

# STREAM RESTORATION GLOSSARY

**Meander** -- The winding of a stream channel, usually in an erodible alluvial valley. A series of sine-generated curves characterized by curved flow and alternating banks and shoals.

**Meander amplitude** -- The distance between points of maximum curvature of successive meanders of opposite phase in a direction normal to the general course of the meander belt, measured between centerlines of channels.

**Meander belt width** -- The distance between lines drawn tangential to the extreme limits of fully developed meanders. Not to be confused with meander amplitude.

**Meander length** -- The lineal distance down valley between two corresponding points of successive meanders of the same phase.

**Morphology** -- The form, shape or structure of a stream or organism.

**Natural flow** -- The flow past a specified point on a natural stream that is unaffected by stream diversion, storage, import, export, return flow, or change in use caused by modifications in land use.

**Off-channel area** -- Any relatively calm portion of a stream outside of the main flow.

**Outfall** -- The mouth or outlet of a river, stream, lake, drain or sewer.

**Oxbow** -- An abandoned meander in a river or stream, caused by cutoff. Used to describe the U-shaped bend in the river or the land within such a bend of a river.

**Perennial streams** -- Streams which flow continuously.

**Point bar** -- The convex side of a meander bend that is built up due to sediment deposition.

**Pool** -- A reach of stream that is characterized by deep low velocity water and a smooth surface.

**Pool/riffle ratio** -- The ratio of surface area or length of pools to the surface area or length of riffles in a given stream reach; frequently expressed as the relative percentage of each category. Used to describe fish habitat rearing quality.

**Probability of exceedence** -- The probability that a random flood will exceed a specified magnitude in a given period of time.

**Rapids** -- A reach of stream that is characterized by small falls and turbulent high velocity water.

**Reach** -- A section of stream between two defined points.

**Refusal** -- A series of rocks placed across the channel, with the top of the rocks at the existing grade of the channel to maintain the channel invert. Used in conjunction with vanes to prevent scour around the end of the vane structures.

**Regime theory** -- A theory of channel formation that applies to streams that make a part of their boundaries from their transported sediment load and a portion of their transported sediment load from their boundaries. Channels are considered in regime or equilibrium when bank erosion and bank formation are equal.

**Restoration** -- The return of an ecosystem to a close approximation of its condition prior to disturbance.

**Riffle** -- A reach of stream that is characterized by shallow, fast moving water broken by the presence of rocks and boulders.

**Riff** -- A shallow or rocky place in a stream, forming either a ford or a rapid.

**Riparian area** -- An area of land and vegetation adjacent to a stream that has a direct effect on the stream. This includes woodlands, vegetation, and floodplains.

**Riparian buffer** -- The riparian area and vegetation adjacent to streams, lakes, estuaries, or other waterways, which shall be created, established or preserved, and remain protected.

**Riparian habitat** -- The aquatic and terrestrial habitat adjacent to streams, lakes, estuaries, or other waterways.

**Riparian** -- Located on the banks of a stream or other body of water.

**Riparian vegetation** -- The plants that grow adjacent to a wetland area such as a river, stream, reservoir, pond, spring, marsh, bog, meadow, etc., and that rely upon the hydrology of the associated water body.

**Ripple** -- (1) A specific bedform found in sand bed streams. (2) Undulations or waves on the surface of flowing water.

**Riprap** -- Rock or other material with a specific mixture of sizes referred to as a 'gradation', used to stabilize stream or river banks from erosion or to create habitat features in a stream.

**River channels** -- Natural or artificial open conduits which continuously or periodically contain moving water, or which form a connection between two bodies of water.

**River miles** -- Miles from the mouth of a river to a specific destination or, for upstream tributaries, from the confluence with the main river to a specific destination.

**River reach** -- Any defined length of a river.

**River stage** -- The elevation of the water surface at a specified station above some arbitrary zero datum (level).

**Riverine** -- Relating to, formed by, or resembling a river including tributaries, streams, brooks, etc.

**Riverine habitat** -- The aquatic habitat within streams and rivers.

**Rock vane** -- In stream structure composed of rocks, constructed for the purpose of reducing shear stress on streambanks and directing flow towards the center of the channel.

**Rock weir** -- A structure designed to serve as grade control and to create a diversity of flow velocities while still maintaining adequate sediment transport capacity.

**Root wad** -- The mass of roots associated with a tree adjacent or in a stream that provides refuge for fish and other aquatic life.

**Run (in stream or river)** -- A reach of stream characterized by fast flowing low turbulence water.

**Runoff** -- Water that flows over the ground and reaches a stream as a result of rainfall or snowmelt.

**Scour** -- The erosive action of running water in streams, which excavates and carries away material from the bed and banks. Scour may occur in both earth and solid rock material and can be classed as general, contraction, or local scour.

**Sediment** -- Soil or mineral material transported by water or wind and deposited in streams or other bodies of water.

**Sedimentation** -- (1) The combined processes of soil erosion, entrainment, transport, deposition, and consolidation. (2) Deposition of sediment.

**Siltation** -- The deposition or accumulation of fine soil particles.

**Sinuosity** -- The ratio of channel length to direct down valley distance. Also may be expressed as the ratio of down valley slope to channel slope.

**Slope** -- The ratio of the change in elevation over distance.

**Slough** -- A shallow backwater inlet that is commonly exposed at low flow or tide.

**Stable channel** -- A stream channel with the right balance of slope, planform and cross-section to transport both the water and sediment load without net long-term bed or bank sediment deposition or erosion throughout the stream segment.

**Stream** -- A general term for a body of flowing water; natural water course containing water at least part of the year. In hydrology, the term is generally applied to the water flowing in a natural channel as distinct from a canal.

**Stream channel** -- A long narrow depression shaped by the concentrated flow of a stream and covered continuously or periodically by water.

**Stream gradient** -- A general slope or rate of change in vertical elevation per unit of horizontal distance of the bed, water surface, or energy grade of a stream.

**Stream morphology** -- The form and structure of streams.

**Stream order** -- A hydrologic system of stream classification. Each small unbranched tributary is a first order stream. Two first order streams join to make a second order stream. A third order stream has only first and second order tributaries, and so forth.

**Stream reach** -- An individual segment of stream that has beginning and ending points defined by identifiable features such as where a tributary confluence changes the channel character or order.

**Streambank erosion** -- The removal of soil from streambanks by flowing water.

**Streambank stabilization** -- The lining of streambanks with riprap, matting, etc., or other measures intended to control erosion.

**Streambed** -- (1) The unvegetated portion of a channel boundary below the base flow level. (2) The channel through which a natural stream of water runs or used to run, as a dry streambed.

**Stream flow** -- The rate at which water passes a given point in a stream or river, usually expressed in cubic feet per second (cfs).

**Substrate** -- (1) The composition of a streambed, including either mineral or organic materials. (2) Material that forms an attachment media for organisms.

**Surface erosion** -- The detachment and transport of soil particles by wind, water, or gravity. Or a group of processes whereby soil materials are removed by running water, waves and currents, moving ice, or wind.

**Surface water** -- All waters whose surface is naturally exposed to the atmosphere, for example, rivers, lakes, reservoirs, ponds, streams, impoundments, seas, estuaries, etc., and all springs, wells, or other collectors directly influenced by surface water.

**Suspended sediment** -- Sediment suspended in a fluid by the upward components of turbulent currents, moving ice, or wind.

**Suspended sediment load** -- That portion of a stream's total sediment load which is transported within the body of water and has very little contact with the stream bed.

**Tailwater** -- (1) The area immediately downstream of a reservoir. (2) Applied irrigation water that runs off the end of a field.

**Thalweg** -- (1) The lowest thread along the axial part of a valley or stream channel. (2) A subsurface, ground-water stream percolating beneath and in the general direction of a surface stream course or valley. (3) The middle, chief, or deepest part of a navigable channel or waterway.

**Torrent** -- (1) A turbulent, swift-flowing stream. (2) A heavy downpour; a deluge.

**Tractive force** -- The drag on a stream bed or bank caused by passing water which tends to pull soil particles along with the stream flow.

**Tree revegetment** -- Installation of trees attached to each other along the streambank to trap sediment, provide habitat diversity and protect the bank.

**Tributary** -- A stream that flows into another stream, river, or lake.

**Turbidity** -- A measure of the content of suspended matter that interferes with the passage of light through the water or in which visual depth is restricted. Suspended sediments are only one component of turbidity.

**Waterfall** -- A sudden, nearly vertical drop in a stream, as it flows over rock.

**Watershed** -- An area of land that's total surface drainage flows to a single point in a stream.

**Watershed management** -- The analysis, protection, development, operation or maintenance of the land, vegetation and water resources of a drainage basin for the conservation of all its resources for the benefit of its residents.


**Watershed restoration** -- Improving current conditions of watersheds to restore degraded fish habitat and provide long-term protection to aquatic and riparian resources.

**Wattles** -- Bunches of dormant branch cuttings bound together in cylindrical bundles and embedded in streambanks.

**Wetted perimeter** -- The length of the wetted contact between a stream of flowing water and the stream bottom in a vertical plane at right angles to the direction of flow.

**Whips** -- Any dormant woody branch cutting (usually flexible) with a diameter of less than 3 inches.

**Woody debris** -- Referring to wood in streams.

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