

*Recommended Standards and Guidance for Performance,
Application, Design, and Operation & Maintenance*

Glossary of Terms

September 2012



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Acronyms

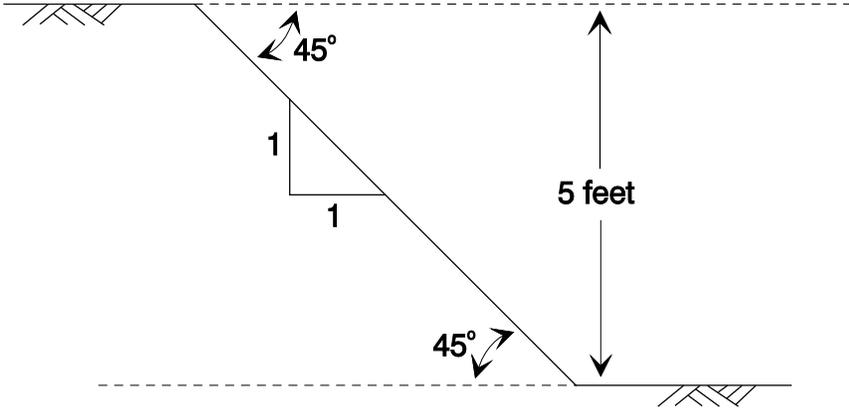
“ANSI”	American National Standards Institute
“ASTM”	American Society for Testing Materials
“BOD”	Biochemical oxygen demand, typically expressed in mg/L.
“CBOD₅”	Carbonaceous biochemical oxygen demand, typically expressed in mg/L.
“FC”	Fecal coliform, typically expressed in number of colonies/100 ml.
“LOSS”	A large on-site sewage system (see Chapter 246-272B WAC).
“NSF”	National Sanitation Foundation International
“O&G” (formerly referred to as FOG)	Oil and grease, a component of sewage typically originating from food stuffs (animal fats or vegetable oils) or consisting of compounds of alcohol or glycerol with fatty acids and lotions). Typically expressed in mg/L.
“OSS”	On-site sewage system
“RS&G”	Recommended standards and guidance
“SDS”	Subsurface Drip System(s)
“SSAS”	A subsurface soil absorption system
“TAG” (formerly referred to as TAC)	The Technical Advisory Group
“TN”	Total nitrogen, typically expressed in mg/L.
“TSS”	Total suspended solids, a measure of all suspended solids in a liquid, typically expressed in mg/L.
“UPC”	Uniform Plumbing Code
“USEPA”	United States Environmental Protection Agency.

Definitions

Term	Definition
Accessible	When applied to a fixture, connection, appliance or equipment, means having access thereto, but which first may require the removal of an access panel, door, or similar obstructions. <i>Readily accessible</i> means direct access without the necessity of removing any panel, door, or similar obstruction.
Aeration	The process of bringing air in contact with wastewater by using a compressor or blower and a diffuser for the purpose of promoting biological degradation.
Additive	Commercial product added to an on-site sewage system intended to affect the performance or aesthetics of an on-site sewage system.
Agronomic rates	Greywater application rates (to irrigated plants) which are based on the water needs of the plants to be irrigated rather than the maximum allowable loading rates (based on soil type) referenced in Chapter WAC 246-274.
Air vacuum relief valve	Allows air release when the system is being pressurized and air entry into the system to avoid debris getting sucked into the system. This must be installed the highest elevation in each distribution zone.
Alkalinity	Refers to the relative amounts of alkaline chemicals in a solution. Sodium, potassium, and calcium are alkaline chemicals and are often combined with carbonates, sulfates, or chlorides. Plants do not tolerate high concentrations of alkaline salts.
ANSI	American National Standards Institute
Approved	Written statement of acceptability issued by the local health officer or the department.
Approved testing facility	An ANSI accredited testing facility, or other third-party testing facility approved by the Department of Health.
ASTM	American Society for Testing Materials
Automated controller	A controller capable of regulating filter backwash, line flushing and distribution zone sequencing in addition to timed dosing.
Backwash	The process of flow reversal to clean a filter and to restore it to the normal clean condition for filtering with a minimum resistance to flow through the media or screen.
Backwater valve	A type of check valve installed in a drainage system to prevent reverse flow.

Term	Definition
Baffle	A device placed in a sewage tank for multiple functions, including dissipating energy, directing solids, retaining solids, and drawing liquid off at a specific depth. A baffle is not an intercompartmental wall.
Basal area	The effective surface area available to transmit the treated effluent from the filter media into the original receiving soils.
Bed	A soil dispersal component consisting of an excavation with a width greater than three feet.
Biodegradability	The word biodegradable means that a complex chemical is broken down into simpler components through biological action. Do not be confused by the word biodegradable, which often is used to imply environmentally safe. Harmful chemicals as well as beneficial ones may be biodegradable.
Blackwater	Water that is flushed from toilets and urinals that contains human waste.
BOD	Biochemical oxygen demand, typically expressed in mg/L.
(BOD₅) biological oxygen demand	An index of the amount of oxygen that will be consumed by the decomposition of organic matter in wastewater. This is the result of a laboratory analysis that consists of measuring the initial dissolved oxygen concentration, incubating the sample for five days at 68o F, then measuring the final dissolved oxygen. The difference in dissolved oxygen concentration corrected for the initial dilution and sample volume is called the BOD ₅ . The BOD ₅ test is one of the commonly used indicators of wastewater strength.
Boron	Considered a plant micronutrient, boron is required in only very, very small amounts. Most soils provide adequate amounts of this chemical. Concentrations only slightly higher than those considered beneficial can cause severe injury or death to plants.
Building sewer	That part of the horizontal piping of a drainage system extending from the building drain, which collects sewage from all the drainage pipes inside a building, to an on-site sewage system. It begins two feet outside the building wall and conveys sewage from the building drain to the remaining portions of the on-site sewage system.
Canopy	The uppermost branching and foliage of a tree or shrub.
Category 1 treatment component	A treatment component designed to treat sewage with strength typical of a residential source when septic tank effluent is anticipated to be equal to or less than treatment level E.

Term	Definition
Category 2 treatment component	A treatment component designed to treat high-strength sewage when septic tank effluent is anticipated to be greater than treatment level E.
Category 3 treatment component	A treatment component designed to handle only the blackwater component of residential sewage.
CBOD₅ (carbonaceous biochemical oxygen demand)	Carbonaceous biochemical oxygen demand, typically expressed in mg/L. Same as the 5-day biochemical oxygen demand (BOD ₅) test, except that the NITROGENOUS DEMAND is prevented by addition of a nitrification inhibitor to the sample.
Cesspool	A pit receiving untreated sewage and allowing the liquid to seep into the surrounding soil or rock.
Coliform (bacteria)	A group of bacteria that produce gas and ferment lactose, some of which are found in the intestinal tract of warm blooded animals. They are indicators of potential ground water and/or surface water contamination with such fecal material.
Composting toilet	A system designed to store and compost (primarily by unsaturated, aerobic microbial digestion) human excrement (human urine and feces) to a stable soil-like material called “humus”. These systems are commonly designed to accommodate fecal and urinary wastes (human excrement), toilet paper and small amounts of organic carbonaceous material added to assist their function.
Conductivity	A simple measure of the amount of dissolved chemicals in a solution. These chemicals can be beneficial or harmful. The higher the conductivity, the more dissolved salts and minerals are present. In general, the higher the concentration of dissolved salts and minerals in the water, the greater the potential for adverse affects on the environment and plant health.
Conforming system	Any on-site sewage system or component, meeting any of the following criteria: (a) In full compliance with new construction requirements under this chapter; or (b) Approved, installed and operating in accordance with requirements of previous editions of this chapter; or (c) Permitted by the waiver process under WAC 246-272A-0420 that assures public health protection by higher treatment performance or other methods.
Cover material	Soil placed over a soil dispersal component composed predominately of mineral material with no greater than ten percent organic content. Cover material may contain an organic surface layer for establishing a vegetative landscape to reduce soil erosion.

Term	Definition
Cuts and/or banks	<p>Any naturally occurring or artificially formed slope greater than one hundred percent (forty-five degrees) and extending vertically at least five feet from the toe of the slope to the top of the slope as follows:</p>  <p>The diagram shows a cross-section of a slope. A horizontal dashed line at the top represents the top of the slope. A vertical double-headed arrow indicates a height of 5 feet from this line to the toe of the slope. The slope itself is a straight line at a 45-degree angle, with a right-angled triangle drawn inside it showing a vertical side of 1 and a horizontal side of 1. The bottom of the slope is a horizontal dashed line, and the toe is marked with hatching.</p>
Demand system	<p>Any system where the dosing frequency (or flow to a treatment or soil dispersal component) is controlled by the volume of effluent flowing to the component. For a demand system containing a pump and pressure distribution system, the pump turns on when sufficient volumes (demand) flow into the chamber causing the pump-on float to activate and the predetermined dose volume to be discharged to the treatment and / or soil dispersal component which follows.</p>
Department, or department	<p>The Washington State Department of Health</p>
Design flow	<p>The maximum volume of sewage a residence, structure, or other facility is estimated to generate in a twenty-four-hour period. It incorporates both an operating capacity and a surge capacity for the system during periodic heavy use events. The sizing and design of the on-site sewage system components are based on the design flow.</p>
Designer	<p>A person who matches site and soil characteristics with appropriate on-site sewage technology. This term applies to both on-site sewage treatment system designers licensed under chapter 18.210 RCW and professional engineers licensed under chapter 18.43 RCW.</p>
Development	<p>The creation of a residence, structure, facility, subdivision, site, area, or similar activity resulting in the production of sewage.</p>
Disk filter	<p>A type of filter that utilizes a series of grooved rings that overlay each other to form a network of very small openings to trap contaminants.</p>
Disinfection	<p>The process of destroying pathogenic microorganisms in sewage through the application of ultraviolet light, chlorination, or ozonation.</p>

Term	Definition
Dispersal component	That portion of an on-site sewage system designed to provide final treatment and dispersal of the effluent from a wastewater treatment unit, including, but not limited to, absorption fields (drainfields), sand mounds, and sand-lined trenches.
Distributing valve	A valve that distributes flow to multiple drainfield laterals, zones or locations by automatically rotating upon each pump cycle.
Distribution technology	Any arrangement of equipment and/or materials that distributes sewage within an on-site sewage system.
Diversion valve	A valve that diverts flow exclusively to one disposal component providing a long-term drying period of another disposal component.
Dosing	The application of wastewater to a treatment or disposal system in discreet amounts over a definite time period, as opposed to an unregulated flow.
Dosing tank / chamber	A watertight receptacle containing dosing equipment which collects treated effluent and periodically discharges it into another treatment / dispersal component, depending upon the needs and design of the particular on-site sewage system.
Drainback	Effluent that flows back into a pump tank after the dosing event.
Drainfield	See subsurface soil absorption system (SSAS) and soil dispersal component.
Drainrock	Clean washed gravel or crushed rock ranging in size from three-quarters inch to two and one-half inches, and containing no more than two percent by weight passing a US No. 8 sieve and no more than one percent by weight passing a US No. 200 sieve.
Drip irrigation	A system of crop irrigation involving the controlled delivery of water (usually at low application rates) to plants through a network of small diameter flexible poly tubing with small diameter openings called emitters.
Dripline	Flexible small diameter polyethylene tubing containing small diameter openings called emitters.
Effective particle size (ES)	The diameter (size) of the particle in a granular sample such as sand for which 10 percent of the total grains are smaller and 90 percent larger on a weight basis. Stating it differently, it is the diameter of an opening of an ideal sieve which would retain 90% of a sample, while passing 10% of the sample. (Symbolically ES = D10)

Term	Definition
Effluent	Liquid discharged from a septic tank or other on-site sewage system component.
Elapsed time meter (ETM)	A meter that measures and records the total length of time a component has been in the operating mode.
Electric solenoid valve	An electric valve actuated by a solenoid, used for controlling the flow of liquid in pipes.
Emitters	Small diameter openings in dripline that can dissipate pressure and allow a slow, controlled discharge (rated in gallons per hour).
Evapotranspiration	The loss of moisture from the soil due to a combination of the processes of evaporation and transpiration from the plants growing in the soil. Evapotranspiration varies with soil type and landscape position, local climate and plant types.
Expanding clay	A clay soil with the mineralogy of clay particles, such as those found in the Montmorillonite/Smectite Group, which causes the clay particles to expand when they absorb water, closing the soil pores, and contract when they dry out.
Expansion	A change in a residence, facility, site, or use that: (a) Causes the sewage quantity or quality to exceed the existing design flow of the on-site system, for example, when a residence is increased from two to three bedrooms or a change in use from an office to a restaurant; or (b) Reduces the treatment or dispersal capability of the existing on-site sewage system or the reserve area, for example, when a building is placed over a reserve area.
Extremely gravelly	Soil with sixty percent or more, but less than ninety percent rock fragments by volume.
Failure	A condition of an on-site sewage system or component that threatens the public health by inadequately treating sewage or by creating a potential for direct or indirect contact between sewage and the public. Examples of failure include: (a) Sewage on the surface of the ground; (b) Sewage backing up into a structure caused by slow soil absorption of septic tank effluent; (c) Sewage leaking from a sewage tank or collection system; (d) Cesspools or seepage pits where evidence of ground water or surface water quality degradation exists; (e) Inadequately treated effluent contaminating ground water or surface water; or (f) Noncompliance with standards stipulated on the permit.

Term	Definition
Fecal coliform	Bacteria common to the digestive systems of warm-blooded animals that are cultured in standard tests. Counts of these organisms are typically used to indicate potential contamination from sewage or to describe a level of needed disinfection. Generally expressed as colonies per 100 ml.
Filter	A device or structure for removing suspended solid or colloidal material from wastewater. Also a sewage treatment component which contains a specified filter media which is used to treat sewage physically, chemically and biologically.
Filtrate	Liquid which has passed through a filter.
Fineness modulus (FM)	A measure of fineness of a sand media calculated by adding the cumulative percentages of sand in a sample retained on the 3/8 in., No. 4, No. 8, No. 16, No. 30, No. 50, and No. 100 sieves, and dividing the sum by 100. The higher the FM the coarser the sand.
Flushing	The process by which drip lines are hydraulically cleansed to prevent emitter clogging by increasing the velocity of water flow through the drip lines to scour and transport solid material that may have accumulated inside the drip lines.
Geomembrane	An essentially impermeable membrane used with foundation, soil, rock, earth or any other geotechnical engineering-related material as an integral part of a human-made project, structure, or system.
Geotextile	Any geotechnical engineering-related permeable textile used with foundations, soil, rock, earth, an integral part of a human-made project, structure, or system, and which serves to lessen the movement of fine soil particles.
Gravelly	Soils with fifteen percent or more, but less than thirty-five percent rock fragments by volume.
Greywater	Sewage from bathtubs, showers, bathroom sinks, washing machines, dishwashers, and kitchen sinks. It includes sewage from any source in a residence or structure that has not come into contact with toilet wastes.

Term	Definition
Ground water	Subsurface water occupying the zone of saturated soil, permanently, seasonally, or as the result of the tides. Indications of ground water may include: (a) Water seeping into or standing in an open excavation from the soil surrounding the excavation or monitoring ports; or (b) Spots or blotches of different color or shades of color interspersed with a dominant color in soil, caused by reduction and oxidation of iron. These color patterns are redoximorphic features, commonly referred to as mottling. Redoximorphic features often indicate the intermittent presence of ground water and may indicate poor aeration and impeded drainage. Also see "water table."
Holding tank sewage system	An on-site sewage system which incorporates a sewage tank without a discharge outlet, the services of a sewage pumper/hauler, and the off-site treatment and disposal for the sewage generated.
Hydraulic conductivity	The ability of soil to transmit liquids through pore spaces in a specified direction, e.g., horizontally or vertically.
Hydraulic loading rate	The amount of effluent applied to a given treatment step, in this chapter expressed as gallons per square foot per day (gal/sq.ft./day).
Incinerating toilets	Self-contained devices that reduce non-water-carried human urine and feces to ash and vapor, including the necessary venting, piping, electrical, and/or mechanical components. The process is fueled by gas, fuel oil, or electricity.
Industrial wastewater	The water or liquid carried waste from an industrial process. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feedlots, poultry houses, or dairies. The term includes contaminated storm water and leachate from solid waste facilities.
Infiltrative area	see "Basal Area".
Infiltrative surface	The surface within a treatment component or soil dispersal component to which effluent is applied and through which effluent moves into original, undisturbed soil or other porous treatment media. In drainfields, this is the drain rock-original soil interface at the bottom of the trench; in mound systems, this is the gravel-mound sand and the sand-original soil interfaces; in sand-lined trenches/beds (sand filter), this is the gravel-sand interface and the sand-original soil interface at the bottom of the trench of bed.

Term	Definition
Influent	Wastewater, partially or completely treated, or in its natural state (raw wastewater), flowing into a reservoir, tank, treatment component, or soil dispersal component.
Installer	A person approved by the local health officer to install on-site sewage systems or components.
Local health officer	The health officer of the city, county, or city-county health department or district within the state of Washington, or a representative authorized by and under the direct supervision of the local health officer, as defined in chapter 70.05 RCW. (http://apps.leg.wa.gov/RCW/default.aspx?cite=70.05)
LOSS	A large on-site sewage system (see chapter 246-272B WAC). (http://apps.leg.wa.gov/WAC/default.aspx?cite=246-272B)
Maintenance	The actions necessary to keep the on-site sewage system components functioning as designed.
Massive structure	The condition of a soil layer in which the layer appears as a coherent or solid mass not separated into peds of any kind.
Mesh	A parameter used to describe the size of screen openings or the size of particles that can be passed through a screen, usually in terms of the number of openings occurring per linear inch.
Minimum pretreatment	For subsurface drip systems, minimum pretreatment means septic tank effluent AND filtration in accordance with manufacturer's recommendations (ranges from 100 to 120 micron particle filtration).
Moderate structure	The well-formed distinct peds evident in undisturbed soil. When disturbed, soil material parts into a mixture of whole peds, broken peds, and material that is not in peds.
Monitoring	Periodic or continuous checking of an on-site sewage system, which is performed by observations and measurements, to determine if the system is functioning as intended and if system maintenance is needed. Monitoring also includes maintaining accurate records that document monitoring activities.

Term	Definition
Mound system	A method of on-site sewage treatment and dispersal in which a specified sand filter media is laid on top of a properly prepared original soil surface. The distribution system and wastewater infiltration beds are then placed entirely within the filter media at such a level that the desired vertical separation to provide the necessary treatment exists. The original soil provides some additional treatment and is necessary to move the effluent away from the site without surfacing. Not included in this definition are systems where soil fill is used only for cover.
NSF	National Sanitation Foundation International
O&G (formerly referred to as FOG)	See “Oils & Greases”
Oils & Greases (formerly referred to as Fats, Oils, & Greases)	Oil and grease, a component of sewage typically originating from food stuffs (animal fats or vegetable oils) or consisting of compounds of alcohol or glycerol with fatty acids (soaps and lotions). Typically expressed in mg/L.
On-site sewage system (OSS)	An integrated system of components, located on or nearby the property it serves, that conveys, stores, treats, and/or provides subsurface soil treatment and dispersal of sewage. It consists of a collection system, a treatment component or treatment sequence, and a soil dispersal component. An on-site sewage system also refers to a holding tank sewage system or other system that does not have a soil dispersal component.
Operating capacity	The average daily volume of sewage an OSS can treat and disperse on a sustained basis. The operating capacity, which is lower than the design flow, is an integral part of the design and is used as an index in OSS monitoring.
Ordinary high-water mark	The mark on lakes, streams, springs, and tidal waters, found by examining the beds and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland with respect to vegetation, as that condition exists on the effective date of this chapter, or as it may naturally change thereafter. The following definitions apply where the ordinary high-water mark cannot be found: (a) The ordinary high-water mark adjoining marine water is the elevation at mean higher high tide; and (b) The ordinary high-water mark adjoining freshwater is the line of mean high water.
OSS	On-site sewage system

Term	Definition
Particle size	The diameter of a soil or sand particle, usually measured by sedimentation or sieving.
Ped	A unit of soil structure such as blocks, column, granule, plate or prism formed by natural processes.
Percolation	The flow or trickling of a liquid downward through a contact or filtering medium. The liquid may or may not fill the pores of the medium.
Performance standard	A standard used to judge whether predetermined requirements have been met, such as the necessary level of treatment for waste stream, after the completion or initiation of operation. Performance standards generally are in the form of a pre-determined level or concentration of a particular compound or constituent that is allowed in a waste effluent.
Permeable soil	Soil with a textural classification, according to the U.S. Department of Agriculture Soil Conservation Service classification system, of loams or coarser. Soils will be considered excessively permeable when they are coarser than coarse sand.
Person	Any individual, corporation, company, association, society, firm, partnership, joint stock company, or any governmental agency, or the authorized agents of these entities.
Phosphate	A plant nutrient often added to soil as a fertilizer. Soils in some areas are low in phosphate and thus, there may be some benefit to plants if phosphate is present in greywater. This should not be relied upon, however, since many forms of phosphate are not readily usable by plants and soils.
Pipe volume	The amount of effluent needed to refill the supply lines and distribution system that have drained after a dose cycle. Generally for pressure distribution systems 7 times the pipe volume should be included in the design flow and 5 times the pipe volume should be included in the design flow for drip systems.
Pit toilet	An on-site sewage disposal unit consisting of a structure overlying an excavation not exceeding five feet in depth in which human excrement (human feces and urine) is directly deposited for permanent placement in the ground. Pit toilets, due to site and soil considerations, have very limited application.
Planned unit development	A subdivision characterized by a unified site design, clustered residential units and/or commercial units, and areas of common open space.

Term	Definition
Platy structure	Soil that contains flat peds that lie horizontally and often overlap. This type of structure will impede the vertical movement of water.
Potable water	Clean water which is satisfactory for drinking, culinary and domestic purposes and meets the drinking water standards established by the Washington Department of Health.
Pressure compensating emitters	Drip emitters that allow a constant discharge over a wide range of applied pressures. A pressure regulator is not needed with this type of emitter when system pressure is maintained (determined by pump selection) within the range recommended by the manufacturer.
Pressure distribution	A system of small diameter pipes equally distributing effluent throughout a SSAS, as described in the department's "Recommended Standards and Guidance for Pressure Distribution Systems." A subsurface drip system may be used wherever the chapter requires pressure distribution.
Pressure regulator	A device used to regulate and maintain pressure within a specified range in a piping system. Required to control discharge with turbulent flow emitters.
Professional engineer	A person who is currently licensed as an engineer under the provisions of chapter 18.43 RCW. (http://apps.leg.wa.gov/RCW/default.aspx?cite=18.43)
Proprietary product	A sewage treatment and distribution technology, method, or material subject to a patent or trademark.
Public domain technology	A sewage treatment and distribution technology, method, or material not subject to a patent or trademark.
Public sewer system	A sewerage system: (a) Owned or operated by a city, town, municipal corporation, county, or other approved ownership consisting of a collection system and necessary trunks, pumping facilities and a of final treatment and disposal; and (b) Approved by or under permit from the department of ecology, the department of health and/or a local health officer.
Puddling	Act of destroying soil structure, usually by disturbing or compacting the soil at high water content, thereby reducing porosity and permeability.
Pump chamber	See Dosing Tank / Chamber
Pumper	A person approved by the local health officer to remove and transport sewage or septage from on-site sewage systems.

Term	Definition
Raw wastewater	Wastewater before it receives any treatment.
Readily accessible	Having direct access to a plumbing fixture, connection, appliance or equipment without the necessity of removing any panel, door, or similar obstruction.
Record drawing	An accurate graphic and written record of the location and features of the OSS that are needed to properly monitor, operate, and maintain that system.
Registered list	“List of Registered On-site Treatment and Distribution Products”, developed and maintained by the department and containing a list of treatment and distribution products that meets the requirements for product registration in WAC 246-272A.
Repair	The relocation, replacement or reconstruction of a failed on-site sewage system.
Reserve area	An area of land approved for the installation of a conforming system that is protected and maintained for replacement of the OSS upon its failure.
Residential sewage	Sewage having the constituency and strength typical of wastewater from domestic households.
Residential strength greywater	Greywater having the consistency and strength typically found in residential applications: acceptable characteristics of raw greywater are: BOD5 < 200 mg/L, TSS < 125 mg/L, O&G < 25 mg/L.
Restrictive layer	A stratum impeding the vertical movement of water, air, and growth of plant roots, such as hardpan, claypan, fragipan, caliche, some compacted soils, bedrock and unstructured clay soils.
Return manifold	A collection manifold or the piping that returns liquid and debris to the primary treatment tank during system flushes.
Rock fragment	Rock or mineral fragments having a diameter of two millimeters or more; for example, gravel, cobbles, stones, and boulders.
Routine servicing	Servicing all system components as needed, including product manufacturer's requirements / recommendations for service.
RS&G	Recommended standards and guidance.

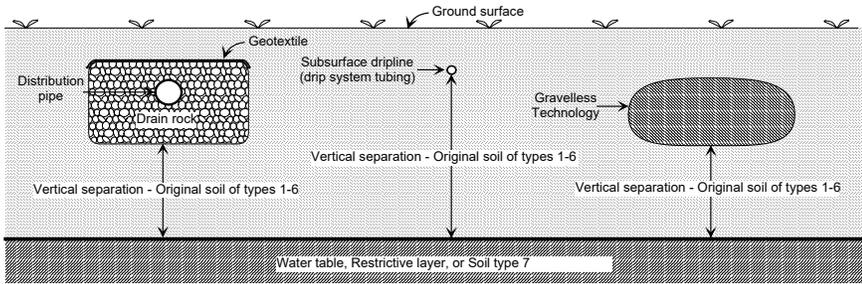
Term	Definition
Sand filter	<p>A biological and physical wastewater treatment component consisting (generally) of an under drained bed of sand to which pre-treated effluent is periodically applied. Filtrate collected by the under drains is then disposed of by an approved soil absorption system. Pretreatment can be provided by a septic tank or another approved treatment component. An Intermittent Sand Filter is a sand filter in which pre-treated wastewater is applied periodically providing intermittent periods of wastewater application, followed by periods of drying and oxygenation of the filter bed. A Recirculating Sand (Gravel) Filter is a sand (gravel) filter which processes liquid waste by mixing filtrate with incoming septic tank effluent and recirculating it several times through the filter media before discharging to a final treatment/disposal unit. A Sand-Lined Drainfield Trench is a combination of a pressure distribution drainfield and an intermittent sand filter typically consisting of a two-foot layer of intermittent sand filter media placed directly below the drain rock layer in the pressure distribution drainfield trench. A Bottomless Sand Filter is a special case of a sand-lined drainfield trench installed in a perimeter enclosure and is usually used to utilize more suitable soils high in the soil profile for dispersal.</p>
SDS	Subsurface Drip System(s)
Seepage pit	An excavation more than three feet deep where the sidewall of the excavation is designed to dispose of septic tank effluent. Seepage pits may also be called "dry wells."
Septage	The mixture of solid wastes, scum, sludge, and liquids pumped from within septic tanks, pump chambers, holding tanks, and other OSS components.
Septic system	See on-site sewage system or OSS.
Septic tank	A watertight treatment receptacle receiving the discharge of sewage from a building sewer or sewers, designed and constructed to permit separation of settleable and floating solids from the liquid, detention and anaerobic digestion of the organic matter, prior to discharge of the liquid.
Service interval	The time period between planned site visits to perform various system monitoring functions such as checking equipment, renewing depleted disinfectant chemical supply, collecting samples. The service intervals may be specified by contracts, operation plans, or local health jurisdiction permits.

Term	Definition
Sewage	Any urine, feces, and the water carrying human wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments or other places.
Sewage quality	Contents in sewage that include: (a) CBOD ₅ , TSS, and O&G; (b) Other parameters that can adversely affect treatment. Examples include pH, temperature, and dissolved oxygen; (c) Other constituents that create concerns due to specific site sensitivity. Examples include fecal coliform and nitrogen.
Sewage tank	A prefabricated or cast-in-place septic tank, pump tank/dosing chamber, holding tank, grease interceptor, recirculating filter tank or any other tanks as they relate to on-site sewage systems including tanks for use with proprietary products.
Slope stability	The resistance of an inclined surface to failure by sliding or collapsing.
Slowly permeable soil	Soils with a textural classification, according to the U.S. Department of Agriculture Soil Conservation Service classification system, of silt loams, and some silty clay loams that are well structured.
Sodium	Can act as a plant poison by reducing the plant's ability to take up water from the soil. Too much sodium can destroy the structure of clay soils, making them slick and greasy by removing air spaces and thus preventing good drainage. Once a clay soil is damaged by sodium, it can be very difficult to restore it to a viable condition.
Soil compaction	Increasing the soil bulk density, and concomitantly decreasing the soil porosity, by the application of mechanical forces to the soil. Results in a soil that retains less water and resists root penetration. Soils with high clay content are more easily compacted than sandy soils.
Soil dispersal component	A technology that releases effluent from a treatment component into the soil for dispersal, final treatment and recycling.
Soil log	A detailed description of soil characteristics providing information on the soil's capacity to act as an acceptable treatment and dispersal medium for sewage.
Soil scientist	A person certified by the American Society of Agronomy as a Certified Professional Soil Scientist.
Soil type	One of seven numerical classifications of fine earth particles and rock fragments as described in WAC 246-272A-0220 (2)(e). (http://apps.leg.wa.gov/WAC/default.aspx?cite=246272A-0220)
SSAS	See "subsurface soil absorption system".

Term	Definition
Standard methods	The <i>20th Edition of Standard Methods for the Examination of Water and Wastewater</i> , prepared and published jointly by the American Public Health Association, the American Water Works Association and the Water Environment Federation.
Strong structure	Peds are distinct in undisturbed soil. They separate cleanly when soil is disturbed, and the soil material separates mainly into whole peds when removed.
Subdivision	A division of land or creation of lots or parcels, described under chapter 58.17 RCW, including both long and short subdivisions, planned unit developments, and mobile home parks. (http://apps.leg.wa.gov/RCW/default.aspx?cite=58.17)
Subsurface drip system	An efficient pressurized wastewater distribution system that can deliver small, precise doses of effluent to soil surrounding the drip distribution piping (called dripline) as described in the department's " <i>Recommended Standards and Guidance for Subsurface Drip Systems.</i> "
Subsurface soil absorption system (SSAS)	A soil dispersal component of trenches or beds containing either a distribution pipe within a layer of drainrock covered with a geotextile, or an approved gravelless distribution technology, designed and installed in original, undisturbed, unsaturated soil providing at least minimal vertical separation as established in this chapter, with either gravity or pressure distribution of the treatment component effluent.
Suitable Soil	Original, undisturbed soil of types 1 through 6.
Supply manifold	A distribution manifold or the piping that delivers effluent to dripline segments (laterals).
Surface water	Any body of water, whether fresh or marine, flowing or contained in natural or artificial unlined depressions for significant periods of the year, including natural and artificial lakes, ponds, springs, rivers, streams, swamps, marshes, irrigation canals and tidal waters.
Synthetic filter fabric	See Geotextile
Synthetic membrane	See Geomembrane
TAG	Technical advisory group
Telemetry system	Transmits system performance information measured by sensors to a remote location by means of wires or electromagnetic waves.
Timed dosing	Delivery of discrete volumes of sewage at prescribed time intervals.

Term	Definition
Timer-controlled system	A pressure distribution system where the pump on and off times are preset, discrete time periods.
TN-total nitrogen	Total nitrogen, typically expressed in mg/L. A measure of the complete nitrogen content in wastewater. The forms of nitrogen of greatest interest are nitrate (NO ₃ -), nitrite (NO ₂ -), ammonia (NH ₃), and organic nitrogen; all these forms of nitrogen, as well as nitrogen gas (N ₂), are biochemically interconvertible and are components of the nitrogen cycle. The total nitrogen content of wastewater can be determined by measuring nitrate, nitrite, ammonia, and Kjeldahl nitrogen.
Total suspended solids (TSS)	Suspended solids refer to the dispersed particulate matter in a wastewater sample that may be retained by a filter medium. Suspended solids may include both settleable and unsetttable solids of both inorganic and organic origin. This parameter is widely used to monitor the performance of the various stages of wastewater treatment, often used in conjunction with BOD ₅ to describe wastewater strength. The test consists of filtering a known volume of sample through a weighed filter membrane that is then dried and re-weighed.
Treatment component	A technology that treats sewage in preparation for further treatment and/or dispersal into the soil environment. Some treatment components, such as mound systems, incorporate a soil dispersal component in lieu of separate treatment and soil dispersal components.
Treatment level	One of six levels (A, B, C, D, E, & N) used in these rules to: (a) Identify treatment component performance demonstrated through requirements specified in WAC 246-272A-0110; and (b) Match site conditions of vertical separation and soil type with treatment components. Treatment levels used in these rules are not intended to be applied as field compliance standards. Their intended use is for establishing treatment product performance in a product testing setting under established protocols by qualified testing entities. (http://apps.leg.wa.gov/WAC/default.aspx?cite=246-272A-0110)
Treatment Level A	A thirty-day average of ≤10 mg/l of CBOD ₅ and ≤10 mg/l of total suspended solids and a thirty-day geometric mean of ≤200 fecal coliform/100ml.
Treatment Level B	A thirty-day average of ≤15 mg/l of CBOD ₅ and ≤15 mg/l of total suspended solids and a thirty-day geometric mean of ≤1000 fecal coliform/100ml.

Term	Definition
Treatment Level C	A thirty-day average of ≤ 25 mg/l of CBOD5 and ≤ 30 mg/l of total suspended solids and a thirty-day geometric mean of $\leq 50,000$ fecal coliform/100ml.
Treatment Level D	A thirty-day average of ≤ 25 mg/l of CBOD5 and ≤ 30 mg/l of total suspended solids.
Treatment Level E	A full test average of ≤ 125 mg/l of CBOD5, ≤ 80 mg/l of total suspended solids, and ≤ 20 mg/l of oils and greases.
Treatment Level N	A full test average of ≤ 20 mg/l of total nitrogen.
Treatment sequence	Any series of treatment components that discharges treated sewage to the soil dispersal component.
Trench	A soil dispersal component consisting of an excavation with a width of three feet or less.
TSS	Total suspended solids, a measure of all suspended solids in a liquid, typically expressed in mg/L.
Turbulent flow emitters	Drip emitters that allow a varying discharge depending on the pressure applied (flow rate increases as system pressure increases). A pressure regulator recommended by the dripline manufacturer is required with this type of emitter to ensure discharge is in accordance with design.
Uniform distribution	A method of distribution which results in equal distribution of the effluent throughout the distribution network. This will help assure a vertical unsaturated flow regime. Procedures are explained in detail in the Recommended Standards and Guidance for Pressure Distribution Systems (DOH).
Uniformity coefficient, CU	A ratio of the uniformity of a mixture of sand particles calculated by dividing the size of the opening where 60% of a sample passes by the size of the opening where 10% of a sample passes on a weight basis. The higher the UC the less uniform the sand. (symbolically $D_{60}/D_{10}=UC$)
Unit volume of sewage	Means: (a) Flow from a single-family residence; (b) Flow from a mobile home site in a mobile home park; or (c) Four hundred fifty gallons of sewage per day where the proposed development is not single-family residences or a mobile home park.
UPC	Uniform Plumbing Code (http://apps.leg.wa.gov/WAC/default.aspx?cite=51-56)
USEPA	United States Environmental Protection Agency

Term	Definition
Vault toilet	An on-site sewage system that incorporates: (a) a structure enclosing a toilet above a water-tight (preventing liquid infiltration into the soil) storage chamber for human waste; (b) the services of a sewage pumper/hauler; and (c) the off-site treatment and disposal for the sewage generated. Portable chemical toilets are not included in this category.
Vent system	A pipe or pipes installed to provide a flow of air to or from a drainage system or to provide a circulation of air within such system to protect trap seals from siphonage and back-pressure.
Vertical flow	The effluent flow path downward through soil or filter media that involves travel along soil surfaces or through soil pores. This flow can be either saturated or unsaturated. Unsaturated flow follows a tortuous path that allows pathogens and pollutants in the wastewater to come in contact with the microsites in the soil or filter media where treatment by physical, biological, and chemical means occurs. With unsaturated flow all soil pores are primarily filled with air, not water. With saturated flow all soil pores are filled with water. Oxygen is excluded, and contact time may be insufficient for retention or treatment to occur.
Vertical separation	<p>The depth of unsaturated, original, undisturbed soil of Soil types 1 - 6 between the bottom infiltrative surface of a soil dispersal component and the highest seasonal water table, a restrictive layer, or Soil Type 7 as illustrated below by the profile drawing of subsurface soil absorption systems:</p> 
Very gravelly	Soil containing thirty-five percent or more, but less than sixty percent rock fragments by volume.
Wastewater	See “ <i>sewage.</i> ”
Wastewater treatment unit	A unit designed, constructed, and installed to stabilize liquid waste by biochemical and physical action.

Term	Definition
Water table	The upper surface of the ground water, whether permanent or seasonal. Also see “ground water.”
Waterless toilet	A non-discharging toilet; a device which uses no water for waste transport but stores or reduces toilet and urinal wastes to either compost, ash, or an accumulation of wastes for removal, transport, and final disposal at an approved site.
Well	Any excavation that is constructed when the intended use of the well is for the location, diversion, artificial recharge, observation, monitoring, dewatering or withdrawal of ground water for agricultural, municipal, industrial, domestic, or commercial use. Excluded are: (a) A temporary observation or monitoring well used to determine the depth to a water table for locating an OSS; (b) An observation or monitoring well used to measure the effect of an OSS on a water table; and (c) An interceptor or curtain drain constructed to lower a water table.