OKLAHOMA

Farm & Ranch*A*Syst

Glossary

These terms may help you make more accurate assessments when completing the worksheets. They may also help clarify some of the terms used in fact sheets.

Abandoned well. A well unused for at least 12 months and that has not been properly closed.

Aerobic system. An alternative to septic tanks or waste lagoons in which oxygen-using biological systems treat the wastewater. These systems are more expensive to operate and maintain because of the need for aeration.

Air gap. The air space (open space) between the hose or faucet and water level, preventing backflow of liquids into a well or water supply.

Animal waste management plan (AWMP). A specific plan (usually developed by the USDA Natural Resources Conservation Service, formerly the SCS) designed to manage animal wastes so that the most benefit is obtained and the environment is protected.

Anti-backflow (anti-backsiphoning) device. A check valve or other mechanical device used to prevent unwanted reverse flow of liquids back down a water supply pipe into a well.

Approved disposal site. A site for land application of wastewater or tank pumpage that meets state standards and is approved by the Department of Environmental Quality (DEQ).

Aquifer. A subsurface zone in which readily extractable water saturates the pores of the geologic formations.

AWWA backflow prevention device. A check valve or other mechanical device, approved by the American Water Well Association, to prevent the unwanted reverse flow of liquids back down a water supply pipe into a well.

Backflow. The unwanted reverse flow of liquids in a piping system.

Backsiphonage. Backflow caused by the formation of a vacuum in a water supply pipe.

Bedding. That portion of the poultry litter used as an absorbing material, and usually consisting of wood shavings, rice hulls, or straw.

Bedrock. Consolidated sediment impractical to dig by hand.

Burn barrel. An open container for burning household solid waste. (See *incinerator*.)

CAFO. A concentrated animal feeding operation that has more than a specified (by EPA Region 6) number of animals confined for a total of 45 days or more in any 12-month period in a confinement area that does not sustain vegetation, or any animal production operation which the EPA Region 6 director has designated to be a CAFO.

Calibration. A method for determining if the desired amount of material is being applied by a piece of equipment.

Casing. Steel or plastic pipe installed while drilling a well to prevent collapse of the well bore hole and entrance of contaminants, and to allow placement of a pump or pumping equipment.

Cathodic protection. A technique to prevent corrosion of a metal surface by reversing the electrical current that causes corrosion. Cathodic protection may use a sacrificial anode or impress current on the tank. (See *sacrificial anodes* and *impressed current*.)

Certified installer. A person certified by the state to install and repair petroleum storage tanks.

Cesspool. Covered excavation in the ground that receives sewage directly from a building's sanitary drainage system. It is designed to retain the organic matter and solids and permit liquid to seep into soil cavities.

Clear water infiltration. Entry of water into a system that does not need treatment, such as rainfall or tile drainage, rough unsealed joints, access ports, and cracks.

Closed handling system. A system for transferring pesticides or fertilizers directly from a storage container to applicator equipment (through a hose, for example) so that humans and the environment are never inadvertently exposed to the chemicals.

Compost. Organic matter that has been collected and allowed to decompose.

Composting. A controlled process of decomposing organic matter by microorganisms.

Corrosion. Deterioration of a metallic material ("rust") due to a reaction with its environment. Damage to tanks by corrosion is caused by a galvanic reaction (like that in a battery) occurring between a metal underground tank and the soil. Part of the tank can become negatively charged, and another part positively charged. Moisture in the soil provides the connecting link that finally turns these tank "batteries" on. Then the negatively charged part of the underground tank system—where the current exits from the tank or its piping—begins to deteriorate. As electric current passes through this part, the hard metal begins to turn into soft ore, holes form, and leaks begin.

Corrosion protection. One method of corrosion protection is cathodic protection. Steel tanks can be protected by coating them with a corrosion-resistant coating combined with "cathodic" protection. Steel underground tanks can also be protected from corrosion if they are bonded to a thick layer of noncorrosive material, such as fiberglass-reinforced plastic. Also, the corrosion problem can be entirely avoided by using tanks and piping made completely of noncorrosive material, such as fiberglass.

Cost sharing. A program of getting a percentage of the costs of a project, facility, or effort paid by the federal government, usually through the Consolidated Farm Service Agency (formerly the ASCS).

Cross-connection. A link or channel between pipes, wells, fixtures, or tanks carrying contaminated water and those carrying potable (safe for drinking) water. If it is at higher pressure, contaminated water can enter the potable water system.

Design capacity. Maximum volume of liquid that can be treated in a particular wastewater treatment system. For systems that include subsurface wastewater disposal and distribution, capacity is also based on the soil's ability to accept and treat sewage effluent. In filling out the worksheet, if you don't know the design capacity of your system, use 150 gallons per bedroom per day as an estimate.

Diversion. A channel, embankment, or other manmade structure constructed to divert water from one area to another.

Drainfield. Known also as the soil absorption field, the drainfield delivers wastewater to the soil. Household wastewater flows into a series of perforated pipe in the trenches, passes through the holes in the pipe, and then trickles down through the gravel to the soil.

Drilled wells. Wells not dug or driven, including those constructed by rotary and percussion tool drilling devices. These wells are normally 4 inches and larger in diameter.

Driven-point (sand-point) wells. Wells constructed by driving assembled lengths of pipe into the ground with percussion equipment or by hand. These wells are usually smaller than two inches in diameter, less than 50 feet deep, and can be installed in areas of relatively loose soils, such as sand.

Dug wells. Large-diameter wells often constructed by hand.

Dump. A disposal area for wastes that is not designed to prevent leaching and offers little ground water protection.

Effluent. Liquid discharged from a septic tank or other liquid waste treatment system.

Farm business. A farm that generates at least $1,000 in net annual income from farming.

Filter strip. An area of vegetation for removing sediment, organic material, organisms, nutrients, and chemicals in runoff or wastewater.

Galvanized. Iron or steel coated with zinc. Galvanized materials are protected from corrosion until the zinc dissolves or is scratched away. Galvanized materials do not meet corrosion protection requirements.

Ground water. Subsurface water in a zone of saturation.

Grout. Slurry of cement or a cement-clay mixture used to seal the space between the outside of the well casing and the bore hole, or to seal an abandoned well.

Hazardous waste contractor. A business licensed to collect, transport, and recycle or legally dispose of hazardous waste in a licensed facility.

Holding tank. An approved watertight receptacle for the collection and temporary holding of sewage.

Household hazardous waste collection program. A special program in which household hazardous waste is collected for disposal in specially constructed hazardous waste landfills or incinerators.

Household quantities. Less than one gallon of a liquid pesticide or 10 pounds of a dry pesticide. Contact the Department of Environmental Quality (DEQ) for quantities of other products..

Hydraulic loading rate. The volume of liquid waste discharged per unit area per unit time.

Hydrogeology. The study of ground water—its origin, occurrence, movement, and quality.

Impervious zone. A soil or rock layer, such as dense clay or bedrock which will not allow water to penetrate.

Impressed current. A corrosion protection system that introduces an electric current into the ground through a series of anodes that are not attached to the underground tank. The electrical current flowing from these anodes to the tank system is greater than the corrosive current attempting to flow from it, thus protecting the underground tank from corrosion.

Incinerator. A container for enclosed burning of solid waste for complete combustion and collection of residues.

Interior liner. A liner for petroleum storage tanks made of noncorrosive, synthetic materials that can be effective in protecting metal tanks.

Inventory control. Measuring and comparing the volume of tank contents regularly with product delivery and withdrawal records to help detect leaks before major problems develop.

Lagoons. A pondlike structure that uses biodegradation (converting body by-products, feed, bedding, and other organic matter) from human waste and/or animal waste to more stable end products. Aerobic lagoons require free oxygen and are generally considered uneconomical. Anaerobic lagoons do not require free oxygen. Anaerobic lagoons liquefy and break down human and/or animal waste solids, but not all wastes are completely degradable.

Leaching. The removal of soluble materials from soils or other material by water.

Licensed landfill. A landfill specifically designed to protect ground water through the use of a high-quality clay and/or impermeable film liner, accompanied by a system of buried pipes to collect any liquids generated. Meets current state standards.

Lining. A restrictive covering over all or part of a holding structure to prevent seepage.

Litter. A collective term for an absorbing material commonly called "bedding." Also a term for poultry manure.

Micrograms per liter (µg/L). A unit of concentration equal to the weight of a substance measured in micrograms (one millionth of a gram) contained in one liter. It is equivalent to 1 part per billion (ppb) in water measure.

Milligrams per liter (mg/l). A unit of concentration equal to the weight of a substance measured in milligrams (one thousandth of a gram) contained in one liter. It is equivalent to 1 part per million (ppm) in water measure.

Nitrate-nitrogen (NO_3-N). The nitrogen portion of the nitrate ion. To convert NO_3-N to NO_3, multiply by 4.4. For example, 10 ppm NO_3-N is equivalent to 44 ppm NO_3.

N, P, K. Nitrogen, phosphorus, and potassium.

Nutrient. Elements necessary for growth. In plants, for example, nitrogen (N), phosphorus (P), and potassium (K) are the major nutrients.

Nutrient accounting. A method for calculating the amount of nutrients that are available and the amount that is used.

Nutrient analysis. Test of a material to determine its nutrient value.

Nutrient management plan (NMP). A specific plan designed to manage animal wastes so that the most benefit is obtained and the environment is protected from excessive application of any one nutrient.

Off-site disposal. Disposal of waste products, such as wastewater or sludge off the farm or ranch, at a municipal treatment plant or approved disposal site.

On-farm or ranch disposal. Any method of burning, dumping, or land spreading of wastes on the farm or ranch. Use of septic system for disposal of wastewater is an example of on-farm or on-ranch disposal.

Organic matter. Matter containing compounds of plant or animal origin, measured by organic carbon content.

Parts per billion (ppb). A concentration measurement of one unit of a substance dispersed in one billion units of another.

Parts per million (ppm). A measurement of concentration of one unit of material dispersed in one million units of another.

Percolation. The downward movement of water through soil.

Primary containment. The original container of a potential contaminant. It may be a bag, barrel, bottle, or bulk storage tank, depending upon the product.

Recycling. Reusing waste materials to develop another product.

Residue. A material that remains after decomposition.

Rinsate. Rinse water from a container or tank cleaning that contains dilute product.

Runoff. Water that has not moved into the soil but moves across the soil or some other surface.

Sacrificial anodes. Pieces of metal attached directly to an underground tank that are more electrically active than the steel tank. Because the anodes are more active, electrical current runs from the anodes rather than from the tank. The tank becomes the cathode (positive electrode) and is protected from corrosion. The attached anode (negative electrode) is "sacrificed" or consumed in the corrosion process and must be replaced periodically.

Scum. Floatable solids, such as grease and fat.

Secondary containment. A system designed to contain all spills without contaminating buildings, the soil, or the environment. The system may consist of sealed floors, curbs, dikes, or sealed basins that will catch and hold the contents of a container if leaks or ruptures occur.

Seepage pit (dry well). An underground receptacle constructed to permit disposal of septic tank effluent, treated wastes, or clear wastes by soil absorption through its bottom and walls.

Setbacks. Separation distances between certain types of facilities or structures, required by law to reduce the spread of fire, contamination, or other hazards.

Sludge. Settled, partially decomposed solids resulting from biological, chemical, or physical wastewater treatment.

Soil drainage class. A general evaluation of a soil's ability to transmit water. Different drainage classes are described by such terms as excessively drained, well-drained, and poorly drained.

Soil permeability. The quality of a soil that enables water or air to pass through it. Slowly permeable soils have fine-textured materials (like clays) that permit only slow water movement. Moderately or highly permeable soils have coarse-textured materials (like sands) that permit rapid water movement.

Soil texture. The relative proportions of the various particle sizes (sand, silt, and clay) in a soil. Described by such terms as sandy loam and silty clay.

Spill and overfill protection. Spill protection usually consists of a catch basin for collecting spills when the tank is filled. Overfill protection is a warning or prevention of an overfill, such as an automatic shutoff or buzzer. These precautions can prevent a number of small releases over a very long period of time from polluting the ground water.

Stacking shed. A structure designed and built for the storage of poultry manure.

Tank tightness testing. A procedure for testing a tank's ability to prevent accidental release of any stored substance or intrusion of ground water into an underground tank.

Waters of the U.S. (United States). Waters of the U.S. are not clearly defined. They include any flowing stream, but they may also include channels, ditches, and gullies that connect to a stream off a property. A bar ditch could, therefore, be a water of the U.S.

Water-soluble container. A water-soluble packet of a pesticide that is placed directly into the applicator tank and is designed to dissolve while filling the applicator tank without the need for additional mixing.

Water table. The upper level of ground water in a zone of saturation. It fluctuates with climatic conditions on land surface, and with aquifer discharge and recharge rates.

Well cap (seal). A device used to provide a watertight cover to the top of a well casing pipe. *

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