GLOSSARY

Abiotic: Something that is not living (for example, rock).

Adfluvial: Migrating between spawning areas in streams and rearing areas in lakes or marshes.

Alluvial: deposited by moving water.

Alluvium: Material deposited by running water, including the sediments laid down in riverbeds, flood plains, lakes and estuaries.

Anadromous: Fish that move from the sea to fresh water for reproduction.

Annual peak flood: The highest peak discharge in a given year.

Aquifer: A body of rock that can collect groundwater, and can yield water to wells and springs. A groundwater reservoir.

Benchmark: An initial context for evaluating stream habitat quality. Derived from reference conditions, analysis of regional survey data, and published information.

Biotic: Something that is living, or pertaining to living things.

BOD: Biochemical Oxygen Demand

Canopy closure: A measurements of amount of shading over the stream. Inverse of view-to-the-sky (percent open sky).

Canopy cover: The overhanging vegetation over a given area.

CFS: Abbreviation for cubic feet per second, a measurement of streamflow volume.

cfu: Coliform Units (refers to the number of fecal coliform bacteria)

Channel complexity: a term used in describing fish habitat. A complex channel contains a mixture of habitat types that provide areas with different velocity and depth for use by different fish life stages. A simple channel contains fairly uniform flow and few habitat types.

Channel gradient: see stream gradient.

Channel Habitat Types (CHT): Groups of stream channels with similar gradient, channel pattern and confinement. Channels within a particular group are expected to respond similarly to changes in environmental factors that influence channel conditions. In this process, CHTs are used to organize information at a scale relevant to aquatic resources, and lead to identification of restoration opportunities.

Channel pattern: Description of how a stream channel looks as it flows down it's valley (for example, braided channel or meandering channel).

Channel structure: see geomorphic structure

Char: A close relative to trout, another salmonid. Bull trout are a species of char.

Cohesive: When describing soil, tendency of soil particles to stick together. Examples of soils with poor cohesion include soils from volcanic ash, and those high in sand or silt.

Colluvial: Loose deposits of soil and rock deposited by gravity.

Confinement: A description of how much a channel can move within it's valley before it is stopped by a hillslope or terrace.

Creep, soil: Slow, continual downslope movement of mineral, rock and soil particles under the influence of gravity.

Crown closure: A measure of the amount of tree canopy cover in a given area.

Debris flow: A type of landslide that is a mixture of soil, water, logs, and boulders that travels quickly down a steep channel.

Discharge: Outflow; the flow of a stream, canal, or aquifer.

Disturbance: Events that can affect watersheds or stream channels, such as floods, fires or landslides. They may vary in severity from small-scale to catastrophic, and can affect entire watersheds or only local areas.

Diurnal: daily, over a daily cycle.

DO: Dissolved Oxygen

Downcutting: when a stream channel deepens over time.

Drainage basin: A geographic and hydrologic subunit of a watershed.

Drainage density: see stream density

Earthflow: Deep-seated landslide of broken soil and rock, produces areas of hummocky terrain.

Ecoregion: Land areas with fairly similar geology, flora and fauna, and landscape characteristics that reflect a certain ecosystem type.

Elevation: The vertical reference of a site location above mean sea level, measured in feet or meters.

Emergence: For salmonids, the time of year when fry swim up from in gravels in their nesting site and begin to swim in the stream.

Eocene: an early epoch of the Tertiary geologic period.

Ephemeral (intermittent) stream: A stream that flows only certain times of the year, as it receives water from springs or a surface source.

Estuarine: pertaining to, or in, an estuary.

Evapotranspiration (ET): The amount of water leaving to the atmosphere through both evaporation and transpiration.

FC: Fecal Coliform

Fish life stage: see life stage

Flood attenuation: When flood levels are lowered by water storage in wetlands.

Flood desynchronization: When flooding is delayed by temporary water storage in wetlands.

Flood peak: The highest amount of flow that occurs during a given flood event.

Flood plain: The flat area adjoining a river channel constructed by the river in the present climate, and overflowed at times of high river flow.

Fluvial: Fish that rear in larger rivers and spawn in smaller river tributaries.

Gaging station: A selected section of a stream channel equipped with a gage, recorder, or other facilities for measuring stream discharge.

Gaining reach: reach where groundwater is flowing into the stream channel to become surface water.

Geomorphic structure (channel structure): For a stream channel, a description of how the channel is shaped in response to processes like erosion, and by underlying geology.

Hardwood trees: Deciduous trees. For example, bigleaf maple, red alder, flowering dogwood, paper birch, bitter cherry, willow, cottonwood, Oregon ash, and laurel, among others.

Hydraulic gradient (hydraulic head): Water level from a given point upstream to a given point downstream; or the height of the water surface above a subsurface point. Used in analysis of both ground and surface water flow, and is an expression of the relative energy between two points.

Hydrograph: A graph of runoff rate, inflow rate or discharge rate, past a specific point over time.

Hydrologic cycle: The circulation of water around the earth, from ocean to atmosphere and back to ocean again.

Hydrologic Units (HUCs): U.S. Geological Survey Hydrologic Unit Codes, which correspond with specific watersheds, and are expressed in a hierarchical scale.

Hydrology: The science of the behavior of water from the atmosphere into the soil.

Hydrophobic soils: Soils that do not easily soak up water, and thus increase the rate of surface runoff.

Impervious surface: Surface (such as pavement) that does not allow, or greatly decreases, the amount of infiltration of precipitation into the ground.

IN: Inorganic Nitrogen

Infiltration: The rate of movement of water from the atmosphere into the soil.

Lag time: The interval between the center of mass of the storm precipitation and the peak flow of the resultant runoff. It is the delay between the upstream production of flow and its arrival at a downstream location.

Large Woody Debris (LWD) recruitment: The amount or size of large trees in a riparian area that could potentially fall in (recruit) to the stream channel. Mechanisms for recruitment include small landslides, bank undercutting, windthrow during storms, individual trees dying of age or disease, and transport from upstream reaches.

Large Woody Debris (LWD): Logs, stumps or root wads in the stream channel, or nearby. These function to create pools and cover for fish, and to trap and sort stream gravels.

Legacy activities: Past land use practices, which have contributed to current watershed and stream channel conditions.

Life stage (fish life stage): A part of a fish's life cycle, with identifiable habitat requirements associated with it; for example, summer rearing, spawning, juvenile outmigration to ocean waters.

Losing reach: Stream reach where surface water is flowing out of the stream channel to become groundwater.

Low flows: The minimum rate of flow for a given period of time.

Meandering: When a stream channel moves across laterally it's valley.

Microhabitat: Specific combination of habitat elements in the place occupied by an organism for a specific purpose (such as feeding, refuge, reproduction).

Miocene: a later epoch of the Tertiary geologic period.

NMFS: National Marine Fisheries Service

ODF: Oregon Dept. of Forestry

ODFW: Oregon Dept. of Fish and Wildlife

Oligocene: an epoch of the Tertiary geologic period, between the Miocene and Eocene epochs.

Orthophotos: A composite photograph compiled from a series of aerial photographs, where displacements from ground relief and slope are removed, and objects are in the same relationship to one another as they would be on a map. Because the photo scale is standardized, measurements of distance and area are much easier using this type of photo.

Peak flow: The maximum instantaneous rate of flow during a storm or other period of time.

Perennial stream: A stream that flows throughout the year.

Precipitation intensity: The rate at which water is delivered to the earth's surface.

Precipitation: The liquid equivalent (inches) of rainfall, snow, sleet, or hail collected by storage gages.

Raindrop splash: Erosion created when a raindrop hits a bare soil surface.

Rain-on-snow zone (event): When snow packs are melted by warm rains causing peak flow events. Rain-on-snow events usually occur within the transient snow zone.

Raveling: Erosion caused by gravity. Often seen on steep slopes immediately uphill of roads.

Recurrence interval(s) (return interval): Determined from historical records. The average length of time between two events (rain, flooding) of the same size or larger. Recurrence intervals are associated with a probability (for example, a 25-year flood would have a 4% probability of happening in any given year).

Reference reach(es): Stream reaches where past protection (for instance, national parks or wilderness areas) or current land use (for instance, roadless areas) allows condition to be used as a reference to natural or undisturbed conditions. Designation of reference reaches should be done with care; effects of stream channels from past land uses (such as mining) exist in many areas protected today.

Regulation: A governing direction or law.

Resident fish: Non-migratory fish that remain in the same stream network their entire lives.

Rilling (surface rilling): Erosion caused by water carrying off particles of surface soil.

Riparian area: Areas bordering streams and rivers.

Riparian vegetation: Vegetation growing on or near the banks of a stream or other body of water in soils that are wet during some portion of the growing season. Includes areas in and near wetlands, floodplains and valley bottoms.

Riparian zone: An administratively defined distance from the water's edge that can include riparian plant communities and upland plant communities. *Alternatively*, an area surrounding a stream, in which ecosystem processes are within the influence of stream processes.

Salmonid: Fish of the family *Salmonidae*, including salmon, trout, chars, whitefish, ciscoes and grayling. Generally, the term refers mostly to salmon, trout and chars.

Sediments, fine and coarse: Fragments of rock, soil and organic material transported and deposited into streambeds by wind, water, or gravity.

Seven-day maximum average temperature: An average of seven consecutive days of water temperatures. The maximum of these values is used to determine whether water temperatures meet state standards at a given place.

Sideslope: Hillslope that borders a stream channel.

Snow-water Equivalent (SWE): The depth of water contained in the snowpack, if the snowpack were melted, expressed in inches.

Soil creep: When gravity moves the soil mantle downhill at rates too small to observe.

Specific heat (of water): The amount of heat required to make a one-degree change in water or air temperatures.

Splash Dam: a type of logging dam, where water and logs were stored upstream of the dam until the dam was opened. Using floodgates or dam destruction, the stored water was used to transport timber to downstream mills.

Spring snowmelt: The time when the seasonal snowpack melts out.

SSGIS: Oregon State Center for GIS

Stade: a substage of a glacial stage, when a glacier advances.

Stand-replacing fire: A fire of enough severity, at a local level, to kill all the mature trees.

Stereographic: For photographs, aerial photographs taken along a parallel flight track so that objects appear to be three-dimensional when viewed through stereoscopic lenses.

Stream density (drainage density): Total length of natural stream channels in a given area, expressed as miles of stream channel per square miles of area.

Stream gradient (channel gradient): The slope of the stream channel floor (or the water surface) with respect to the horizontal, measured in the direction of flow.

Stream terrace: One of a series of level surfaces in a stream valley, alongside of and mostly parallel to the stream channel. These are remnants of valley floors, floodplains or streambeds that were produced in the past.

Substrate: Mineral or organic material that forms the bed of a stream.

Surface runoff: Water that runs across the top of the land without infiltrating the soil.

TES: Threatened or endangered species.

Till: A mixture of clay, sand, silt, gravel and boulders deposited by a glacier.

TMDL: Total Maximum Daily Load

TN: Total Nitrogen

TN:TP: Ration of Total Nitrogen to Total Phosphorous

TP: Total Phosphorous

Transpiration: Loss of water to the atmosphere from living plants.

TSS: Total Suspended Solids

Tuff: a generic term for consolidated pyroclastic (formed by a volcano) rocks.

Upland vegetation: vegetation typical for a given region, growing on drier upland soils. The same plant species may grow in both riparian and upland zones.

USFWS: United States Department of Fish and Wildlife Services

USGS: United States Geological Survey

View-to-the-sky (percent open sky): A measurement of amount of shading over the stream. Inverse of canopy closure, expressed in percent (100% - canopy closure).

Water Right Certificate: A *water right certificate* is issued by the Department of Ecology to certify that water users have the authority to use a specific amount of water under certain conditions. These conditions are based on beneficial use of water under your water right permit. The water right certificate is a legal document recorded at your county auditor's office. The certificate completes the process of obtaining your water right. Once a certificate is issued, no expansion is allowed under the water right.

Water Right Claim: A *water right claim* is a statement of claim to a water use that began before the State Water Codes were adopted and is not covered by a permit or certificate. A claim may represent a valid water right if it describes a surface water use that began before 1917 or a ground water use that began before 1945, a water right claim that was filed with the state during an open filing period designated under RCW 90.14 (the Water Rights Claim Registration Act), or is covered by the ground water exemption.

Water Right Permit: A *water right permit* is permission given to water right applicants by the state to develop a water right. Water rights are developed when water right applicants follow the provisions outlined in their permit, using water for the purposes and up to the limits stated in the permit. Water right permits remain in effect until the water right certificate is issued, if all terms of the permit are met, or the permit has been canceled.

Water Year: The water year in North America is the twelve month period beginning October 1 in one year and ending September 30 of the following year. The water year is designated by he calendar year in which it ends.

Watershed: an area of land that drains down slope to the lowest point. Drainage pathways may converge into a stream or river, or may end in a marsh or ancient lakebed.

WDFW: Washington State Department of Fish and Wildlife

WDNR: Washington State Department of Natural Resources

WDOE: Washington State Department of Ecology

WDOH: Washington State Department of Health

WRIA: Water Resources Inventory Area