

15A NCAC 18E .0105 DEFINITIONS

In addition to the definitions set forth in G.S. 130A-334, the following shall apply to the rules in this Subchapter:

- (1) "Aggregate" means naturally occurring inorganic material of a specific size or grade. An example of aggregate is clean, washed gravel, or crushed stone that is graded or sized in accordance with size numbers 4, 5, or 6 of ASTM D448.
- (2) "Apparent Cation Exchange Capacity" means the sum of exchangeable bases plus total soil acidity at a pH of 7.0. ACEC is expressed in milliequivalents per 100 grams (meq/100g) of soil or centimoles per kilogram (cmol/kg) of soil. The soil ACEC is calculated by determining the ACEC using the neutral normal ammonium acetate method, pH of 7.0 neutral normal, dividing by the percent clay as determined by particle size distribution using the pipette method, and then multiplying by 100, as described in USDA-NRCS Soil Survey Laboratory Information Manual, Soil Survey Investigations Report No. 45 and Kellogg Soil Survey Laboratory Methods Manual, Soil Survey Investigation Report No. 42, page 229, or EPA Method 9080.
- (3) "Applicant" means the individual who submits an application to the LHD for an IP, CA, OP, or existing system authorization.
- (4) "Approved" means that which the Department or LHD has determined is in accordance with this Subchapter and G.S. 130A, Article 11.
- (5) "Artificial drainage" means any man-made structure or device designed to overcome a SWC or intercept lateral flowing ground or surface water. Artificial drainage systems include groundwater lowering systems, interceptor drains, and surface water diversions.
- (6) "Authorized agent" means a person who has been authorized by the Department in accordance with G.S. 130A, Article 4 and 15A NCAC 01O .0100 to permit wastewater systems.
- (7) "Authorized designer" means a service provider authorized by the manufacturer who creates plans for the installation, expansion, or repair of a proprietary wastewater system.
- (8) "Authorized On-Site Wastewater Evaluator" means a person licensed in accordance with G.S. 90A, Article 5 and meeting the certification requirements in G.S. 130A-336.2(a) and 21 NCAC 39.
- (9) "Backfill" means the soil that is placed in a trench or bed that surrounds or is on top of the dispersal media within the excavation up to the naturally occurring soil surface.
- (10) "Bed" means an excavation with a width greater than three feet containing dispersal media and one or more laterals.
- (11) "Bedroom" means any room defined as a sleeping room in the North Carolina Building Code.
- (12) "Building drain" means the lowest piping of a drainage system that receives the discharge from waste pipes inside the design unit and extends to 10 ft beyond the walls of the building or five feet for a building with a foundation and conveys the sewage to a building sewer.
- (13) "Building sewer" means the part of a drainage system that extends from the end of the building drain and conveys the discharge to a wastewater system.
- (14) "Certified Inspector" means a person authorized to inspect a wastewater system in accordance with G.S. 90A, Article 5, and applicable rules of the North Carolina On-Site Wastewater Contractors and Inspectors Certification Board.
- (15) "Clod" means a compact, coherent, mass of soil produced by digging, plowing, or other human land manipulation.
- (16) "Coastal region" means Beaufort, Bertie, Bladen, Brunswick, Camden, Carteret, Chowan, Columbus, Craven, Cumberland, Currituck, Dare, Duplin, Edgecombe, Gates, Greene, Halifax, Harnett, Hertford, Hoke, Hyde, Johnston, Jones, Lenoir, Martin, New Hanover, Northampton, Onslow, Pamlico, Pender, Pasquotank, Perquimans, Pitt, Richmond, Robeson, Sampson, Scotland, Tyrrell, Washington, Wayne, and Wilson counties.
- (17) "Collection sewer" means gravity flow pipelines, force mains, effluent supply lines, manholes, lift stations, and all appurtenances used for conveying wastes from the building drain or building sewer to and within a wastewater system. A collection system is a collection sewer.
- (18) "Complete data set" means analytical results for all required influent and effluent constituents as specified in the effluent standard for a specific site on a specific date. A data set may include other constituents specified in an RWTS or PIA Approval, permit, or other document.
- (19) "Component" means a part of a wastewater system. The component may be any part of the wastewater system, such as a collection sewer, pretreatment, dispersal field, etc.

- (20) "Composite sample" means commingled individual samples collected from the same point at different times. Samples may be of equal volume or may be proportional to the flow at time of sampling.
- (21) "Control system" means either conventional or accepted systems that are surveyed as part of a survey protocol identified in Rule .1706 of this Subchapter.
- (22) "Cover" means the soil that is placed at or above the naturally occurring soil surface to cover the wastewater system.
- (23) "Demand dosing" means a configuration in which a specific volume of effluent is delivered to a component based upon patterns of wastewater generation from the source and liquid level detection device settings.
- (24) "Department" means the North Carolina Department of Health and Human Services, as defined in G.S. 130A-334(1f). The mailing address for the Department is as follows: NCDHHS, Division of Public Health, On-Site Water Protection Branch, 1642 Mail Service Center, Raleigh, North Carolina 27699-1642.
- (25) "Design daily flow" means the unadjusted quantity of wastewater a facility is projected to produce in a 24-hour period upon which wastewater system sizing and design are based as determined in Section .0400 of this Subchapter.
- (26) "Design unit" means a discrete connection such as an individual dwelling unit, place of business, or place of public assembly on which wastewater DDF is based. Multiple design units may comprise a facility.
- (27) "Dispersal field" means the physical location where final treatment and dispersal of effluent occurs in the soil.
- (28) "Dispersal media" means the media used to provide void space through which effluent flows and may be stored prior to infiltration, such as washed gravel or crushed stone, products referenced in Section .0900 of this Subchapter, products approved pursuant to Section .1700 of this Subchapter, etc.
- (29) "Dispersal system" means the dispersal field and associated components that distribute effluent to and within the dispersal field. This includes a pump, pump tank, pressure manifold, distribution box, drip box, lateral, dispersal media, etc.
- (30) "Dose volume" means an amount of effluent delivered during a dosing event as determined by the liquid level detection device settings in a demand dosing system or by a timer in a timed dosing system.
- (31) "Dwelling unit" means any room or group of rooms located within a structure and forming a single, habitable unit with facilities which are used or intended to be used for living, sleeping, bathing, toilet usage, cooking, and eating.
- (32) "Effluent" means the liquid discharge from a pretreatment process, component, or system.
- (33) "Facility" means one or more design units located on a single or multiple lot(s) or tract(s) of land and served by a wastewater system comprised of one or more wastewater systems.
- (34) "Finished grade" means the final elevation of the land over the wastewater system after installation.
- (35) "Flow equalization" means a system configuration that includes sufficient storage capacity to allow for uniform flow to a subsequent component despite variable flow from the source.
- (36) "Full kitchen" means the appliances meet the requirements of North Carolina Food Code, Chapters 4-1 and 4-2.
- (37) "Grab sample" means a discrete sample collected at a specific time and location.
- (38) "Grease tank" means the tank located outside the facility that is used to reduce the amount of grease discharged to a wastewater system.
- (39) "Grease trap" means a device used inside the facility to reduce the amount of grease discharged to a wastewater system.
- (40) "Gravity distribution" means gravity flow of effluent to and within each lateral.
- (41) "Groundwater lowering system" means a type of artificial drainage system designed to lower the water table by gravity or, in conjunction with a pump, to maintain the vertical separation beneath a dispersal field.
- (42) "Horizon" means a layer of soil, parallel to the surface that has distinct physical, chemical, and biological properties or characteristics such as color, structure, texture, consistence, kinds and

number of organisms present, degree of acidity or alkalinity, etc., resulting from soil forming processes.

- (43) "Infiltrative surface" means the designated interface where effluent moves from dispersal media or a distribution device into treatment media, naturally occurring soil, or fill.
- (44) "Influent" means the sewage discharged to a pretreatment component.
- (45) "Installer" means a person authorized to construct, install, or repair a wastewater system in accordance with G.S. 90A, Article 5 and applicable rules of the North Carolina On-Site Wastewater Contractors and Inspectors Certification Board.
- (46) "Interceptor drain" means a type of artificial drainage designed to intercept and divert lateral moving groundwater or perched water away from the dispersal field or other system component to an effective outlet.
- (47) "Invert" means the lowest elevation of the internal cross-section of a pipe, fitting, or component.
- (48) "Jurisdictional wetland" means an area subject to the regulatory jurisdiction of the U.S. Army Corps of Engineers or DEQ.
- (49) "Ksat" or saturated hydraulic conductivity, means the rate of water flow through a unit cross sectional area of soil under saturated conditions. In-situ Ksat is measured in the field using clean water. Results of in-situ Ksat are used to simulate movement of effluent through the soil and may be used to field verify LTAR.
- (50) "Lateral water movement" means the movement of subsurface water downslope often associated with a less permeable horizon. Lateral water movement can be observed in a bore hole, excavation, or monitoring well on sloping sites.
- (51) "Lateral" means any pipe, tubing, or other device used to convey and distribute effluent in a dispersal field.
- (52) "Limiting condition" means soil conditions or site features that determine wastewater system design options. Soil conditions are morphology, depth, restrictive horizons, soil wetness, or organic matter content. Site features are topography, slope, landscape position, or available space.
- (53) "Lithochromic feature" means soil mottle or matrix associated with variations of color due to weathering of parent materials.
- (54) "Long Term Acceptance Rate" means the rate of effluent absorption by the soil, existing fill, or saprolite in a wastewater system after long-term use. The LTAR, in units of gpd/ft^2 , is assigned based upon soil textural class, structure, consistence, depth, percent coarse rock, landscape position, topography, and system type, and is used to determine the dispersal field sizing requirements, in accordance with applicable rules of this Subchapter.
- (55) "Local health department" means any county, district, or other health department authorized to be organized under the General Statutes of North Carolina.
- (56) "Management Entity" means the person, entity, company, or firm designated by the owner of the wastewater system who has primary responsibility for the operation of a wastewater system in accordance with this Subchapter, G.S. 90A, Article 3, and applicable rules of the Water Pollution Control System Operators Certification Commission. The Management Entity may be the owner, a public Management Entity, a certified operator, a management company, or an entity that employs certified operators. The Management Entity is or employs the operator in responsible charge for the wastewater system.
- (57) "Mass loading" means the total mass of one or more organic or inorganic effluent constituents delivered to the wastewater system over a specified period. It is computed by multiplying the total volume of flow during the specified period by the flow-weighted average constituent concentration in the same period. Units of measurement are pounds per day.
- (58) "Matrix" means a volume of soil equivalent to 50 percent or greater of the total volume of a horizon.
- (59) "Mean high-water mark" means, for coastal waters having six inches or more lunar tidal influence, the average height of the high-water over a 19-year period as may be ascertained from National Ocean Survey, U.S. Army Corps of Engineers tide stations data, or as otherwise determined under the provisions of the Coastal Area Management Act. The highest high-water mark as reported by the three agencies shall be applied.
- (60) "Media" means a solid material that can be described by shape, dimensions, surface area, void space, and application.

- (61) "Media filter" means a device that uses materials designed to treat effluent by reducing BOD₅ and removing TSS in an unsaturated environment. Biological treatment is facilitated via microbial growth on the surface of the treatment media.
- (62) "Mottle" means subordinate color of a differing Munsell color system notation in a soil horizon.
- (63) "Mountain region" means Alleghany, Ashe, Avery, Buncombe, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Swain, Transylvania, Watauga, and Yancey counties.
- (64) "Naturally occurring soil" means soil formed in place due to natural formation processes that is unaltered by filling, removal, or other artificial modification other than tillage.
- (65) "NEMA 4X" means an enclosure for an electrical control panel or junction box that meets standards for protection of equipment due to the ingress of water, including rain and hose-directed water, and an additional level of protection against corrosion, as set forth in NEMA Standard 250.
- (66) "NSF/ANSI 40 systems" means individual RWTS that are approved and listed in accordance with the standards adopted by NSF International for Class I residential wastewater treatment systems under NSF/ANSI Standard 40 and approved for use in accordance with G.S. 130A-342 and the rules of this Subchapter.
- (67) "Non-ground absorption system" means a system for waste treatment designed not to discharge to the soil, land surface, or surface waters, including approved vault privies, incinerating toilets, mechanical toilets, composting toilets, chemical toilets, and recycling systems.
- (68) "Normal water level" means the term as defined in 15A NCAC 02B .0610(28).
- (69) "Off-site system" means a wastewater system where any system component is located on property other than the lot where the facility is located.
- (70) "Ordinary high-water mark" means the line on the shore established by the fluctuations of water and indicated by physical characteristics such as: a natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; or the presence of litter and debris.
- (71) "Organic soils" means those organic mucks and peats consisting of more than 20 percent organic matter, by dry weight, and greater than or equal to 18 inches in thickness.
- (72) "Owner" means a person holding legal title to the facility, wastewater system, or property or his or her representative. The owner's representative is a person who holds power of attorney to act on an owner's behalf or an agent designated by letter or contract to act on the owner's behalf.
- (73) "Parallel distribution" means the distribution of effluent that proportionally loads multiple sections of a dispersal field at one time.
- (74) "Parent material" means the mineral and organic matter that is in its present position through rock decomposition or deposition by water, wind, or gravity.
- (75) "Ped" means a unit of soil structure, such as blocky, granular, prismatic, or platy formed by natural processes.
- (76) "Perched water table" means a zone of saturation held above the main groundwater body by a less permeable layer, impermeable rock, or sediment, which may or may not exhibit redoximorphic features.
- (77) "Person" means any individual, firm, association, organization, partnership, business trust, corporation, company, or unit of local government.
- (78) "Piedmont region" means Alamance, Alexander, Anson, Burke, Cabarrus, Caldwell, Caswell, Catawba, Chatham, Cleveland, Davidson, Davie, Durham, Forsyth, Franklin, Gaston, Granville, Guilford, Iredell, Lee, Lincoln, Mecklenburg, Montgomery, Moore, Nash, Orange, Person, Polk, Randolph, Rockingham, Rowan, Rutherford, Stanly, Stokes, Surry, Union, Vance, Wake, Warren, Wilkes, and Yadkin counties.
- (79) "Pressure dispersal" means a system utilizing an effluent pump or siphon to distribute effluent uniformly to the infiltrative surface in the dispersal field through a pressurized pipe network.
- (80) "Pressure dosed gravity distribution" means pressure delivery of effluent to a manifold, distribution box, or other splitter with subsequent gravity distribution within one or more laterals to the infiltrative surface.
- (81) "Public management entity" means a public entity legally authorized to operate and maintain wastewater systems, including a city pursuant to G.S. 160A, Article 16, a county pursuant to G.S. 153A, Article 15, an interlocal contract pursuant to G.S. 160A, Article 20, a joint management agency pursuant to G.S. 160A, Article 20, a county service district pursuant to G.S. 153A, Article

16, a county water and sewer district pursuant to G.S. 162A, Article 6, a sanitary district pursuant to G.S. 130A, Article 2, Part 2, a water and sewer authority pursuant to G.S. 162A, Article 1, a metropolitan water district pursuant to G.S. 162A, Article 4, a metropolitan sewerage district pursuant to G.S. 162A, Article 5A, a public utility pursuant to G.S. 62, Article 1, a county or district health department pursuant to G.S. 130A, Article 2, or any other public entity legally authorized to operate and maintain wastewater systems.

- (82) "Raw sewage lift stations" means a dosing system that is designed to move untreated sewage from a lower elevation to a higher elevation. Raw sewage lift stations are installed prior to any wastewater treatment.
- (83) "RCW systems" means advanced pretreatment systems approved by the Department in accordance with Section .1700 of this Subchapter that meet RCW effluent standards in Rule .1002 of this Subchapter.
- (84) "Redoximorphic features" means a color pattern of a horizon due to a depletion or concentration of pigment compared to the matrix color, formed by oxidation and reduction of Fe coupled with its removal, translocation, or accrual, or a soil matrix color controlled by the presence of Fe⁺². Redox depletions are a type of redoximorphic feature.
- (85) "Repair area" means an area that has been classified suitable consistent with the Rules in this Subchapter that is reserved for the extension, alteration, wastewater system relocation, or replacement of part or all of the initial wastewater system. The repair area shall be available to be used in the event of a malfunction or if a wastewater system is partially or totally destroyed.
- (86) "Residential Wastewater Treatment Systems" means approved individual advanced pretreatment systems that are covered under standards of NSF International, in accordance with G.S. 130A-342 and applicable Rules in this Subchapter.
- (87) "Restrictive horizon" means a soil horizon that is capable of perching groundwater or effluent and that is brittle and strongly compacted or strongly cemented with iron, aluminum, silica, organic matter, or other compounds. Restrictive horizons may occur as fragipans, iron pans, or organic pans, and are recognized by their resistance in excavation or in using a soil auger.
- (88) "Rock" means the body of consolidated or partially consolidated material composed of minerals at or below the land surface. Rock includes bedrock and partially weathered rock that is hard and cannot be dug with hand tools. The upper boundary of rock is saprolite, soil, or the land surface.
- (89) "Saprolite" means the body of porous material formed in place by weathering of rock that has a massive, rock-controlled structure and retains the arrangement of minerals of its parent rock in a minimum of 50 percent of its volume. Saprolite can be dug with hand tools. The lower limit of saprolite is rock and its upper limit is soil or the land surface.
- (90) "Septic tank" means a structurally sound, water-tight, covered receptacle, approved in accordance with Section .1400 of this Subchapter. A septic tank is designed for primary treatment of wastewater and is constructed to:
- (a) receive the discharge of wastewater from a building;
 - (b) separate settleable and floating solids from the liquid;
 - (c) digest organic matter by anaerobic bacterial action;
 - (d) store digested solids through a period of detention; and
 - (e) allow effluent to discharge for additional treatment and final dispersal.
- (91) "Septic tank effluent pump" means a collection system that uses a septic tank to separate solids and incorporates a pump vault, pump, and associated devices to convey effluent under pressure to a subsequent component.
- (92) "Sequential distribution" means the distribution method in which effluent is loaded into one trench and fills it to a predetermined level before passing through a drop box or relief device to the succeeding trench at a lower elevation. All trenches are fed from the same side.
- (93) "Setback" means the minimum horizontal separation distance between the wastewater system and features listed in Section .0600 of this Subchapter.
- (94) "Settling tank" means a septic tank designed for use in conjunction with a RWTS. A settling tank is not required to meet the design requirements of a septic tank.
- (95) "Serial distribution" means the distribution method in which effluent is loaded into one trench and fills it to a predetermined level before passing through a pipe to the succeeding trench at a lower elevation.
- (96) "Site" means the area in which the wastewater system is located, including the repair area.

- (97) "Soil" means the naturally occurring body of unconsolidated mineral and organic materials on the land surface. Soil is composed of sand-, silt-, and clay-sized particles that are mixed with varying amounts of larger fragments and some organic material. Soil contains less than 50 percent of its volume as rock, saprolite, or coarse-earth fraction. The coarse-earth fraction are mineral particles greater than 2.0 millimeters. The upper limit of the soil is the land surface, and its lower limit is rock, saprolite, or other parent materials.
- (98) "Soil consistence" means the degree and kind of cohesion and adhesion that a soil exhibits.
- (99) "Soil series" means an official series name established by USDA-NRCS.
- (100) "Soil structure" means the arrangement of primary soil particles into compound particles, peds, or clusters that are separated by natural planes of weakness from adjoining units.
- (101) "Soil textural classes" means soil classification based upon size distribution of mineral particles in the fine-earth fraction less than two millimeters in diameter. The fine-earth fraction includes sand, silt, and clay particles. Sand particles are 0.05 – 2.0 mm in size, silt particles are 0.002 – 0.05 mm in size, and clay particles are less than 0.002 mm in size.
- (102) "Stream" means a body of concentrated flowing water in a natural low area or natural or manmade channel on the land surface. This includes ephemeral, intermittent, and perennial streams as those terms are defined at 15A NCAC 02B .0233(2)(d), (g), and (i), respectively, as well as streams which have been modified by channeling, culvert installation, or relocation.
- (103) "Structurally sound" means a tank that has been installed in accordance with the tank manufacturer's requirements and is able to withstand a minimum uniform live loading of 150 pounds per square foot in addition to all loads to which an underground tank is normally subjected, such as dead weight of the material and soil over the tank, active soil pressure on tank walls, and the uplifting force of groundwater.
- (104) "Surface water diversion" means a natural or constructed drainage feature used to divert surface water, collect runoff, and direct it to an effective outlet. Surface water diversions include waterways, berms, swales, and ditches. Surface water diversions are a type of artificial drainage.
- (105) "TS-I systems" means advanced pretreatment systems approved by the Department in accordance with Section .1700 of this Subchapter that meet TS-I effluent standards in Table XXV of Rule .1201(a) of this Subchapter.
- (106) "TS-II systems" means advanced pretreatment systems approved by the Department in accordance with Section .1700 of this Subchapter that meet TS-II effluent standards in Table XXV of Rule .1201(a) of this Subchapter.
- (107) "Telemetry" means the ability to contact by phone, email, or another electronic medium. The telemetry unit shall continue alarm notifications to the designated party until the alarm condition is remedied or the telemetry unit is physically turned off.
- (108) "Test system" means the dispersal system proposed for accepted status as part of a survey protocol identified in Rule .1706 of this Subchapter.
- (109) "Third-party" means a person or entity engaged in testing or evaluation that may be compensated for their work product that is independent of the parties for whom testing or evaluation is performed and does not otherwise benefit regardless of the outcome. The third-party person or entity has knowledge of the subject area based upon relevant training and experience.
- (110) "Timed dosing" means a configuration in which a specific volume of effluent is delivered to a component based upon a prescribed interval, regardless of facility water use variation over time.
- (111) "Treatment media" means the media used for physical, chemical, and biological treatment in a wastewater treatment component.
- (112) "Trench" means an excavation with a width less than or equal to three feet containing dispersal media and one or more laterals.
- (113) "Underground utility" means any underground line, system, or infrastructure used for producing, storing, conveying, transmitting, identifying, locating, or distributing communication, electricity, gas, petroleum or petroleum products, hazardous liquids, water, steam, or sewage.
- (114) "Unstable slopes" means areas showing indications of mass downslope movement such as debris flows, landslides, and rock falls.
- (115) "Vertical separation" means the depth beneath the dispersal field infiltrative surface to a LC.
- (116) "Warming kitchen" means a kitchen that does not meet the requirements of North Carolina Food Code, Chapters 4-1 and 4-2.

- (117) "Water main standards" means design criteria for pipe and pipe joints and associated installation procedures used in potable water systems and that have been approved by North Carolina DEQ Public Water Supply Section in accordance with 15A NCAC 18C.
- (118) "Watertight" means that no water moves into or out of the structure or device, except through designated inlets and outlets. Watertight tanks shall demonstrate compliance with the leak testing requirements in Rule .0805 of this Subchapter.

*History Note: Authority G.S. 130A-335(e) and (f);
Eff. January 1, 2024.*