APPENDIX A
Glossary

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Glossary of Terms Used

100-Year Flood, a.k.a. Base Flood	The flood having a one-percent chance of being equaled or exceeded in any given year
303(d) List	Section 303(d) of the federal Clean Water Act requires Washington State periodically to prepare a list of all surface waters in the state for which beneficial uses of the water – such as for drinking, recreation, aquatic habitat, and industrial use – are impaired by pollutants. These are water quality limited estuaries, lakes, and streams that fall short of state surface water quality standards, and are not expected to improve within the next two years.
4(d) Rule	In the federal Endangered Species Act, the protective rule promulgated by the lead federal agency at the time it makes a final decision to list a species as threatened. The 4(d) Rule can be a restatement of Section 9(a) prohibitions on take of a species, but also can specify activities which have been determined to be adequately regulated and given legal coverage for the (incidental take) of the listed species.
Aquatic	Pertaining to water
Aquifer	A saturated permeable material (often sand, gravel, sandstone, or limestone) that contains and carries groundwater and acts as a water reservoir.
A-Zone	The areas inundated by the 100-year flood.
Backwater	Stream water, obstructed by some downstream hydraulic control, that is slowed or stopped from flowing at its normal, open-channel flow condition.

Bankfull Discharge	Sometimes referred to as the effective flow or ordinary high water flow; it is the channel-forming flow. For most streams, the bankfull discharge is the flow that has a recurrence interval of approximately 1.5 years. Most bankfull discharges have a recurrence range between 1.3 and 1.8 years. In some areas it could be lower or higher than this range. Bankfull discharge is the flow that transports the most sediment for the least amount of energy.
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" The base flood surface water elevation is measured in feet above mean sea level and referenced to the National Geodetic Vertical Datum of 1929 (or the most current vertical datum accepted by Pierce County.
Base Flood Elevation (BFE)	Water surface elevation of the base flood (100-year flood); the elevation which is the basis of the insurance and floodplain management requirements of the National Flood Insurance Program.
Base Flow	The portion of the stream flow that is not due to storm runoff and is supported by groundwater, large lakes, and swamp seepage into a channel
Basin	A geographic and hydrologic sub unit of a watershed, shortened reference to drainage basin
Best Management Practices (BMPs)	Physical, structural, or managerial practices which have gained general acceptance for their ability to prevent or reduce environmental impacts.
BMPs	See Best Management Practices.
Buffer	"Buffer" means a tract or strip of land that separates one type, category or use of land from another. Buffers typically serve to provide a defined area between a more intensive use of land and a land use that is less intensive. Buffers are typically referenced by the associated critical area such as wetland buffer, riparian buffer, etc.

B-Zone	Certain areas subject to the "base flood" with contributing drainage areas of more than 100 acres and less than one square mile and all pothole areas
Capital Improvement Project (CIP)	A project funded by Pierce County Water Programs intended to improve the physical plant of the drainage system, the performance of that system, and/or reduce site specific or cumulative adverse stormwater impacts
Carrying Capacity	The level of development density or use an environment is able to support without suffering undesirable or irreversible degradation
cfs	Cubic feet per second. Units assigned to the volume of water that flows past a fixed point in a stream channel, drainage outlet or other water flow path every second; equivalent to 449 gallons per minute (gpm)
Channel	"Natural or artificial waterway of perceptible extent that periodically or continuously contains moving water. It has a definite bed and banks that serve to confine water."
Channel Erosion	The widening, deepening and headward cutting of small channels and waterways due to erosion caused by moderate to large floods
Channel Morphology	The shape and gradient of a channel that forms due to streamflow forces and the composition of the underlying channel substrate.
Channelization	The straightening, deepening, or widening of a stream channel for the purpose of increasing the stream's carrying capacity
Clearing	The removal of timber, brush, grass, ground cover, or other vegetative matter from a site, which exposes the earth's surface on the site
Confluence	The location where two streams meet.
Conservation	Includes protection, maintenance and restoration of habitat characteristics to support the species of interest

Consistency	No feature of a plan or regulation is incompatible with any other feature of a plan or regulation *(WAC 365-195-210)*
Contaminant	Any chemical, physical, biological, or radiological substance that does not occur naturally or occurs at concentrations and duration as to be injurious to human health or welfare or shown to be ecologically damaging
Conveyance Capacity	A term generally referring to the maximum capability of the physical drainage system to safely transport water (from a hydraulic perspective)
Corridor (Landscape)	Landscape elements that connect similar patches of habitat through an area with different characteristics; for example, streamside vegetation may create a corridor of willows and hardwoods between meadows or through a forest.
Critical Areas	Wetlands, flood hazard areas, fish and wildlife habitat areas, aquifer recharge areas, and geologically hazardous areas
Culvert	A single length of pipe open to the ground surface at both ends carrying streamflow under a road grade or other type of fill embankment. Typically, no manholes or catch basins are installed along its length.
Degradation	The lowering of the streambed or widening of the stream channel by erosion. The breakdown and removal of soil, rock and organic debris.
Detention Facility	A facility (e.g., pond, vault, pipe) in which surface and stormwater are temporarily stored and released at a controlled rate
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, fillings, grading, paving, excavation, drilling operations, or the subdivision of property.

Development Regulations	Any controls placed on development or land use activities by a county or city, including, but not limited to, zoning ordinances, subdivision ordinances, and binding site plan ordinances *(RCW 36.70.030)*
Discharge	Flow rate of a stream or stormwater system, usually measured in cubic feet per second
Drainage Inventory	Data on public storm drainage system describing type, size, and location of facilities.
Easement	The legal right to use a specified piece of land for a particular purpose.
Ecosystem	A biological community together with the chemical and physical environment with which it interacts.
Effectiveness Monitoring	The evaluation of whether an action achieved the desired effect. For example, in a sediment reduction project, effectiveness monitoring would determine whether sediment supply was actually reduced.
Ephemeral Stream Channel	A dry stream course, except during or immediately after extreme rainfall or surfacing groundwater due to heavy annual rainfall; often no ordinary high water mark is evident. See also intermittent stream channel.
Erosion	Detachment of soil or rock fragments by water, wind, ice and gravity
Erosion & Sedimentation Control Facility	A type of drainage facility designed to hold water for a period of time to allow sediment contained the surface and stormwater runoff directed to the facility to settle out and improve the quality of the runoff
Fecal Coliform	Minute living organisms associate with human or animal feces that are used as an indirect indicator of the presence of other disease causing bacteria
Federal Emergency Management Agency (FEMA)	Independent agency created in 1978 to provide a single point of accountability for all federal activities related to disaster mitigation and emergency preparedness, response and recovery

Fill	Earth, sand, gravel, rock, asphalt, or other solid material placed to raise the ground elevation or to replace excavated material
Fish & Wildlife Habitat Areas	The areas identified as being of critical importance to maintenance of fish, wildlife, and plant species, including: areas with which endangered, threatened, and sensitive species have a primary association; habitats and species of local importance; commercial and recreational shellfish areas; kelp and eelgrass beds, herring and smelt spawning areas; naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat; waters of the state; lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity, or private organization; state natural area preserves and natural resource conservation areas.
Fish Passage Barrier	An obstacle that prevents fish from moving either upstream or downstream, such as certain dams, weirs, floodgates, roads, bridges, causeways and culverts.
Flood	An overflow or inundation that comes from a river or any other source, including but not limited to streams, tides, wave action, storm drains, or excess rainfall.
Flood Control	Physically controlling a river or stream by structural means such as dikes and levees, which separate people and property from damaging floodwater
Flood Elevation	Height of flood waters above an elevation datum plane
Flood Hazard Management	A comprehensive approach to flood control issues that encompasses both flood control management and floodplain management and uses both structural and nonstructural methods of reducing flood hazards. Flood hazard management is not limited to areas within the floodplain but can extend to the entire watershed. Stormwater management is also included because the control of the quantity and quality (sediment load) of stormwater runoff into streams and rivers can have significant impacts on stream and river flooding.
Flood Insurance Rate Map (FIRM)	"Flood Insurance Rate Map (FIRM)" means the official map on which the Federal Insurance Administration has delineated areas of special flood hazard and the risk premium zones applicable to Pierce County.

Flood prone Area	Generally includes the active floodplain and the flood fringe. The elevation of the flood prone area is qualitatively defined as 2 times the bankfull depth.
Flooding or Erosion Impacts	Impacts such as flooding of septic systems, crawl spaces, living areas, outbuildings, etc.; increased ice or algal growth on sidewalks/roadways; earth movement/settlement; increased landslide potential; erosion and other potential damage
Floodplain	The total area subject to inundation by the base flood including the flood fringe and floodway. The low area adjoining a stream or river channel that overflows at times of high river flow.
Geomorphology	The actions or events that shape and control the distribution of materials, their states and their morphology within the interior and on the surface of the earth
Glacial Till	Surface or near-surface soil that has been compressed by a past glacier into a dense, relatively impermeable material. It typically has a low infiltration rate and is often responsible for the formation of ponds, wetlands or a seasonally high water table.
Gradient (of stream)	Degree of inclination of a stream channel parallel to stream flow; it may be represented as a ratio, fraction, percentage or angle.
Groundwater	The water contained in interconnected pores located below the water table in an unconfined aquifer or located in a confined aquifer
Groundwater Flooding	The occurrence of surface and subsurface water resulting in flood inundation, due to the fluctuation of the water table. It encompasses depth, frequency, and duration and is usually seasonal by characteristic.
Habitat	The sum total of all the environmental factors of a specific place that is occupied by an organism, a population or a community.
Hazard Mitigation	Action taken to reduce or eliminate long-term risk to people and property from hazards such as floods, earthquakes and fires

High Gradient Contained	Moderately to deeply incised channels with high stream power. Most sediment is easily transported, thus gravel and small cobbles deposit only in hydraulically protected areas. Pools tend to be small and shallow, although LWD and bedrock may form large deep pools.
Hydraulic Project Approval	Permit issued by Washington State Department of Fish and Wildlife required for projects with construction activity in or near state waters (RCW 75.20.100-160) that affect the bed or flow of a stream.
Hydrograph	A graph showing variation in the flow in a stream or channel, over time, at a specified point of interest
Hydrologic Soil Group	A classification of soils by the Soil Conservation Service into four runoff potential groups. The groups range from A soils, which are very permeable and produce little runoff, to D soils, which are not very permeable and produce much more runoff
Hydrology	The science of the behavior of water in the atmosphere, on the surface of the earth, and underground.
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 Surface	A hard surface, which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development, and/or 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.
Incised Channel	A stream channel in which the bed has dropped and as a result, the stream is disconnected from its floodplain

Infiltration Facility	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
Instream Flow	Instream flow is the amount of water in a stream required to support or protect existing uses of fish and fish habitat.
Intermittent Stream Channel	Stream channels that carry water consistently for part of the year and are dry during the remainder of the year. See ephemeral stream channel
Landscape	All the natural features such as grasslands, hills, forest and water, which distinguish one part of the earth's surface from another part; usually that portion of land that the eye can comprehend in a single view, including all its natural characteristics
Large woody debris (LWD)	Any piece of woody material generally 12 inches or larger in diameter that intrudes into a stream channel or nearby (e.g., logs, stumps or root wads) and that functions to form pools, regulate sediments, disperse stream energy, create channel complexity, stabilize channels, provide instream organic matter, and provide cover for fish.
Low Impact Development (LID)	A category of best management practices designed to incorporate open space preservation techniques, such as cluster residential developments or rooftop runoff management, foundation design, vegetation enhancement, etc., that reduce hydrological impacts of development, as compared to more traditional practices
Main Stem	The principal channel of a stream to which tributaries join.
Meander Pattern	A series of sinuous curves or loops in the course of a stream that are produced as a stream swings from side to side in flowing across its floodplain
Minor Drainage System	The convenience drainage system consisting of street gutters, storm sewer, small open channels, and swales, etc.

Mitigation	Avoiding, rectifying, minimizing, reducing, compensating for or eliminating probable significant adverse impacts to a natural resource or environment.
Model	Models are conceptual and mathematical descriptions or analogies used to help visualize something that cannot be directly observed. Models provide frameworks that organize concepts, data and information into a system of inferences that can be presented as mathematical descriptions of situations or state of affairs.
Moderate Gradient Contained	Transport dominated channels with moderate to high stream power. LWD is important for forming pools and storing sediment, thus substrates and bedforms are highly variable. Off-channel habitats are rare.
Native	Occurring naturally in a habitat or region; not introduced by humans
NPDES	National Pollutant Discharge Elimination System
On-Site Detention	Temporary storage of runoff on the same land development site where the runoff is generated, frequently as a condition for development activity
Open Space	A landscape which is primarily unimproved. Open space areas may include: critical areas, wooded areas, and parks, trails, privately owned natural reserves, abandoned railroad lines, utility corridors, and other vacant rights-of-way. Permanent dedications, designation, or reservation of open space for public or private use may occur in accordance with Comprehensive Plan policies. Open space may include Natural Open Space, Natural Buffer Areas, Buffers, and Screening.
Organics	Organics is a collective term for any number of carbon-based substances that may be toxic to aquatic life or can accumulate in fish tissue to levels that are unsafe for human consumption.
Outfall	The outlet of a storm drain or sewer. The point where water flows from a manmade conduit, channel, or drain into a water body or other natural drainage feature

Palustrine	Wetland channels, beaver complexes or sloughs. Velocity is generally low, substrates are composed of fine sediment or organic matter, and channel morphology is sinuous or irregular and dominated by pools or glides (*R2 Resource Consultants, 2000*).
Peak Flow	The maximum instantaneous rate of flow during a storm, usually in reference to a specific design storm event
Perennial Stream	A watercourse that flows throughout the year
Pervious	A solid surface that contains a sufficient amount of void space to allow water to infiltrate through it.
Pesticides	Chemical used to kill, control, or manage plant or animal pests; includes herbicides, fungicides, insecticides, rodenticides, and piscicides.
Pollutant Loading	The arithmetic product of the pollutant concentration and the runoff over a specified period of time (day, month, year, etc.)
Pothole	A closed drainage basin from which there is no surface water outlet.
Priority Habitat	A seasonal range or habitat element with which a given species has a primary association and which, if altered, may reduce the likelihood that the species will maintain or increase population over the long term. These might include areas of high relative density, breeding habitat, winter range, and movement corridors. Priority habitats might also include areas that are of limited availability or high vulnerability to alteration, such as cliffs, talus, wetlands, etc.
Priority Species	An animal species of concern due to their population status and their sensitivity to habitat manipulation. Priority species include species of concern, monitor species, candidate species, priority game species, as well as other game and non-game species.
Private Stormwater Facility	Any stormwater system or portion thereof held in private ownership, or the responsibility for operation of which resides with a private entity .

Programmatic	Relating to a plan or procedure for dealing with some matter, e.g., regulations, policy guidelines, site design standards, operational policies and procedures, technical assistance, enforcement, and public outreach and educational programs.
Public Stormwater Facility	Any stormwater system or portion thereof that is owned or operated by a public entity
Reach	A segment of a stream channel where the cross-section, slope and roughness of the channel are constant. Simulation of the flow in streams is done by dividing the stream channel into reaches.
Receiving Waters	Streams, lakes, bays, etc., into which stormwaters are discharged
Reed Canary Grass	An invasive grass that thrives in open, wet areas, often a nuisance plant in riparian and wetland areas
Regional Stormwater Facility	Stormwater detention, retention or water quality control facility designed to manage runoff from large tracts of land (sub-basins)
Restoration	The reestablishment of a viable wetland or critical fish or wildlife habitat area from a previously filled or degraded site
Retention	The holding of runoff in a basin without release except by means of evaporation, infiltration or emergency bypass
Right Of Way (ROW)	A strip of land held in an easement or separate tract which is occupied or dedicated to be occupied by a publicly or privately dedicated street or railroad, together with property reserved for utilities, transmission lines and extensions, walkways, sidewalks, bikeways, equestrian trails, and other similar uses.
Rip Rap	A combination of large stone, cobbles and boulders used to line channels, stabilize banks, reduce runoff velocities or filter out sediment

Riparian Area	"Riparian area" means land areas directly influenced by a body of water. Usually such areas have visible vegetation or physical characteristics showing this water influence. Stream sides, lake borders, and marshes are typical riparian areas. Generally refers to such areas along flowing bodies of water. The term *Littoral* is generally used to denote such areas along non-flowing bodies of water.
Runoff	Water originating from rainfall and other precipitation that si found in drainage facilities, rivers, streams, springs, seeps, ponds, lakes and wetlands, as well as shallow ground water
Salmonids	Fish of the family Salmonidae, including salmon, trout, char (salmon and steelhead stock inventory), whitefish and grayling native to Washington State
Scour	Process by which floodwaters remove soil around objects that obstructs flow, such as the foundation wall of a house, the channel of a stream, or below a culvert
Sediment	Solid material settled from suspension in a liquid
Sedimentation	The process of settling and depositing of suspending matter carried by runoff; usually occurring by gravity when the velocity of the surface water is reduced below the point at which it can transport the suspended material
SEPA	State Environmental Policy Act (RCW 43C)
Sheet Flow	Runoff which flows over the ground surface as a thin, even layer, not concentrated in a channel
Significant Erosion	The removal and transport of sediment, generally by the action of water, in a manner that causes damage to property, aquatic ecosystems, aquatic habitats, salmonids or other aquatic resources

Site Development Standards	A variety of standards applied to site development that can include, among others, principles for placement of buildings on site, provision of open space, access roads, drainage facilities, lighting, parking and landscaping.
Soil Permeability	The ease with which gases, liquids, or plant roots penetrate or pass through a layer of soil
Spawning Habitat	Areas used by adult fish for laying and fertilizing eggs
Stakeholder	Group of people pr organizations with an interest in the outcome of a plan, program, or project.
Storm Drains	The enclosed conduits that transport surface and stormwater runoff toward points of discharge (sometimes referred to as storm sewers)
Storm Sewer	Usually enclosed conduits that transport excess stormwater runoff toward points of discharge (sometimes called “storm drains”)
Stormwater	The 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 facility
Stormwater Management	Management of the quantity, quality and conveyance of surface water runoff from precipitation
Stream	A channel of perennial or intermittent flowing water
Stream Geomorphology	The study of the riparian landscape and its affect on stream flow patterns. The landscape tends toward a dynamic equilibrium state where stream flow patterns are affected by the landscapes (or streambeds) ability to erode or resist erosion.
Sub-basin	A drainage area which drains to a watercourse or water body named and noted on common maps and which is contained within a basin; a basin or area which is part of a larger drainage basin or area.

Substrate	The rock or soil material present in the bottom of the stream or river, including muck, sand, gravel, boulders and bedrock
Sub-Watershed	A geographic drainage unit that combines with other sub-watersheds to form a watershed
Surface Water	"Surface water" means an open body of water that flows or is collected on the earth's surface such as rivers, lakes, reservoirs, ponds, streams, seas, estuaries, etc., and all springs, wells, or other collectors directly influenced by surface water
Surface Waters of the State	Includes lakes, rivers, ponds, streams, inland waters, saltwaters, wetlands and all other surface waters and water courses within the jurisdiction of the state of Washington (WAC Chapter 173-201A).
Swale	A natural depression or wide shallow channel that temporarily stores, routes or filters runoff
TMDL	See Total Maximum Daily Load.
Topography	The shape or configuration of the land, represented on a map by contour lines or relief shading.
Total Maximum Daily Load (TMDL)	A water quality planning and implementation tool required under Section 303(d) of the Clean Water Act. This measure specifies, through the use of a scientifically-based process, the amount of a pollutant that can be discharged to a water body without affecting beneficial uses and mechanisms for ensuring discharges do not exceed that amount. TMDLs can focus on both point and nonpoint sources of pollution and one watershed may have a TMDL developed for both simultaneously.
Total Suspended Solids (TSS)	A measure of the weight of mineral or organic solids suspended in a given volume of water; used as a measure of sedimentation or siltation and as an indicator of pollutants known to attach to solids
Undeveloped	A property in a state generally approaching being native or natural covered with living, mature vegetation

Urban Growth	The growth that makes intensive use of land for the location of buildings, structures, and impermeable surfaces to such a degree as to be incompatible with the primary use of such land for the production of food, other agricultural products, or fiber, or the extraction of mineral resources. When allowed to spread over wide areas, urban growth typically requires urban governmental services. "Characterized by urban growth" refers to land having urban growth located on it, or to land located in relationship to an area with urban growth on it as to be appropriate for urban growth.
Urban Growth Area	Those areas established through the designation of a boundary which separates existing and future urban areas from rural and resource areas. An urban growth area defines where developments will be directed and supported with historical and typical urban governmental services and facilities, such as storm and sanitary sewer systems, domestic water systems, street cleaning services, fire protection services, and public transit services. Urban Growth Areas are established by the Pierce County Comprehensive Plan.
USBEM	Urban Stream Baseline Evaluation Methodology
USGS (United States Geological Survey)	Agency within the federal Department of the Interior responsible for collecting and distributing stream flow data for the nation
Water Body	Surface waters including rivers, streams, lakes, ponds, marine waters, estuaries, and wetlands
Water Quality Standards	Limits for water pollution in lakes, rivers and marine waters in order to protect water quality. The Clean Water Act requires that the water quality standards protect beneficial uses, such as swimming, fishing, aquatic life habitat, and agricultural and drinking water.
Water Resources Inventory Area (WRIA)	An administrative and planning unit in Washington State that encompasses a large river basin
Water Table	The upper level of groundwater or the zone of saturation for underground water. It is an irregular surface with a slope or shape determined by the quantity of ground water and the permeability of the earth material. Also referred to as *Groundwater Tabl*e.

Watercourse Alteration Any man-made change in the alignment, geometric cross-Section, channel capacity, or channel efficiency of a watercourse

Watershed The region drained by or contributing water to a stream, lake, or other body of water.

Weir A dam or obstruction in a stream or river to raise the water level or divert streamflow

Wetland Areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands generally do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities; or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. However, wetlands may include those artificial wetlands intentionally created from nonwetland areas created to mitigated conversion of wetlands.

Zoning The process by which a county or a municipality legally controls the use of property and physical configuration of development upon tracts of land within its jurisdiction. Zoning is an exercise of the police power and as such must be enacted for the protection of public health, safety and welfare. (*PCC Title 19, Appendix A)*