# APPENDIX K

# NPDES CAFO PERMITTING GLOSSARY

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**25-year, 24-hour rainfall event –** Mean precipitation event with a probable recurrence interval of once in twenty-five years, as defined by the National Weather Service in Technical Paper No. 40, "Rainfall Frequency Atlas of the United States," May, 1961, or equivalent regional or State rainfall probability information developed from this source.

**100-year, 24-hour rainfall event –** Mean precipitation event with a probable recurrence interval of once in one hundred years, as defined by the National Weather Service in Technical Paper No. 40, "Rainfall Frequency Atlas of the United States," May, 1961, or equivalent regional or State rainfall probability information developed from this source.

**303(d) water body –** Under section 303(d) of the 1972 Clean Water Act, states, territories, and authorized tribes are required to develop lists of impaired waters. These impaired waters do not meet water quality standards that states, territories, and authorized tribes have set for them. The law requires that these jurisdictions establish priority rankings for waters on the lists and develop TMDLs for these waters.

**Aboveground storage tank –** Aboveground storage tanks are used as an alternative to underbuilding pit storage and earthen basins. Current assembly practices for aboveground storage facilities are primarily circular silo types and round concrete designs, but the structures may also be rectangular. Such tanks are suitable for operations handling slurry (semisolid) or liquid manure; this generally excludes open-lot waste which is inconsistent in composition and has a higher percentage of solids. Below and aboveground storage tanks are appropriate in situations where the production site has karst terrain, space constraints, or aesthetics issues associated with earthen basins. Storing manure in prefabricated or formed storage tanks is especially advantageous on sites with porous soils or fragmented bedrock. Such locations may be unfit for earthen basins and lagoons because seepage and ground water contamination may occur.

**Acre** — 1 acre=43,560 sq. ft.=208.7 $ft.^2$ =0.405 hectares; or 640 acres=1 sq. mile (called a section).

**Acre-foot –** The volume of water that would cover one acre of land (43,560 square feet) to a depth of one foot, equivalent to 325,851 gallons of water.

**Aerobic –** Living, active, or occurring only in the presence of free oxygen.

**Air Quality Standards –** Federal and state government-prescribed levels of a pollutant in the outside air that cannot be exceeded during a specified period of time in a specified geographical area.

**Agronomy –** The science of crop production and soil management.

**Anaerobic (anoxic) –** In the absence of oxygen.

**Anaerobic digestion –** A biological process that occurs in the absense of oxygen. In very large animal production operation, it is sometimes used to produce biogas (a low energy gas which is a combination of methane and carbon dioxide) from the biodegradable organic portion of manure. This gas can be used as an energy source. After anaerobic digestion, the remaining semi-solid (which is relatively odor free but still contains most of its nutrients) can be used as a fertilizer.

**Backgrounding –** Growing program for feeder cattle from time calves are weaned until they are on a finishing ration in the feedlot.

**Basin –** A tract of land in which the ground is broadly tilted toward a common point. Water that falls onto any portion of the basin is carried toward the common point by a single river system.

**Bedding –** Material such as straw, sawdust, wood shavings, shredded newspaper, sand or other similar material used in animal confinement areas for the comfort of the animal or to absorb excess moisture. Bedding can drastically affect the characteristics of the manure, and must be taken into consideration in the design of the storage facility.

**Belowground storage tanks –** Belowground storage tanks are used as an alternative to underbuilding pit storage and earthen basins. Belowground storage can be located totally or partially below grade and should be surrounded by fences or guardrails to prevent people, livestock, or equipment from accidently entering the tank. Such tanks are suitable for operations handling slurry (semisolid) or liquid manure; this

generally excludes open-lot waste which is inconsistent in composition and has a higher percentage of solids. Below and aboveground storage tanks are appropriate in situations where the production site has karst terrain, space constraints, or aesthetics issues associated with earthen basins. Storing manure in prefabricated or formed storage tanks is especially advantageous on sites with porous soils or fragmented bedrock. Such locations may be unfit for earthen basins and lagoons because seepage and ground water contamination may occur.

**Best Available Technology Economically Achievable (BAT) –** Technology-based standard established by the Clean Water Act (CWA) as the most appropriate means available on a national basis for controlling the direct discharge of toxic and nonconventional pollutants to navigable waters. BAT effluent limitations guidelines, in general, represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

**Best Conventional Pollutant Control Technology (BCT) –** Technology-based standard for the discharge from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, oil and grease. The BCT is established in light of a two-part "cost reasonableness" test which compares the cost for an industry to reduce its pollutant discharge with the cost to a POTW for similar levels of reduction of a pollutant loading. The second test examines the cost-effectiveness of additional industrial treatment beyond BPT. EPA must find limits which are reasonable under both tests before establishing them as BCT.

**Best management practice (BMP) –** Permit condition used in place of or in conjunction with effluent limitations to prevent or control the discharge of pollutants. May include schedule of activities, prohibition of practices, maintenance procedure, or other management practice. BMPs may include, but are not limited to, treatment requirements, operating procedures, or practices to control runoff, spillage, leaks, or drainage from raw material storage.

**Best professional judgment (BPJ) –** The method used by permit writers to develop technology-based NPDES permit conditions, in those circumstances where there is no applicable effluent limitation guideline, on a case-by-case basis using all reasonably available and relevant data.

**Biochemical Oxygen Demand (BOD) –** Laboratory measurement of the amount of oxygen consumed by microorganisms while decomposing organic matter in a product. BOD levels are indicative of the effect of the waste on fish or other aquatic life which require oxygen to live, and though not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

**$BOD_5$ –** The amount of dissolved oxygen consumed in five days by biological processes breaking down organic matter.

**Boar –** An uncastrated male hog.

**Breeding stock –** Sexually mature male and female livestock that are retained to produce offspring.

**Broiler –** Meat-type chicken typically marketed at 6.5 weeks of age. Live weight at market generally averages 4 to 4.5 pounds per bird.

**Buffer Zone –** The region near the border of a protected area; a transition zone between areas managed for different objectives.

**Buck –** Male goat. Male goats are at times disparagingly called "Billy goats".

**Bull –** Bovine male, uncastrated of breeding age.

**Bushel –** A dry volume measure of varying weight for grain, fruit, etc., equal to four pecks or eight gallons (2150.42 cubic inches). A bushel of wheat, soybeans, and white potatoes each weighs 60 pounds. A bushel of corn, rye, grain sorghum, and flaxseed each weighs 56 pounds. A bushel of barley, buckwheat, and apples each weighs 48 pounds.

**By-product –** Product of considerably less value than the major product. For example, the hide and offal are by-products while beef is the major product.

**Bypass –** The intentional diversion of waste streams from any portion of a treatment (or pretreatment) facility.

**Calf –** Young male or female bovine animal under 1 year of age.

**Calve –** Giving birth to a calf.

**Capon –** Castrated male chicken.

**Coliform Bacteria –** Microorganisms which typically inhabit the intestines of warm-blooded animals. They are commonly measured in drinking water analyses to indicate pollution by human or animal waste.

**Compost –** Decomposed organic material resulting from the composting process. Used to enrich or improve the consistency of soil.

**Conservation district –** Any unit of local government formed to carry out a local soil and water conservation program.

**Conservation plan –** A combination of land uses and farming practices to protect and improve soil productivity and water quality, and to prevent deterioration of natural resources on all or part of a farm. Plans may be prepared by staff working in conservation districts and must meet technical standards. For some purposes, such as conservation compliance, the plan must be approved by the local conservation district. Under the 1996 FAIR Act, conservation plans for conservation compliance must be both technically and economically feasible.

**Conservation practice (NRCS) –** Any technique or measure used to protect soil and water resources for which standards and specifications for installation, operation, or maintenance have been developed. Practices approved by USDA's Natural Resources Conservation Service are compiled at each conservation district in its field office technical guide.

**Conservation Reserve Enhancement Program (CREP) –** A sub program of the Conservation Reserve Program, CREP is a state-federal multi-year land retirement program developed by states and targeted to specific state and nationally significant water quality, soil erosion, and wildlife habitat problems. The CREP offers higher payments per acre to participants than the CRP, and perhaps other benefits as well. States with approved programs include Maryland, Minnesota, Illinois, New York, Oregon, Washington, and North Carolina.

**Conservation Reserve Program (CRP) –** A USDA program, created in the Food Security Act of 1985, to retire from production up to 45 million acres of highly erodible and environmentally sensitive farmland. Landowners who sign contracts agree to keep retired lands in approved conserving uses for 10-15 years. In exchange, the landowner receives an annual rental payment, cost-share payments to establish permanent vegetative cover and technical assistance.

**Conservation tillage –** Any tillage and planting system that leaves at least 30% of the soil surface covered by residue after planting. Conservation tillage maintains a ground cover with less soil disturbance than traditional cultivation, thereby reducing soil loss and energy use while maintaining crop yields and quality. Conservation tillage techniques include minimum tillage, mulch tillage, ridge tillage, and no- till.

**Confinement area –** The animal confinement area includes but is not limited to open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milkrooms, milking centers, cowyards, barnyards, medication pens, walkers, animal walkways, and stables.

**Containment –** Structures used to control runoff of precipitation that comes into contact with manure, feed and other wastes on open feedlots. Examples of containment structures are lagoons and holding ponds.

**Contour farming –** Field operations such as plowing, planting, cultivating, and harvesting on the contour, or at right angles to the natural slope to reduce soil erosion, protect soil fertility, and use water more efficiently.

**Cooperative State Research, Education, and Extension Service (CSREES) –** The USDA agency that administers federal funds appropriated for agricultural and forestry research, extension, and education programs at eligible institutions, including the land grant colleges of agriculture in the states, selected veterinary schools, and other institutions with capabilities in the food and agricultural science arena.

**Cover crop –** A close-growing crop grown to protect and improve soils between periods of regular crops.

**Cow –** Sexually mature female bovine animal that has usually produced a calf.

**Cow-calf operation –** A ranch or farm where cows are raised and bred mainly to produce calves usually destined for the beef market. The cows produce a calf crop each year, and the operation keeps some heifer calves from each calf crop for breeding herd replacements. The rest of the calf crop is sold between the ages of

6 and 12 months along with old or nonproductive cows and bulls. Such calves often are sold to producers who raise them as feeder cattle.

**Crop rotation –** The growing of different crops, in recurring succession, on the same land in contrast to monoculture cropping. Rotation usually is done to replenish soil fertility and to reduce pest populations in order to increase the potential for high levels of production in future years.

**Dewatering –** The removal of the liquid fraction from manure slurries. This is often done to maximize storage by increasing the solids concentration or to facilitate the transportation of the manure. Dewatering is often accomplished by mechanical separation (screen separator, belt-press, centrifuge) or gravity separation (settling basin).

**Director –** The Regional Administrator or State Director, as the context requires, or an authorized representative. When there is no approved state program, and there is an EPA administered program, Director means the Regional Administrator. When there is an approved state program, "Director" normally means the State Director.

**Digester –** A vessel used for the biological, physical, or chemical break-down of livestock and poultry manure.

**Discharge –** *Discharge* when used without qualification means the *discharge of a pollutant*. *Discharge of a pollutant* means: (a) Any addition of any pollutant or combination of pollutants to waters of the United States from any point source, or (b) Any addition of any pollutant or combination of pollutants to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channelled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any indirect discharger.

**Dry cow –** A cow that is not lactating.

**Dry lot (dry operation) –** An operation using confinement buildings and handling manure and bedding exclusively as dry material, an operation using a building with a mesh or slatted floor over a concrete pit, or an operation scraping manure to a covered waste storage facility is referred to as a "dry" operation. When such practices are used, and are not combined with liquid manure handling systems such as flushing to lagoons or storage ponds, these operations are referred to as "other than liquid manure handling systems" or "dry" manure systems, or "dry" operations.

**Duck –** Term used to connote both sexes but is also used to refer to the female gender. Ducks are typically marketed at 35 days of age at an average live weight of 7 pounds per bird.

**Effluent –** Water mixed with waste matter.

**Effluent Limitations Guidelines (ELG) –** Regulations issued by the EPA Administrator under Section 304(b) of the Clean Water Act that establish national technology-based effluent requirements for a specific industrial category.

**Erosion –** The wearing away of land surfaces by the action of wind or water.

**Ephemeral stream –** A stream that flows only sporadically, such as after storms.

**EQIP –** The Federal Environmental Quality Incentive Program (EQIP) provides financial assistance to producers to implement better conservation practices.

**Ewe –** A female sheep.

**Evaporation pond –** Used in regions where evaporation exceeds rainfall to separate manure solids from liquids. Constructed to remove moisture from livestock manure.

**Farm Service Agency –** A division of the USDA that oversees the administration of all federal farm programs. Programs include farm commodities, crop insurance, conservation programs and farm loans. Offices are located in strategic counties in every state in the U.S. Formerly known as ASCS, Agricultural Stabilization and Conservation Services.

**Farrow-to-finish –** Typically, a confinement operation where pigs are bred and raised to their slaughter weight, usually 200-250 pounds.

**Farrowing –** Stage during which the pigs are born, and kept until they are weaned from the sow.

**Fecal coliform bacteria –** A group of bacteria found in the intestinal tract of humans and animals, and also found in soil. While harmless in themselves, coliform bacteria are commonly used as indicators of the presence of pathogenic organisms.

**Feeder cattle –** Cattle past the calf stage that have weight increased making them salable as feedlot replacements.

**Feedlot –** Lot or building or a group of lots or buildings used for the confined feeding, breeding or holding of animals. This definition includes areas specifically designed for confinement in which manure may accumulate or any area where the concentration of animals is such that a vegetative cover cannot be maintained. Lots used to feed and raise poultry are considered to be feedlots. Pastures are not animal feedlots.

**Fertilizer –** Any organic or inorganic material, either natural or synthetic, used to supply elements (such as nitrogen (N), phosphate (P2O5), and potash (K2O)) essential for plant growth.

**Filly –** A female horse less than three years old.

**Filter backwash –** Reversing the flow of water back through the filter media to remove entrapped solids.

**Filter strips –** An area of vegetation, generally narrow and long, that slows the rate of runoff, allowing sediments, organic matter, and other pollutants that are being conveyed by the water to be removed.

**Finish pig –** To feed a pig until it reaches market weight, 250-260 pounds.

**Finishing stage –** Stage leading to and including full adulthood for swine is called the finishing stage. The pigs remain here until they reach market weight, 240 to 260 pounds.

**Flush system –** In flush systems, large volumes of water flow down a sloped surface, scour manure from the concrete, and carry it to a manure storage facility. There are three basic types of flush systems: 1) underslat gutters, used primarily in beef confinement buildings and swine facilities; 2) narrow-open gutters, used predominately in hog finishing buildings; and 3) wide-open gutters or alleys, most often seen in dairy freestall barns, holding pens, and milking parlors.

**Forage Growth –** All browse and non-woody plants that are eaten by wildlife and livestock. Roughage of high feeding value. Grasses and legumes cut at the proper stage of maturity and stored to preserve quality are forage. A crop that is high in fiber and grown especially to feed ruminant animals.

**Freeboard –** The distance between the highest possible wastewater level in a manure storage/treatment structure and the top edge of the structure.

**Gelding –** A castrated male horse.

**Grassed waterway –** Grassed waterways are areas planted with grass or other permanent vegetative cover where water usually concentrates as it runs off a field. They can be either natural or man-made channels. Grass in the waterway slows the water and can reduce gully erosion and aid in trapping sediment.

**Grazing land –** Pasture, meadow, rangeland, or other similar area where livestock are put to feed on the vegetation.

**Ground water –** The supply of fresh water found beneath the Earth's surface, usually in aquifers, which supply wells and springs.

**Growing stage –** Occurs after the piglets leave the nursery. Pigs are larger and better able to take care of themselves at this stage, so larger group pens and a less controlled environment is needed. They are kept here until they reach 120 to 140 pounds.

**Gully erosion –** Also called ephemeral gully erosion, this process occurs when water flows in small channels and larger swales. Most gully erosion occurs on highly erodible soils, where there is little or no crop residue cover, or where crop harvest disturbs the soil.

**Heifer –** Young female bovine cow prior to the time that she has produced her first calf.

**Hen –** Adult female chicken or turkey.

**Herd –** Group of cattle (usually cows) that are in a similar management program.

**Highly erodible land (HEL)** — Land that is very susceptible to erosion, including fields that have

at least 1/3 or 50 acres of soils with a natural erosion potential of at least 8 times their T value.

**Holding pond –** A pond, usually made of earthen material, that is used to store manure wastewater, or polluted runoff generally for a limited time.

**Intermittent stream –** Has flowing water only during certain periods of time, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall or snowmelt is a supplemental source of water for the stream flow.

**Irrigation –** Applying water (or wastewater) to land areas to supply the water (and sometimes nutrient) needs of plants. Techniques for irrigating include furrow irrigation, sprinkler irrigation, trickle (or drip) irrigation, and flooding.

**Irrigation return flow –** Part of artificially applied water that is not consumed by plants or evaporation, and that eventually 'returns' to an aquifer or surface water body, such as a lake or stream.

**Karst topography –** An irregular limestone region with sinks, underground streams, and caverns. Karst areas can provide direct channels for contaminants to reach the groundwater.

**Kid –** A young goat.

**Lamb –** A young sheep. An ewe lamb or ram lamb, depending upon the sex.

**Land application –** The removal of wastewater and waste solids from a control facility and distribution to, or incorporation into the soil mantle primarily for beneficial reuse purposes.

**Land application area –** Land application area means land under the control of an AFO owner or operator, whether it is owned, rented, or leased, to which manure, litter, or process wastewater from the production area is or may be applied.

**Land-grant universities –** State colleges and universities started from Federal government grants of land to each state to encourage further practical education in agriculture, home economics, and the mechanical arts.

**Layer –** Mature egg-type chicken over 32 weeks of age.

**Legumes –** A family of plants, including many valuable food, forage and cover species, such as peas, beans, soybeans, peanuts, clovers, alfalfas, sweet clovers, lespedezas, vetches, and kudzu. Sometimes referred to as nitrogen-fixing plants, they can convert nitrogen from the air to build up nitrogen in the soil. Legumes are an important rotation crop because of their nitrogen-fixing property.

**Liner –** Any barrier in the form of a layer, membrane or blanket, naturally existing, constructed or installed to prevent a significant hydrologic connection between liquids contained in retention structures and waters of the United States.

**Litter –** A combination of manure and the bedding material placed in dry chicken production facilities. The bedding material alone may also be referred to as litter.

**Liquid manure –** Usually less than 8.0% solids. Wash water, runoff, precipitation, and so forth are added, if needed, to dilute the manure and lower the solids content.

**Liquid manure handling system –** An operation were animals are raised outside with swimming areas or ponds, or with a stream running through an open lot, or in confinement buildings where water is used to flush the manure to a lagoon, pond, or some other liquid storage structure.

**Load allocation –** Portions of a TMDL assigned to existing and future nonpoint sources, including background loads.

**Maintained –** Animals are confined in the same area where waste is generated and/or concentrated. *Maintained* can also mean that the animals in the confined area are watered, cleaned, groomed, or medicated.

**Manure –** Fecal and urinary defecations of livestock and poultry; may include spilled feed, bedding, or soil.

**Manure storage area –** The *manure storage area* includes but is not limited to lagoons, runoff ponds, storage sheds, stockpiles, under house or pit storages, liquid impoundments, static piles, and composting piles.

**Mare –** A mature female horse or pony.

**Milking parlor –** The area of a dairy where milking takes place.

**Milking parlor wash water –** Is water used to rinse the animals and equipment during the milking process to improve sanitation. The wash water typically includes manure, feed solids, hoof dirt along with detergents and disinfectants that are being used at the operation. The amount of wash water used each day depends upon the number of animals milked and the management practices followed.

**Molt –** A process during which hens stop laying and shed their feathers. Occurs naturally every 12 months or may be artificially induced.

**Multi-year phosphorus application (phosphorus banking) –** A practice that allows manure application in a single year at rates in excess of the phosphorus requirements of the crops. In subsequent years, no phosphorus would be applied until the amount applied in the single year has been removed through plant uptake and harvest.

**New discharger –** Any building, structure, facility, or installation: (a) From which there is or may be a discharge of pollutants; (b) That did not commence the discharge of pollutants at a particular site prior to April 14, 2003; (c) Which is not a new source; and (d) Which has never received a finally effective NDPES permit for discharges at that site.

**New source –** Any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

a. After promulgation of standards of performance under Section 306 of the CWA which are applicable to such source (i.e., February 12, 2003 for CAFOs); or

b. After proposal of standards of performance in accordance with Section 306 of the CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 of the CWA within 120 days of their proposal.

c. Except as otherwise provided in an applicable new source performance standard, a source is a new source if it meets the definition in 40 CFR 122.2; and

i. It is constructed at a site at which no other source is located; or

ii. It totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or

iii. Its processes are substantially independent of an existing source at the same site. In determining whether these processes are substantially independent, the Director shall consider such factors as the extent to which the new facility is integrated with the existing plant; and the extent to which the new facility is engaged in the same general type of activity as the existing source.

**New source performance standards (NSPS) –** Technology-based standards for facilities that qualify as new sources under 40 CFR 122.2 and 40 CFR 122.29. Standards consider that the new source facility has an opportunity to design operations to more effectively control pollutant discharges.

**Nonpoint source –** Diffuse pollution source (i.e. without a single point of origin or not introduced into a receiving stream from a specific outlet). The pollutants are generally carried off the land by storm water. Common non-point sources are agriculture, forestry, urban, mining, construction, dams, channels, land disposal, saltwater intrusion, and city streets.

**No-Till farming –** The soil is left undisturbed from harvest to planting except for nutrient and seed injection. Weed control is accomplished primarily with herbicides.

**Normal growing season –** The time period, usually measured in days, between the last freeze in the spring and the first frost in the fall. Growing seasons vary depending on local climate and geography. It can also vary by crop as different plants have different freezing thresholds.

**Nursery building –** Used for the piglets after they are weaned. Pigs are kept in small groups in this heated, well-insulated enclosure until they reach 60 to 80 pounds. A wire or other very porous floor is used to maintain sanitary conditions. The nursery slotted phase is often broken up into two growth stages, called, respectively, a "hot" and "cold" nursery, reflecting the room temperatures used.

**Nutrient –** A substance that provides food or nourishment, such as usable proteins, vitamins, minerals or carbohydrates. Fertilizers, particularly phosphorus and nitrogen, are the most common nutrients that contribute to lake eutrophication and nonpoint source pollution.

**Open lot –** Pens or similar confinement areas with dirt, concrete, or other paved or hard surfaces wherein animals or poultry are substantially or entirely exposed to the outside

environment except for small portions of the total confinement area affording protection by windbreaks or small shed-type shade areas.

**Other than a liquid manure handling system –** An operation using confinement buildings with a mesh or slatted floor over a concrete pit, where the manure is scraped into a waste storage facility, or an operation using dry bedding on a solid floor. In this case the manure and bedding are not combined with water for flushing to a storage structure.

**Overflow –** the discharge of manure or process wastewater resulting from the filling of wastewater or manure storage structures beyond the point at which no more manure, process wastewater, or storm water can be contained by the structure.

**Pasture –** Land used primarily for the production of domesticated forage plants, usually grasses and legumes, for livestock (in contrast to rangeland, where vegetation is naturally-occurring and is dominated by grasses and perhaps shrubs).

**Permitting authority –** The NPDES permit issuance authority that has been authorized under part 123 of the Clean Water Act.

**Pesticide –** A chemical substance used to kill or control pests, such as weeds, insects, fungus, mites, algae, rodents and other undesirable agents.

**Phosphorus banking –** See *multi-year phosphorus application*.

**Pit system (deep) –** Has a concrete floor and masonry or concrete side walls, is constructed 2-6 feet below the ground. The animal cages are then built 8 feet or more above the pit floor. Because the pit is built below ground level, care must be taken to insure that surface and ground water are not contaminated. Foundation drains and external grading to direct surface water away help to keep manure dry, so that natural composting might occur. The most important benefit of the deep- pit is that manure can be stored for several months or more.

**Pit (shallow) –** The most frequently used pit system. The concrete pit is 4-8 inches deep and is located 3-6 feet below the cages. The manure and other waste is mechanically scraped or flushed out with water to a storage area, or directly loaded into a spreader for direct field application.

**Plate chiller water –** Are used to cool milk being stored at the dairy. Condensation is formed on the plates and drains from the chiller.

**Point source –** Any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fixture, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft from which pollutants are or may be discharged.

**Pollutant –** Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.

**Pollution prevention –** Identifying areas, processes, and activities which create excessive waste products or pollutants in order to reduce or prevent them through, alteration, or eliminating a process.

**Poult –** Young turkey, either male or female.

**Process wastewater –** Water directly or indirectly used in the operation of the CAFO for any or all of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing pens, barns, manure pits, or other CAFO facilities; direct contact swimming, washing, or spray cooling of animals; or dust control. Process wastewater also includes any water which comes into contact with any raw materials, products, or byproducts including manure, litter, feed, milk, eggs, or bedding.

**Process generated wastewater –** See process wastewater.

**Production area –** That part of an AFO that includes the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas. The animal confinement area includes but is not limited to open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milkrooms, milking centers, cowyards, barnyards, medication pens, walkers, animal walkways, and stables. The manure storage area includes but is not limited to lagoons, runoff

ponds, storage sheds, stockpiles, under house or pit storages, liquid impoundments, static piles, and composting piles. The raw materials storage area includes but is not limited to feed silos, silage bunkers, and bedding materials. The waste containment area includes but is not limited to settling basins, and areas within berms and diversions which separate uncontaminated storm water. Also included in the definition of production area is any egg washing or egg processing facility, and any area used in the storage, handling, treatment, or disposal of mortalities.

**Post-harvest residue –** That portion of a plant, such as a corn stalk, left in the field after harvest.

**Pullet –** Young female chicken between 10 and 32 weeks of age, usually this term denotes egg-type birds.

**Ram –** A male sheep which has not been castrated.

**Rangeland –** An open region over which livestock may roam and feed. The plant cover is principally native grasses, grasslike plants, and shrubs. It includes natural grasslands, savannahs, certain shrubs and grasslike lands, most deserts, tundra, alpine communities, coastal marshlands, and wet meadows. It also includes lands that are re-vegetated naturally or artificially and are managed like native vegetation.

**Raw materials storage area –** Includes but is not limited to feed silos, silage bunkers, and bedding materials.

**Retention facility or retention structure –** All collection ditches, conduits and swales for the collection of runoff and wastewater, and all basins, ponds, pits, tanks and lagoons used to store wastes, wastewaters and manures.

**Return flow –** Surface and subsurface water that leaves the field following application of irrigation water.

**Rill erosion –** An erosion process in which numerous small channels, typically a few inches deep, are formed. It occurs mainly on recently cultivated soils or on recent cuts and fills.

**Riparian –** Pertaining to or situated on or along the bank of a stream or other body of water.

**Riparian buffer –** A strip of vegetation planted along the bank of a body of water which slows the rate of flow of runoff from adjoining uplands, causing sediment and other materials to fall out onto the land before the runoff enters and pollutes the body of water.

**Roaster –** Meat-type chicken marketed at 9 weeks for males and 11 weeks for females. Live weight at market ranges between 6 and 8 pounds per bird.

**Root zone –** The depth of soil penetrated by plant roots.

**Rotational grazing –** Grazing two or more pastures in regular sequence, with rest periods for the recovery of herbage.

**Ruminants –** Hoofed animals with four-chambered stomachs (i.e. cattle, sheep, goats). Ruminants have a complex digestive system with a complex biological system that is capable of generating much of their own protein needs

**Runoff –** That part of precipitation, snow melt, or irrigation water that runs off the land into streams or other surface-water. It can carry pollutants from the air and land into receiving waters.

**Sediment –** Solid material that is in suspension, is being transported, or has been moved from its original location by air, water, gravity or ice.

**Sedimentation –** The addition of soils to lakes, a part of the natural aging process, making lakes shallower. The process can be greatly accelerated by human activities.

**Semi-solid manure –** Contains little bedding and usually no extra water added. In most cases, little drying occurs before handling. During wet weather the manure scraped from open lots can also be semi-solid in nature.

**Settling basin –** A basin, often concrete lined, that is a holding area for wastewater and runoff where the heavier particles sink to the bottom. The remaining fraction is then moved to another storage structure or utilized by the operation.

**Silage –** Forage, corn fodder, or sorghum preserved by partial fermentation. Silage is stored in air-tight stacks, pits, bags or silos. It is generally used as a feed for cattle.

**Sinkhole –** A depression in the landscape where limestone has been dissolved.

**Soil loss tolerance ('T' value) –** For a specific soil, the maximum average annual soil loss expressed as tons per acre per year that will permit current production levels to be maintained economically and indefinitely. T values range from 2 to 5 tons per acre per year.

**Soil survey –** A program of the Natural Resource Conservation Service to inventory soil resources as a basis for determining land capabilities and conservation treatments that are needed, provide soil information to the public (primarily through maps), and provide technical support to those who use soils information. About 90% of the private lands have been mapped.

**Solid manure –** Combination of urine, bedding, and feces with little or no extra water added. It is usually found in loafing barns, calving pens, and open lots with good drainage.

**Source-water protection area –** The area delineated by a state for a Public Water Supply or including numerous such suppliers, whether the source is ground water or surface water or both.

**Sow –** Female that has farrowed at least one litter.

**Stallion –** An unaltered (uncastrated) male horse.

**Steer –** Bovine male castrated prior to puberty.

**Stocker cattle –** Heifers and/or steers that are being grown on pasture or other forage for later sale as feedlot replacements.

**Storage –** Refers to the structures used to hold manure, litter, or process wastewater to reduce the need for frequent hauling and land spreading, to allow land spreading at a time when soil and climatic conditions are suitable, or to allow nutrient application at or near the crop's growing season.

**Storage pond –** A liquid impoundment used to hold manure and wastewater.

**Stripcropping –** Growing crops in a systematic arrangement of strips or bands, usually parallel to the land's contour, that serve as barriers to wind and water erosion.

**T value (or T level)** — For a specific soil, the maximum average annual soil loss expressed as tons per acre per year that will permit current production levels to be maintained economically and indefinitely; the soil loss tolerance level.

**Technology-based effluent limit –** A permit limit for a pollutant that is based on the capability of a treatment method to reduce the pollutant to a certain concentration.

**Terrace** — An embankment, ridge, or leveled strip constructed across sloping soils on the contour, or at right angle to the slope. The terrace intercepts surface runoff so that it can soak into the soil or flow slowly to a prepared outlet, decreasing rates of soil erosion.

**Tile drain –** Lines of concrete, clay, fiber, plastic or other suitable material pipe placed in the subsoil to collect and drain water from the soil to an outlet. Infiltrated water that is captured by drain tiles is usually diverted to surface water.

**Tom –** Male turkey.

**Total Suspended Solids –** A measure of the material suspended in wastewater. Total suspended solids (TSS) cause: 1) interference with light penetration, 2) buildup of sediment and 3) potential reduction in aquatic habitat. Solids also carry nutrients that cause algal blooms and other toxic pollutants that are harmful to fish.

**Treatment pond/lagoon –** An impoundment made by excavating or earth fill to biologically treat manure and wastewater.

**Upset –** An exceptional incident in which there is unintentional and temporary noncompliance with the permit limit because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

**Veal –** Meat from very young cattle (under 3 months of age). Veal typically comes from dairy bull calves.

**Wasteload allocation –** The proportion of a receiving water's total maximum daily load that is allocated to one of its existing or future point sources of pollution.

**Wastewater –** water containing waste or contaminated by waste contact, including process-generated and contaminated rainfall runoff.

**Water quality standard (WQS) –** A law or regulation that consists of the beneficial use or uses of a waterbody, the numeric and narrative water quality criteria that are necessary to protect the use or uses of that particular waterbody, and an antidegradation statement.

**Water quality-based effluent limit –** A value determined by selecting the most stringent of the effluent limits calculated using all applicable water quality criteria (e.g., aquatic life, human health, and wildlife) for a specific point source to a specific receiving water for a given pollutant.

**Water table –** The top surface of the aquifer nearest ground level.

**Waters of the United States –** *Waters of the United States* or *waters of the U.S.* means:

(a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(b) All interstate waters, including interstate wetlands;

(c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

(1) Which are or could be used by interstate or foreign travelers for recreational or other purposes;

(2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(3) Which are used or could be used for industrial purposes by industries in interstate commerce;

(d) All impoundments of waters otherwise defined as waters of the United States under this definition;

(e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;

(f) The territorial sea; and

(g) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

**Watershed –** The surrounding land area that drains into a lake, river or river system.

**Wet lot –** Wet system, or liquid manure handling system.

**Wetlands –** A lowland area, such as a marsh, bog, swamp, or similar saturated with water. Wetlands are crucial wildlife habitat, and important for flood control and maintaining the health of surrounding ecosystems.

**Yield –** The number of bushels (or pounds or hundredweight) that a farmer harvests per acre.