILT:** A soil separate consisting of particles between 0.05 mm and 0.002 mm in
32 diameter.
- 33 **SLOPE:** Deviation of a place surface from the horizontal.
- 34 **SLUDGE:** Any soil, semi-solid, or liquid waste generated from a municipal, commercial,
35 or industrial wastewater treatment plant, water supply treatment plant, or air pollution
36 control facility exclusive of the treated effluent from a wastewater treatment plant or
37 any other waste having similar characteristics and effects.

- 1 **SOIL:** A natural body that develops in profile form in response to forces of climate and
2 organisms acting on a parent material in a specific landscape position over a long
3 period of time.
- 4 **SOIL AMENDMENT/SOIL CONDITIONER:** Means any substance that is intended to
5 improve the physical characteristics of the soil, except commercial fertilizers,
6 agricultural liming materials, unmanipulated animal manures, pesticides, and other
7 materials exempted by regulation.
- 8 **SOIL HORIZON:** A layer of soil that is approximately parallel to the earth's surface
9 whose descriptive characteristics are rather distinct from layers above or below.
- 10 **SOIL SLOPE:** The inclination of the land surface determined as feet of rise from the
11 level per 100 feet of distance.
- 12 **SOIL STRUCTURE:** The combinations or arrangement of individual soil particles or
13 grains of sand, silt, and clay into larger definable units (aggregates or peds) which are
14 characterized and classified on the basis of size, shape, and degree of distinctness.
- 15 **SOIL TEXTURE:** The relative amounts of sand, silts, and clay that make up a soil.
- 16 **SOLID WASTE:** Any garbage, refuse, sludge, and other discarded material, including
17 solid, liquid, semi-solid, or contained gaseous material resulting from industrial,
18 commercial, mining (excluding coal mining waste, coal mining by-products, refuse and
19 overburden), agricultural operations, and from community activities, but does not
20 include those materials including, but not limited to sand, soil, rock, gravel, or bridge
21 debris extracted as part of a public road construction project funded wholly or in part
22 with state funds, recovered materials, special wastes as designated by KRS 224.868,
23 solid or dissolved material in domestic sewage, manure, crops, or crop residue, or a
24 combination thereof which are placed on the soil for return to the soil as fertilizers or
25 soil conditioners, or solid or dissolved material in irrigation return flows or industrial
26 discharges which are point sources subject to permits under Section 402 of the Federal
27 Water Pollution Control Act, as amended (86 Stat. 880), or source, special nuclear, or
28 by-product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat.
29 923).
- 30 **SPECIAL WASTE:** Those materials of high volume and low hazard that include but are
31 not limited to mining waste, utility wastes (fly ash, bottom ash, scrubber sludge),
32 sludge from water treatment facilities and wastewater treatment facilities, cement kiln
33 dust, gas and oil drilling mud, and oil production brines. Other waste may be
34 designated special waste by the cabinet.
- 35 **STATIC HEAD:** The elevation difference between the pump and the point of discharge
36 in feet.
- 37 **STATIC PILE COMPOSTING:** A method of composting in which oxygen and
38 temperature levels are mechanically controlled by passive or forced aeration.
- 39 **SUBSTRATE:** The organic material, on which the decomposing microorganisms live
40 and feed.

- 1 **SURFACE IMPOUNDMENT:** A whole or partial facility which may be a natural
2 topographic depression, manmade excavation, or diked area formed primarily of
3 earthen materials and designed to hold liquid wastes or the free liquids from wastes
4 which is not an injection well.
- 5 **SYSTEM HEAD CURVE:** A curve that graphically shows the relationship between the
6 flow and the hydraulic losses in a given piping system.
- 7 **TILLAGE PAN:** A compact, dense layer of soil at the base of the surface layer of a
8 cultivated soil.
- 9 **TOPSOIL:** The layer of soil moved in cultivation.
- 10 **TOTAL DYNAMIC HEAD:** Sum of the static head and friction head.
- 11 **TRAFFIC PAN:** A compacted layer beneath the soil surface of a cultivated soil resulting
12 from the cumulative effects over time of driving over the soil.
- 13 **TREATMENT ZONE:** A soil area of the unsaturated zone of a land treatment unit
14 within which wastes are degraded, decomposed, transformed, or immobilized.
- 15 **UNSATURATED ZONE:** Water movement through soil when the large pores are filled
16 with air.
- 17 **VARIANCE:** A waive of certain specified requirements of the onsite regulation, solid
18 waste regulations etc. granted by the specific regulatory cabinet after consideration of
19 documented evidence that the granting of the waiver cannot reasonable be expected to
20 result in the contamination of surface water, groundwater, land or air or creating a
21 health hazard through the release of pollutants or otherwise create a public health
22 nuisance.
- 23 **VOLUME REDUCTION:** The processing of waste materials to decrease the amount of
24 space they occupy. Compaction, shredding, composting and burning are all methods of
25 volume reduction.
- 26 **WATER TABLE:** means the zone of soil saturation by groundwater. (902 KAR 10:150
27 Domestic septage disposal site approval procedures) or that level in saturated soil
28 where the hydraulic pressure is zero.
- 29 **WILTING POINT:** Moisture content of a soil at which plants can no longer extract
30 water.
- 31 **WINDROW:** An elongated compost pile, usually about 6 to 12 feet high and up to
32 hundreds of feet long.
- 33 **WINDROW COMPOSTING:** The composting of organic materials in a series of
34 elongated piles. The windrows are turned periodically to aerate and mix the waste
35 materials to speed up decomposition and reduce odor.
- 36 **YARD WASTE:** Debris such as grass clippings, leaves, garden waste, brush, and trees.
- 37 **ZONE OF INCORPORATION:** The depth to which the soil on a landfarm is plowed,
38 tilled, or otherwise designed to receive waste.