

7.0 Glossary

Reference: (Pierce County Stormwater Management and Site Development Manual, 2008.)

Applicant - The person, party, firm, corporation, or other legal entity that proposes to develop property in unincorporated Pierce County by submitting an application.

Appurtenances - Machinery, appliances, or auxiliary structures attached to a main structure, (but not considered an integral part thereof), for the purpose of enabling it to function.

Aquifer - A geologic stratum containing groundwater that can be withdrawn and used for human purposes.

As-built Drawings - As-constructed engineering plans that include all changes made to a project during construction and submitted to the County. All drawing changes shall be made by a Professional Engineer or Land Surveyor.

Backwater - Water upstream from an obstruction which is deeper than it would normally be without the obstruction.

Base Flood - The flood having a one percent chance of being equaled or exceeded in any given year, also referred to as the "100-year flood". Designation on maps will always include the letter "A".

Base Flood Elevation - The water surface elevation, in feet, above mean sea level for the base flood. Referenced to the National Geodetic Vertical Datum of 1929 (or Pierce County Datum or United States Coast and Geodetic Survey 1929 Datum which are the same).

Basin - An area from which surface runoff is concentrated, usually to a single point such as the mouth of a stream.

Bench - A relatively level step excavated into natural earth or fill material.

Berm - A constructed barrier of compacted earth.

Best Management Practice (BMP) - Physical, structural, and/or managerial practices approved by the Department of Ecology (DOE) that, when used singly or in combination, prevent or reduce pollution of water.

Biofilter - A designed, vegetated treatment facility where the more or less simultaneous processes of filtration, infiltration, adsorption and biological uptake of pollutants in stormwater takes place during the conveyance of concentrated or sheet flowing stormwater.

Biofiltration - The process of reducing pollutant concentrations in water by filtering the polluted water through biological materials.

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BMP - Best Management Practice.

Bollard - A post (may or may not be removable) used to prevent vehicular access.

Buffer - The zone contiguous with a sensitive area that is required for the continued maintenance, function, and structural stability of the sensitive area.

Catchment - Surface drainage area.

Catch line - The point where a severe slope intercepts a different, more gentle slope.

Certification - A written engineering opinion, stamped, signed, and dated by an engineer, concerning the progress or completion of work.

Channel - A surface feature that conveys surface water and is open to the air.

Channel, constructed - Channels or ditches constructed (or reconstructed natural channels) to convey surface water.

Channel, natural - Streams, creeks, or swales that convey surface/groundwater and have existed long enough to establish a stable route and/or biological community.

Check Structure - A dam (e.g. rock, earthen, log) used in channels to reduce water velocities, promote sediment deposition, and/or enhance infiltration.

Clearing - The removal of vegetative material such as timber (including stumps), brush, sod, etc., that does not require reforestation per an approved Forest Practices Application/notification issued by the Department of Natural Resources.

Closed Basin - A basin for which there is no surface water outlet.

Closed Depression - An area which is low lying and either has no, or such a limited, surface water outlet that during storm events the area acts as a retention basin.

Compaction - The condensing of fill by mechanical means.

Constructed Wetland - Those wetlands intentionally created on sites previously without wetlands for the primary purpose of stormwater treatment and managed as such. Constructed wetlands are normally considered as part of the stormwater collection and treatment system and are subject to maintenance requirements. (These wetlands are not the same as wetlands created for mitigation purposes, which are typically viewed in the same manner as natural, regulated wetlands).

Conveyance - A mechanism for transporting water from one point to another, including pipes, ditches, channels, culverts, gutters, manholes, weirs, man-made and natural channels, water quality filtration systems, dry wells, etc.

Conveyance System - The drainage facilities, both natural and man-made, which collect, contain, and provide for the flow of surface and stormwater from the highest points on the land down to a receiving water.

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County, The - "County" means the Pierce County Executive or designee; also Pierce County, its duly authorized representatives, and the jurisdictional boundaries of Pierce County.

Critical Areas - As defined by P.C.C. Title 18E, Development Regulations - Critical Areas.

Critical Habitat - Habitat necessary for survival of endangered, threatened, rare, sensitive, or monitored species.

Culvert - Pipe or concrete box structure which drains open channels, swales, or ditches under a roadway or embankment. Typically with no catch basins or manholes along its length.

Dead Storage - The volume available in a depression in the ground below any conveyance system, or surface drainage pathway, or outlet invert elevation that could allow the discharge of surface and stormwater runoff.

Dedication - Is the deliberate appropriation of land by an owner for any general and public uses, reserving to himself no other rights than those compatible with the full exercise and enjoyment of the public uses to which the property has been devoted. To show the intent to dedicate, the owner shall file or final plat (or short plat) showing the land to be dedicated. Public acceptance shall be shown by the approval of the plat for filing by the appropriate governmental unit.

Design Engineer (Project Engineer) - The professional civil engineer licensed in the State of Washington who prepares the analysis, design, and engineering plans for an applicant's permit or approval submittal.

Design Event - A synthetic precipitation event (storm) represented by the jurisdiction's designated hyetograph for use in designing a drainage facility.

Detention Facility - A facility (e.g. pond, vault, pipe) in which surface and stormwater is temporarily stored and released at a controlled rate.

Detention Time - The theoretical time required to displace the contents of a stormwater treatment facility at a given rate of discharges (i.e. drawdown time).

Detention Pond - A detention facility in the form of an open pond.

Developer - The person or legal entity who holds title to the property or has a sufficient interest in the project to propose the project. The developer of the project.

Development - Any man-made change to improved or unimproved real estate including, but not limited to, buildings or other structures, placement of manufactured home/mobile home, mining, dredging, clearing, filling, grading, paving, excavation, drilling operations, or the subdivision of property. See also the definitions for new development, redevelopment and land disturbing activities.

Dispersed discharge - The release of surface and storm water runoff from a drainage facility system that allows the runoff to spread over a wide area. The area is located so the flow does not concentrate anywhere upstream of an erodible drainage channel.

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Disturbed Area - An area inside project boundaries altered from its natural state.

Ditch - A long narrow excavation dug in the earth for drainage with its top width less than 10 feet at design flow.

Drainage - Refers to the collection, conveyance, containment, and/or discharge of surface and storm water runoff.

Drainage Basin - A geographic and hydrologic sub unit of a watershed.

Drainage Channel - A drainage pathway with well-defined bed and banks indicating frequent conveyance of surface and storm water runoff.

Drainage Course - A pathway for watershed drainage characterized by wet soil vegetation; often intermittent in flow.

Drainage Easement - A legal encumbrance that is placed against a property's title to reserve specified privileges for the users and beneficiaries of the drainage facilities contained within the boundaries of the easement.

Drainage Pathway - The route that surface and stormwater runoff follows down slope when leaving any part of the site.

Drainage System - Refers to the combination of Best Management Practices, collection, conveyance, retention, detention, treatment and outfall features or structures on a project.

Drop Structure - A structure for dropping water to a lower level and dissipating its surplus energy; a fall. A drop may be vertical or inclined.

Dry Pond - A detention facility which drains dry after a storm.

Earth/Earth Material - Means naturally occurring rock, soil, stone, dirt, or a combination thereof.

Earthwork - Any operation involving the excavation, grading, filling, or moving of earth materials.

Easement - The legal right to use a described piece of land for a particular purpose. It does not include fee ownership, but may restrict the owner's use of the land. All easements granted pursuant to the Manual shall be legally recorded with the County Auditor.

Easement, Private - An interest in the land of someone else, usually for the benefit of one or more individuals, and constitutes an encumbrance on another's land.

Embankment - A structure of earth, gravel, or similar material raised to form a pond bank or foundation for a road, building pad, or similar fill for a particular use.

Energy Dissipater - Any means by which the total energy of flowing water is reduced. In stormwater design, they are usually mechanisms that reduce velocity prior to, or at,

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discharge from an outfall in order to prevent erosion. They include rock splash pads, drop manholes, concrete stilling basins or baffles, and check dams.

Engineer - A professional civil engineer, currently licensed by the State of Washington, retained by and acting on behalf of the Applicant. The term “engineer” also means design engineer and project engineer.

Environmentally Sensitive Area (sensitive area) - As defined by ordinance or resolution by the County.

Erosion - Detachment of soil or rock fragments by water, wind, ice and gravity.

Erosion/Sedimentation Control - Any temporary or permanent measures taken to reduce erosion, control siltation and sedimentation, and ensure that sediment-laden water does not leave the site.

Erosion/Sedimentation Control Facility - A type of drainage facility designed to hold water for a period of time to allow sediment contained in the surface and storm water runoff directed to the facility to settle out so as to improve the quality of the runoff.

ESC - Erosion and Sediment Control (Plan) - See Drainage and Erosion/Sediment Control Plan.

Eutrophication - Refers to the process where nutrient over enrichment of water leads to excessive growth of aquatic plants.

Experimental Best Management Practice (BMP) - A BMP that has not been tested and evaluated by the Department of Ecology in union with local governments and technical experts.

Filter Fabric - A woven or non-woven, water-permeable material, generally made of synthetic products such as polypropylene and used in stormwater management and erosion and sediment control applications to trap sediment or prevent the clogging of aggregates by fine soil particles. See the WSDOT State Standard Specifications and Amendments, specifically, Section 9-33 Construction Geotextiles.

Filter Fabric Fence - A temporary sediment barrier consisting of filter fabric stretched across and attached to supporting posts and entrenched. The filter fence is constructed of stakes and synthetic filter fabric with a rigid wire fence backing where necessary for support.

Flow Control Manhole - A manhole with a flow regulating device or system such as weirs and orifice plates.

Freeboard - The vertical distance between the design water surface elevation and the elevation of the barrier which contains the water.

Frequency of Storm (Design Storm Frequency) - The anticipated period in years that will elapse, based on average probability of storms in the design region, before a storm of a given intensity and/or total volume will recur.

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Grading - Any excavating, filling, clearing, or creating of impervious surfaces or combination thereof.

Groundwater - The underground water usually found in aquifers. Groundwater usually originates from infiltration. Wells tap the groundwater for water supply uses.

Grubbing - The removal and disposing of all unwanted vegetative matter from underground, such as sod, stumps, roots, buried logs, or other debris.

Gully - A channel caused by the concentrated flow of surface and stormwater runoff over unprotected erodible land.

Habitat - The specific area or environment in which a particular type of plant or animal lives. The sum total of all the environmental factors of a specific place that is occupied by an organism, a population or a community. An organism's habitat must provide all of the basic requirements for life.

Hardpan - A cemented or compacted and often clay-like layer of soil that is impenetrable by roots.

Harmful Pollutant - A substance that has adverse effects to an organism including immediate death, chronic poisoning, impaired reproduction, cancer or other effects.

Hyetograph - A graph of percentages of total precipitation for a series of time steps representing the total time in which precipitation occurs.

Illicit Discharge - All non-stormwater discharges to stormwater drainage systems that cause or contribute to a violation of state water quality, sediment quality or ground water quality standards.

Impervious - A surface which cannot be easily penetrated. For instance, rain does not readily penetrate paved surfaces.

Impervious Surface - A hard surface area which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development. A hard surface area which causes water to run off the surface in greater quantities or at an increased rate of flow than the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, gravel parking lots, packed earthen materials, and oiled, macadam or other surfaces which similarly impede the natural infiltration of stormwater. Open, uncovered retention/detention facilities shall not be considered as impervious surfaces.

Impoundment - A natural or man-made containment for surface water.

Improved Property - Land from which runoff has been permanently increased through the actions of man.

Improvement - Any thing or structure constructed for the benefit of all or some residents of the subdivision or the general public such as but not limited to roads, alleys, storm

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drainage systems and ditches, sanitary sewer pipes or main lines, and storm drainage containment facilities.

Infiltration - The downward movement of water from the surface to the subsoil.

Infiltration Facility (or System) - A drainage facility designed to use the hydrologic process of surface and stormwater runoff soaking into the ground, commonly referred to as percolation, to dispose of surface and stormwater runoff.

Ingress/egress - The points of access to and from a property.

Inlet - A form of connection between the surface of the ground and a drain or sewer for the admission of surface and stormwater runoff.

Junction - Point where two or more drainage pipes or channels converge (e.g. manhole).

Land Disturbing Activity - Any activity that results in a change in the existing soil cover (both vegetative and non vegetative) and/or the existing soil topography. Land disturbing activities include, but are not limited to, demolition, construction, clearing, grading, filling and excavation.

Landscaping - The improvement or installation on a parcel or portion thereof of objects or vegetation for decorative or ornamental effect. Examples include: trees, bushes, shrubs, flowers, grass, weeds, ornamental rocks or figures, and low-lying ground cover, sprinkler systems, sidewalks, and lighting fixtures.

Lined Pond, Conveyance - A lined pond or conveyance system is one in which the bottom and sides of the facility have been made impervious to the transmission of liquids.

Live Storage - The amount of storage in a detention facility that is intended to completely drain after a storm event.

Natural Buffer Area (NBA) - A parcel or strip of land that is designated to permanently remain in an undisturbed and untouched condition. No building, clearing, filling, or grading is permitted within this area, except for minor firewood harvest and watercourse maintenance when applicable. Roads, septic tank drain field areas, and reserved drain field areas are not permitted in natural buffer areas.

Natural Channel - Stream, creek, river, lake, wetland, estuary, gully, swale, ravine, or any open conduit where water will concentrate and flow intermittently or continuously.

Natural Location - The location of those channels, swales, and other non-manmade conveyance systems as defined by the first documented topographic contours existing for the subject property, either from maps or photographs, or such other means as appropriate.

Non-Stormwater Discharge - Wash down water and other wastewater that enters the drainage system.

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Nutrients - Essential chemicals needed by plants or animals for growth. Excessive amounts of nutrients can lead to degradation of water quality and the growth of excessive numbers of algae. Some nutrients can be toxic at high concentrations.

Off-site - Any area lying upstream of the site that drains onto the site and any area lying downstream of the site to which the site drains.

Oil Water Separator - A structure or device used to remove oil and greasy solids from water.

On-site - The entire property that includes the proposed development.

Orifice - An opening with closed perimeter, usually sharp-edged, and of regular form in a plate, wall, or partition through which water may flow, generally used for the purpose of measurement or control of such water.

Outfall - The point where water flows from a manmade conduit, channel, or drain into a water body or other natural drainage feature. (See Natural Channel)

Overtopping - To flow over the limits of a containment or conveyance element.

Perviousness - Related to the size and continuity of void spaces in soils; related to a soil's infiltration rate.

Post-Development Conditions - The condition of site after the project has been constructed.

Pothole - A closed basin. See also closed depression and/or basin.

Professional Civil Engineer - A person registered with the State of Washington as a Professional Engineer in Civil Engineering.

Public Storm Drainage Facility - A conveyance, system of conveyances, or stormwater control facility(ies) (including roads with drainage systems, , catch basins, curbs, gutter, ditches, man-made channels, storm drains, retention/detention facilities and infiltration facilities) owned and operated by the County, which is (are) designed or used for collection, storage, conveyance and treatment of storm water.

Recharge - The flow to groundwater from the infiltration of surface and stormwater runoff.

Regional Detention and/or Retention Facility - Stormwater detention and/or retention or water quality control facility designed to manage runoff from large tracts of land.

Retention - The process of collecting and holding surface and stormwater runoff with no surface outflow.

Retention/Detention Facility - A facility with an outlet to surface water but which is intended to primarily discharge to groundwater and evaporation.

Retention Facility - A facility with no outlet to surface water and which is intended to discharge to groundwater and/or evaporation.

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Retention Pond - A retention facility that is an open pond.

Retrofitting - The renovation of an existing structure or facility to meet changed conditions or to improve performance.

Riprap - A facing layer or protective mound of stones placed to prevent erosion or sloughing of a structure or embankment due to flow of surface and stormwater runoff.

Runoff - Water originating from rainfall and other precipitation that is found in drainage facilities, rivers, streams, springs, seeps, ponds, lakes and wetlands as well as shallow ground water.

Scour - Erosion of channel banks due to excessive velocity of the flow of surface and stormwater runoff.

Sediment - Fragmented material that originated from weathering and erosion of rocks or unconsolidated deposits, and is transported by, suspended in, or deposited by water.

Sedimentation - The depositing or formation of sediment.

Sensitive Area - Those areas designated by resolution or ordinance of the Pierce County Council pursuant to Washington Administrative Code 197-11-908 and Pierce County Code, Chapter 18E24 or the most recent amendments thereto. See Environmentally Sensitive Area.

Sheet Erosion - The relatively uniform removal of soil from an area without the development of conspicuous water channels.

Site - Any parcel or combination of contiguous parcels where grading, filling, clearing, or creation of an impervious surface is proposed, and which may be controlled by more than one property owner.

Site Development Plan - Site development plans shall include the following, as specifically required by the County in each instance: Site plan, erosion and sedimentation control plan, grading plan, storm drainage plan, stormwater drainage control report, soils report, flood study, road construction plans, entering sight distance variances and verifications, and other documents required in the review of proposed development of the property.

Slope - An inclined earth surface, the inclination of which is expressed as the ratio of horizontal distance to vertical distance. The gradient in feet per foot or expressed as percent.

Sloughing - The sliding of overlying material. It is the same effect as caving, but it usually occurs when the bank or an underlying stratum is saturated or scoured.

Soil Permeability - The ease with which gases, liquids, or plant roots penetrate or pass through a layer of soil.

Standard Plans and Standard Specifications - The most recent edition of the *Standard Plans for Road, Bridge, and Municipal Construction* and the *Standard Specifications for*

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Road, Bridge, and Municipal Construction by Washington State Department of Transportation in cooperation with the American Public Works Association, and as amended by Pierce County.

Steep Slope - Slopes of 40% gradient or steeper.

Storm Drain System - The system of gutters, pipes, streams, or ditches used to carry surface and storm water from surrounding lands to streams, lakes, or Puget Sound.

Storm Drains - The enclosed conduits that transport surface and stormwater runoff toward points of discharge (sometimes called storm sewers).

Stormwater - That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, channels or pipes into a defined surface water channel, or a constructed infiltration facility.

Stormwater Management Manual for the Puget Sound Basin - The manual as prepared by the Department of Ecology (DOE) that contains BMPs to prevent, control or treat pollution in stormwater.

Structure - A catch basin or manhole in reference to a storm drainage system.

Stub-out - A short length of pipe provided for future connection to the storm drainage system.

Sub-basin - A drainage area which drains to a point contained within a larger basin.

Suspended Solids - Organic or inorganic particles that are suspended in and carried by the water. The term includes sand, mud, and clay particles (and associated pollutants) as well as solids in stormwater.

Swale - A shallow drainage conveyance with relatively gentle side slopes, generally with flow depths less than one foot.

Toe of Slope - A point or line of slope in an excavation or cut where the lower surface changes to horizontal or meets the existing ground slope.

Top of Slope - A point or line on the upper surface of a slope where it changes to horizontal or meets the original surface.

Treatment BMP - A BMP that is intended to remove pollutants from stormwater.

Water Quality - The chemical, physical, and biological characteristics of water, usually in respect to its suitability for a particular purpose.

Water Quality BMP - A BMP specifically designed to control the quality of runoff.

Water Quality Design Storm - The 6-month, 24-hour design storm.

Water Quantity BMP - A BMP specifically designed to control the quantity of runoff.

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Watershed - A geographic region within which water drains into a particular river, stream, or body of water as identified and numbered by the State of Washington Resource Inventory Areas (WRIA) as defined in Chapter 173-500 WAC.

Wetlands – An area inundated or saturated by ground or surface water at a frequency and duration sufficient to support, and that under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Wet Pond - A stormwater treatment pond designed to maintain a continuous or seasonal water level below the pond outlet elevation.

W.S.D.O.T. Specifications - The requirements or standards of the latest edition of the Washington State Department of Transportation Standard Plans and Specifications.