

Glossary

Aeration - A process that forces intimate contact between the atmosphere and a liquid to add air (oxygen).

Aerator - A device used to supply air to manure, wastewater, or sludge in a lagoon or other storage/treatment facility.

Aerobic - Includes air (oxygen).

Aerobic bacteria - Bacteria that grow only in the presence of free, molecular oxygen (oxygen in the gas form).

Aerobic decomposition - The breakdown of organic matter by bacteria and other microorganisms that use oxygen.

Aerobic lagoon - Manure treatment structure that requires oxygen and aerobic bacteria to decompose the manure.

Agitation - The turbulent mixing of liquids and slurries to bring settled solids back into suspension and to make the solids content in the material more uniform.

Algae - Primitive one-celled or multicellular plants, usually aquatic, capable of synthesizing their foodstuffs by photosynthesis. They form the base of the aquatic food chain. Many kinds of algae are microscopic. When environmental conditions are right for their rapid growth, algae can create water quality problems.

Ammonia - A gaseous form of nitrogen.

Ammonium - A form of nitrogen that is available to plants. It is found in fertilizer, and is one of the first forms of nitrogen released as crop residues and organic fertilizers decay.

Ammonification - A biochemical process in which organic nitrogen is converted to ammoniacal nitrogen (NH_4^+).

Anaerobic - Without air. A situation in which oxygen is absent from the environment. This commonly happens in waterlogged conditions.

Anaerobic bacteria - Bacteria that can function and grow in the absence of molecular oxygen. Facultative anaerobes can be active in the presence of dissolved oxygen, but do not require it.

Anaerobic decomposition - Chemical breakdown of organic material due to the metabolism of anaerobic microorganisms in the absence of free oxygen.

Anaerobic food chain - A naturally-occurring multi-step anaerobic process mediated by diverse consortiums of Bacteria and Archea where complex polymers are processed to acetate, methanol, methylamines, carbon dioxide, and formate which then can be reduced to methane gas.

Anaerobic digestion - Conversion of organic matter to gases such as carbon dioxide (CO₂) and methane (CH₄) under controlled conditions in the absence of oxygen.

Anaerobic photosynthetic bacteria - Bacteria able to use light as an energy source. Groups of purple and green bacteria that are important in swine waste lagoon ecology can only grow phototrophically under anaerobic conditions because pigment synthesis in these organisms is repressed by oxygen.

Animal unit - The equivalent of 1,000 pounds of live animal weight; thus, one 1,200 pound dairy cow would represent 1.2 animal units, and one 200 pound hog would be 0.2 animal units.

Aquifer - A soil or rock formation that contains ground water.

Bacteria - Microscopic organisms that live in soil, water, and organic matter. They help organic matter to decay through a variety of biological decomposition processes.

Berm - An elevated mound or dam constructed of compacted soil; used to contain water or wastewater.

Bin composter - Compost facility which has an impervious base and walls to contain the composting material and may include a roof.

Biochemical oxygen demand (BOD) - The quantity of oxygen used by bacteria in the breakdown of organic matter in a specified time, at a specified temperature, under specified aerobic conditions. Normally measured at 68 °F over a 5-day period to produce a value referred to as "BOD₅".

Bio-filter composting - Composting conducted under conditions where the animal degradation occurs in an anaerobic zone surrounded by an aerobic zone which acts to filter the gaseous exchange occurring during degradation.

Biofiltration - The use of microorganisms present on filter or substrate material for the removal of environmentally undesirable compounds from waste air emission streams.

Biogas - A mixture of gases consisting primarily of methane and carbon dioxide that is produced by anaerobic digestion of organic materials. Biogas can be used as a fuel.

Biogenic origin - A substance or gas released or derived from a living or biological source.

Biological control - Pest control by living organisms such as predators, parasites, and disease producing organisms.

Biological oxidation - The process in which living organisms convert organic matter into a less complex or mineral form.

Biological wastewater treatment - Wastewater treatment in which bacterial or biochemical action is managed to stabilize or oxidize the unstable organic matter present. Facilities used include - aerated lagoons, aerobic lagoons, anaerobic lagoons, anaerobic digesters, aerobic digesters, and oxidation ditches.

Biomass - Organic matter that is produced by photosynthetic conversion of solar energy.

Bio-security - Protection of life. Practices which prevent or eliminate life threatening situations.

Bulking agent - Material added to compost to decrease the bulk density, promote aeration and/or serve as a carbon source. Material with high carbon contents such as straw, sawdust, peanut hulls, etc. may be used as bulking agents.

Buffer strip - (See grass filter)

Carbon-nitrogen ratio (C:N) - The weight ratio of organic carbon to total nitrogen in an organic material.

Carbon source - Organic material added to the compost mixture to provide carbon in the appropriate ratio with nitrogen, allowing the composting process to proceed effectively. In many cases, synonymous with bulking agent.

Check dam - A runoff control structure that reduces the velocity of the runoff to prevent erosion and allow suspended solids to settle out upstream of the structure. The structure may consist of rock, expanded metal, narrow wood slots, etc.

Cleanout - Access point to sewer line to enable removal of settled solids or other blockages.

Coagulation - In water and wastewater treatment, the agglomeration of suspended colloidal particles and/or bacterial cells by the addition of a floc-forming chemical or by biological processes. Coagulation is performed to enhance settling of fine suspended particles. (Also see flocculation)

Coliform bacteria - Bacteria common to the intestines of humans and animals. Their presence in water indicates that it may be contaminated with other disease-causing organisms.

Composting - Biological degradation of organic solids under aerobic conditions to a relatively stable, humus-like material called compost.

Conservation district - A subdivision of state government at the local level that assists land users in solving land, water, and other natural resource problems.

Conservation plan - A voluntary agreement between a Conservation District and a cooperating landowner about how he or she plans to use the land and suggesting ways to deal with identified problems.

Conservation practice - A soil and water conservation technique or measure that follows standards and specifications. It is usually used in a system with other conservation practices to get the best results.

Contaminant - Natural or man-made pollutants such as nutrients, chemicals, sediments or bacteria that can make surface waters and ground water unfit for use.

Constructed wetlands - A man-made aquatic ecosystem containing hydrophytic plants designed and managed to treat wastewater.

Cooperative Extension Service - Information and education service staffed with experts in a wide range of subjects including conservation, environment, soils, and plant and animal production.

Cover crop - A crop grown mainly to protect the soil and for nutrient scavenging between time periods of regular crop production.

Crop residue - The portion of a plant or crop left in the field after harvest.

Cultural control - Using non-chemical methods to control a crop pest, including mechanical cultivation for weed control, crop rotation to avoid buildup of disease, and plant variety or hybrid selection for resistance to nematodes.

Decomposition - A process through which manure, plant residues, or other complex materials break down into simpler substances because of physical, chemical, or biological processes.

Denitrification - The reduction of nitrate or nitrite to molecular nitrogen or nitrous oxide gas by microbial activity.

Design storm - A rainfall event of a given intensity and duration that has a probability based on historical rainfall of occurring in a given period of time. For animal waste systems, a 25 year, 24 hour storm event must be used for planning.

Detention time - The amount of time wastes are subjected to a stabilization process or held in a settling basin or storage.

Dewatering basin - (See sedimentation basin)

Digestion - As a waste treatment process, refers to the breakdown of organic matter in a water solution or suspension into simpler or more biologically stable compounds, or both. In anaerobic digestion organic matter may be decomposed to soluble organic acids or alcohols, then converted to gases such as methane and carbon dioxide.

Dissolved oxygen (DO) - Molecular oxygen gas dissolved in water, wastewater, or other liquid. Dissolved oxygen concentration is usually expressed in terms of milligrams per liter, parts per million, or percent saturation.

Drying - Removal of water from manure, making it more solid.

Earthen storage basin - Earthen storage structure intended for the long-term storage of liquid manure until it can be field applied. May be entirely below ground, or part in ground and part above ground using earthen berms.

Economic threshold - How serious a pest infestation has to be before you need to control it to avoid economic loss that is greater than the cost of the control measure.

Economically feasible - When the long-term monetary and social returns equal or exceed the investment and maintenance costs.

Ecosystem - An interconnected community of living things, including humans, and the physical environment where they live and interact.

Effluent - Water, wastewater, or other liquid being discharged from a reservoir, basin, or treatment facility. Effluent can be treated or untreated.

Emergency spillway - Shallow, sodded spillway, intended to protect against overtopping and catastrophic failure of a lagoon or earthen storage in the event of an unusually large rainfall that exceeds design requirements.

Ephemeral gully - A small gully that can be removed by tillage.

Erosion - The process of water or wind moving soil from one location to another. It occurs naturally from weather or runoff, but is often made worse by human activities.

Escherichia coli - One of the species of Coliform bacteria found in the intestinal tract of warm-blooded animals. Its presence is considered indicative of fresh fecal contamination.

Estuary - An area where fresh water meets salt water. Examples include bays, salt marshes, and mouths of rivers.

Eutrophication - The explosive growth of aquatic plants that are exposed to high concentrations of nutrients such as nitrogen and phosphorus.

Evapotranspiration - The combined process of evaporation of water and the loss of water from plants.

Evaporation - The process by which water is changed from a liquid into a vapor. Evaporation is part of the hydrologic cycle.

Evaporation rate - The quantity of water evaporated from a given water surface per unit of time. It is usually expressed in inches per day or inches per month.

Facultative bacteria - Bacteria that can function in aerobic or anaerobic environments.

Feedlot - A confined land area, usually devoid of vegetation, where the animals are dependent on an outside source for their food.

Fertilizer - Any organic or inorganic material that is added to soil to provide nutrients for plant growth.

Fertilizer value - An estimate of the value of commercial fertilizer elements (usually N, P, K) that can be replaced by manure or other organic waste material. Usually expressed as dollars per ton of manure or quantity of nutrients per ton of manure.

Field capacity - The moisture content of soil that has drained by gravity after having been wetted thoroughly with water.

Field scouting - Regularly and systematically checking agricultural fields for pests.

Finished compost - End product material which has undergone both primary and secondary composting.

Fixed solids - The portion of the total solids remaining as an ash or residue after a solids sample is heated to approximately 1000 °F for at least one hour.

Flocculation - Agglomeration of colloidal materials during water or wastewater treatment.

Flushing system - A system that collects and transports or moves waste material with the use of water or wastewater such as in washing of pens and flushing manure from shallow manure collection gutters located under slotted floor animal pens.

Freeboard - Additional capacity in a storage / treatment structure, designed to provide a safety margin of storage in the event that a rainfall occurs when the structure is full. The design storm is normally a 25-year storm of 24 hours duration.

Friable - Capable of being easily broken up. Usually refers to soil structure.

Geotextile fabric - A synthetic cloth resistant to biodegradation that allows water to easily pass through it.

Grass filter - An area with grass cover where runoff is treated by settling and filtering of solids, attachment to the vegetation, and by bacteria residing at the soil-water interface. Runoff may also be reduced by infiltration into the soil.

Gravity flow - The movement of manure or other waste products by gravity such as from one location to another location within an agricultural waste management system.

Gravity overflow system - Manure collection system that relies on the plastic flow properties of liquid manure to move the material to a low overflow at one end of a shallow gutter.

Grazing capacity - The maximum stocking rate possible without causing damage to vegetation, soil, or water quality.

Ground cover - Grasses or other plants grown to prevent erosion.

Ground water - All water below the surface of the land. Ground water usually refers to subsurface water in a saturated zone.

Gully - A channel on the landscape created by uncontrolled running water.

Hairpin gutter - A U-shaped shallow pit located under a slotted floor, with drains located at the end of each leg of the U. Manure is drained after it has accumulated to the desired level. Drain entire gutter from one leg one time and from the other leg the next time.

Herbicide - A chemical used to destroy plants, especially weeds.

Holding pond - An earthen facility constructed to store runoff water and other wastewater or semi-solid slurry or liquid manure until such time as the contents may be recycled on land.

Humus - The dark, carbon-rich, relatively stable residue resulting from the aerobic decomposition of organic matter. The term is often used synonymously with soil organic matter.

Hydric soil - Soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part. They are part of the criteria for identifying wetlands.

Hydrophytic vegetation - Plants that grow in water or have a high tolerance for wet conditions. They are part of the criteria for identifying wetlands.

Hydrologic cycle - The life cycle of water. During this process, surface water evaporates from the sun's heat and becomes water vapor in the atmosphere. As it cools and condenses, moisture falls back to the earth's surface as rain or snow and begins the cycle again.

Hypersensitivity - Abnormally or excessively sensitive reaction to a stimulus. Increased response that may be inappropriate to the level of stimulus.

Impermeable - Having a texture that does not permit water or air to flow through easily.

Incineration - The rapid burning of solids within a furnace.

Infiltration - The movement of water into soil.

Infiltration rate - The rate at which water enters the soil or other porous material under a given condition, expressed as depth of water per unit time, usually in inches per hour.

Influent - Water, wastewater, or other liquid flowing into a reservoir, basin, or treatment facility.

Inoculum - Living organisms or an amount of material containing living organisms (such as bacteria or other microorganisms) that is added to initiate or accelerate a biological process, i.e., biological seeding.

Integrated pest management (IPM) - A system of measures that uses all available methods to control pests in an effective, economic, and environmentally sound way. It does not eliminate pesticides, but uses them only when pest populations are not controlled by other methods.

Lagoon - An earthen structure used for the biological treatment of manure. The biological treatment can be aerobic, artificially aerated, anaerobic or facultative depending on the design, loading rate, geographical location and type of organisms present.

Landfill - A burial site on land for waste material.

Leachate - A liquid containing decomposed wastes, bacteria, and other substances that can seep from waste storage areas.

Leaching - (1) The movement of soluble constituents such as nitrates or chlorides in water through soil via gravity. (2) The disposal of a liquid through a non-watertight artificial structure, conduit, or porous material by downward or lateral drainage, or both, into the surrounding permeable soil, as in a septic system and infiltration field.

Loading rate - The quantity of material added per unit volume per unit time or unit area per unit time.

Manure - The fecal and urinary excretion of livestock. This material may also contain bedding, spilled feed, water or soil. It may also include wastes not associated with livestock excreta, such as hair, skin, or other debris. Manure can be categorized based on solids and moisture content. The transition from one category to another (liquid to semi-solid to solid) is not sharply defined. The transition does not depend on percent solids alone but is affected by type of livestock manure and livestock feed diet, type and amount of bedding, feed spillage, and other residues in the manure.

Liquid manure (slurry)- Manure that by its nature, or after being diluted by water, can be pumped easily. Normally fibrous material such as chopped straw or waste hay is not present. The total solids content typically varies from around 2% to over 10%. Liquid manure can be handled with vacuum or centrifugal manure pumps and other liquid handling equipment.

Semi-solid manure - Manure that has had some bedding added or has received sufficient air drying to raise the solids content such that it will stack but has a lower profile than solid manure, and seepage may collect around the outer edge. It may be handled with a bucket-type front-end loader. Manure removed from heavily stocked outside paved lots in wet weather would likely be semi-solid manure.

Solid manure - Manure that has had sufficient bedding or soil added, or has received sufficient air drying, to raise the solids content to where it will stack with little or no seepage. It is best handled with a fronted loader.

Manure storage - A storage facility to contain manure for some period of time prior to its ultimate utilization. Usually classified by type and form of manure stored and/or construction of the storage, e.g., above or below -round liquid manure tank, earthen storage basin, solid manure storage.

Manure tank - A fabricated structure with vertical sidewalls and an impervious floor constructed to store semi-solid, slurry, or liquid manure. The tank may be located either in-ground or aboveground. The in-ground tank is usually constructed of concrete. The aboveground tank is usually constructed of concrete or steel. Both usually contain provisions for agitation and pumping.

Mesophilic bacteria - Bacteria that achieve their optimum digestion of organic material over the temperature range between 50 and 105°F.

Microorganisms - Microscopic plants or animals, invisible or barely visible to the naked eye. Examples are algae, bacteria, fungi, protozoa, and viruses.

Mulch - Any material such as straw, sawdust, leaves, or plastic film that is spread on the soil surface. It is generally used to conserve soil moisture, control temperature, prevent surface compaction or crusting, reduce runoff and erosion, or control weeds.

Nitrification - The biological oxidation of ammonia (NH_3) and ammonium (NH_4^+) to nitrite (NO_2) then to nitrate (NO_3^-).

Odorant - Any odorous substance; such as a chemical compound that has a characteristic odor.

Odors - The perception of smell, referring to the sensation.

Odor threshold - The lowest concentration of an odor in air that can be detected by the human sense of smell.

Olfactometer - An instrument using human olfactory senses to measure the threshold dilution level of an odor-containing air sample.

Olfactory receptors - Cells of the nasal cavity associated with the sense of smell.

Organic - Chemical compounds or substances that contain carbon.

Organic matter - Chemical substances of animal or vegetable origin, consisting of hydrocarbons and their derivatives.

Oxidation pond - An earthen pond or lagoon used for the biological oxidation of organic material. It may be naturally or mechanically aerated.

Part per million (ppm); billion (ppb); trillion (ppt);quadrillion (ppq)

- A unit of proportion that describes concentrations of pollutants and other substances in water.

1 ppm equals 1 drop in 21.7 gallons

1 ppb equals 1 drop in 21,700 gallons

1 ppt equals 1 drop in 21,700,000 gallons

1 ppq equals 1 drop in 21,700,000,000 gallons

Pathogen - Any organism capable of producing disease or infection.

Percolation rate - The rate of downward movement of water by gravity, through the small cracks or openings within rock, soil, or filtering media.

Permeability - The property of a material that permits movement of water downward by gravitational forces when saturated.

Pest - Any organism that interferes with human health, convenience, comfort, or profit.

Pesticide - A chemical agent used to control specific plants or animals(e.g., herbicide, insecticide, fungicide, and nematocide).

pH - A measure of acidity and alkalinity on a scale from 1 to 14. A pH of 7.0 is neutral. Low pH values indicate acidity; higher pH values indicate alkalinity.

Pheromone - A chemical substance that animals give off which sends information to other members of that animal's species.

Phosphorous - An essential plant nutrient, and often the one that limits the growth of aquatic plants and algae.

Photosynthesis - The process by which green plants convert carbon dioxide and water into simple sugar and oxygen. Chlorophyll and sunlight are essential to this process.

Point source pollution - Contaminants that enter the environment from a fixed pollution source, such as a discharge pipe.

Pollutant - Any introduced substance, whether natural or man-made, that impairs the use of air, water, or land resources.

Pollution - The presence in the environment of a substance (pollutant) in such quantities that it impairs the body's designated use or renders it offensive to the senses of sight, taste, or smell.

Porosity - The total volume of soil, sediment, or rock that consists of void space.

Primary composting - Initial stage of the composting process where compost materials (carcasses, bulking agents, carbon sources, manure, etc.) undergo the primary degradation process. Time interval is dependent upon the rate of degradation and may be as little as 2 weeks or as long as 3 months.

Recycled water - Effluent from which some solids have been removed and the water reused.

Recycling - Removing resources from the waste stream, and reusing them.

Resource management system - A combination of conservation practices that protects a resource base. It allows tolerable soil loss, while maintaining acceptable water quality.

Riprap - A layer of stones or rock placed on an embankment to prevent soil erosion.

Rill erosion - An erosion process in which many small, shallow channels form. It occurs mainly on recently cultivated soils.

Rinsate - The water used to rinse a container. It includes any residues or pollutants rinsed from the container.

Runoff - Rainfall or irrigation water that flows across the land and eventually into streams. Runoff may pick up pollutants from the land and carry them to receiving waters.

Saturated zone - The part of the soil profile where all soil pores, voids, and cavities are filled with water.

Secondary composting - Passive process following movement, mixing and aeration of the compost mixture from the primary stage to a secondary location. Compost mixture undergoes additional degradation to complete the compost process. Time interval normally ranges from 4 weeks to 3 months, depending upon the type of facility.

Sediment - Solid particles of eroded soil, rock, or biological materials that have been deposited by water.

Sedimentation basin - A concrete or earthen structure in which wastewater flow velocity is reduced to permit suspended solids to settle by gravity. The basin may either be designed to overflow, or for influent wastewater to slowly flow away, leaving behind much of its solids.

Seepage - The loss of liquid by infiltration from earthen manure storage or treatment structures. It is generally expressed in terms of flow volume per unit time.

Settleable solids - That matter in wastewater that will not stay in suspension during a preselected settling period, such as one hour.

Settling basin - (See sedimentation basin)

Sewer - Buried pipe that is used to convey wastewater. Sewers can either flow by gravity or by pressure, in the case of pumped wastewater.

Sheet erosion - The removal of a thin, fairly uniform layer of topsoil by runoff water.

Sheet flow - Runoff water that flows uniformly over the soil surface.

Slotted floor - The floor surface of a building that has open spaces or slots to allow manure and other waste material to pass through the floor.

Sludge - The precipitate or settled solids from sedimentation, coagulation, or treatment of wastewater.

Soil - The unconsolidated mineral and organic matter that is a natural medium for the growth of plants.

Soil horizon - A layer of soil with similar properties throughout.

Soil permeability - The ease with which gases or water penetrate the soil.

Soil phase - A subdivision of a soil series. It has slightly different properties and therefore behaves differently.

Soil profile - A vertical section of soil. Starting at the surface, it shows the sequence of individual layers (or *horizons*).

Soil series - The basic unit of soil classification. It consists of soils that are essentially alike in all major attributes.

Solids-liquid separation - The process of separating suspended solids from a liquid by trapping the particles on a mechanical screen or sieve, by centrifugation or by sedimentation.

Solid manure storage - A storage facility in which accumulations of solid manure are stored before subsequent handling and field spreading. Manure is generally stacked on a concrete slab ("stacking slab") but may also be simply stacked on the soil for short-term storage. Liquids, including urine and precipitation, may or may not drain away to a collection unit.

Solids content - (1) The sum of the dissolved and suspended constituents in wastewater. (2) The residue remaining after a sample of wastewater or semi-solid material is evaporated and the residue is dried at a specified temperature (usually 217 °F for 24 hours); usually stated in terms of milligrams per liter (mg/l) or percent solids. Each 1 mg/l is equivalent to one part-per-million (1 ppm). Each 10,000 mg/l is approximately 1% solids.

Static pile composter - Similar to windrow composter, but on a smaller scale. Volume of compost generated in a given time is not large enough to need long rows, resulting in formation of piles rather than rows.

Supernatant - The liquid standing above a sediment or precipitate after settling or centrifuging.

Suspended solids - Solids that are in water, wastewater, or other liquids, and that can largely be removed by filtering or by centrifuging

Surface layer - The soil depth that can be disturbed by tillage, ranging from four to 10 inches deep.

Surface water - Any water source above the ground including lakes, streams, rivers, ponds, impoundments, and open drains which are not used for the purpose of treatment or control of runoff.

Suspended solids - Small particles that float in the water column and create cloudy conditions.

Sustainable agriculture - An integrated system of farming that, over the long run, will satisfy our food and fiber needs, protect our soil and water, make the most efficient use of farm resources, sustain farm profits, minimize use of non-renewable resources (fuel, chemicals, etc.), and enhance our quality of life.

Thermophilic bacteria - Bacteria that thrive in and generate temperatures above 105 °F.

Thermophilic digestion - Digestion taking place at temperatures over 105°F.

Tilth - The physical condition of soil: how easy it is to till, its fitness as a seedbed, and how well seedlings and roots can penetrate it.

Total solids - The amount of inorganic and organic matter contained in a water sample.

Toxic waste - A waste containing a material that either directly poisons living things or detrimentally alters their environment so they die.

Toxicity - Harmfulness of a chemical to an organism.

Unsaturated Zone - The part of the soil profile that contains air in voids and cavities. Also called the zone of aeration.

Volatile Solids - That portion of the total solids that volatilizes (or burns) when a water sample is heated to approximately 1,000 °F for at least one hour. This measure provides an approximation of the organic matter content.

Volatile Suspended Solids - The portion of suspended solids that volatilizes (or burns) when heated at approximately 1,000 °F for at least one hour.

Waste - A resource that for whatever reason is not being used.

Wastewater - The water-carried wastes (wastewater) from households and industrial sources.

Wet-dry feeders - A type of pig feeder in which feed is dropped directly into a small amount of water. It is intended to reduce feed and waterer wastage, which reduces the amount of manure that must be stored and hauled.

Watershed - Land area that drains to a lake, river, or other given point.

Water table - The level in the soil below which is saturated with water.

Well - A hole drilled into the earth that is used to supply water or to monitor ground water quality.

Wetland - An area where hydric soils are saturated by surface and/or ground water long and frequently enough during the growing season to support a dominance of hydrophytic vegetation. Many wetlands DO NOT contain standing water year-round. They may be seasonally dry or lack noticeable vegetation during certain seasons. (See constructed wetland)

Windrow composter - Compost facility placed on an impervious base without sidewalls or a roof. Composting is conducted in organized rows with the composting mixture piled and molded to shed water and the base designed to collect and treat all runoff.

Volatile organic compounds (VOCS)- Organic carbon-containing compounds with a sufficiently low vapor pressure to permit high levels of volatilization at ambient temperatures.

Vapor pressure - The pressure of a vapor in equilibrium with its liquid form. When a liquid is placed in a closed container, the rate at which molecules escape from the surface is constant until equilibrium is reached. At equilibrium, the rate that molecules escape the liquid and the rate at which they condense back into liquid form are identical. This equilibrium concentration depends greatly upon the particular liquid and temperature. For example, gasoline has a much lower vapor pressure than radiator antifreeze.

Volatilization - The movement of a gas into the atmosphere.