

GLOSSARY

Aggradation: Deposition of sediment in a channel, on a floodplain, or other surface in sufficient quantity to increase local elevation.

Annual series: The discharge record consisting of the greatest discharge occurring in each year.

Armor: A coarse layer of gravel or cobble that develops on a streambed through winnowing away of fines.

Autotrophic: A condition in which oxygen production by plants exceeds respiration by plants and animals. Sunlight and inorganic compounds are the primary energy source.

Baffle: A plate, wall, screen, or other device to deflect or impede flow.

Bedforms: Ripples, waves, dunes, and related forms that develop under various flow conditions on the beds of alluvial streams with significant bed-load transport.

Bed load: Sediment, usually sand size or larger, that is transported along the bed by rolling, skipping, dragging, or saltation.

Benthic: Of, pertaining to, or related to the bottom of a stream or other body of water.

Berm: A terrace or ledge formed within a channel at base of the streambank. Also, a terrace or ledge cut on a slope or embankment to divert water or intercept sliding earth.

Bollards: Heavy post and chain fixtures used to exclude wheeled vehicles from protected areas.

Borrow pit: A hole created by excavating levee embankment material.

Braided channel: A channel pattern characterized by numerous intertwined channels.

Bypass channel: A short flood diversion channel constructed to bypass a natural stream reach or features of special interest such as wetlands. Bypass channels may be constructed to convey all flows or flood discharges only.

Check dam: A low dam constructed of logs, loose rock, or other material, to control water flow and check erosion.

Climax community: A mature, relatively stable biotic community representing the culmination of ecological succession.

Cobble: Gravel and stones that have been rounded by abrasive action of flowing water or waves.

Coldwater stream: A stream with water temperatures low enough to support salmonid fishes.

Collection pond: Pond located on the landside of a levee where interior floodwaters collect.

Community: All of the populations of plants or animals in an area or volume; a complex association usually containing both animals and plants.

Cross-sectional area: The area of a section of a channel at right angles to the direction of flow.

Crown: The top of a levee.

Cutoff island: An island created in a bend or meander by excavating a bypass or diversion channel across the meander neck.

Debris: Inorganic sediment or trash such as tires of shopping carts.

Debris basin: A basin constructed to trap sediment or debris that would clog or damage a flood channel.

Drop structure: A grade control structure that provides for a vertical drop in the channel invert between the upstream and downstream sides.

Ecosystem: A community and its environment including living and nonliving components.

Ephemeral stream: A stream that flows only during runoff events.

Equilibrium: A condition of fluvial systems in which watershed and channel parameters are balanced.

Evapotranspiration: The combined moisture loss from evaporation and transpiration.

Extrapolation: Estimation of a function at a point which is larger or smaller than all the points at which the value of the function is known.

Fabridam: A dam constructed of fabric and rubber that can be inflated with air or water.

Fish ladder: A fishway that provides passage over or around a vertical obstruction.

Fishway: A structure designed to allow fish passage around, over, or through obstacles.

Flap gate: A gate hinged at the top and allowing flow in only one direction.

Flood channel: Any partially or completely excavated channel intended to convey above-normal discharges. Flood channels may be sized to convey any return interval discharge above the 2-year or other normal bank-full discharge.

Flood diversion channel: (See Floodway.)

Floodwall: A wall constructed of masonry or concrete to provide flood protection from seasonal high water.

Floodway: A natural or constructed channel that conveys flood flows.

Flume: An open channel constructed of wood, steel, or reinforced concrete and used to convey water for various purposes, including grade control.

Form liner: A liner for concrete forms designed to produce a special finish.

Gabions: Rock-filled wire cages used on streams for erosion control and construction of dams and other structures.

Grade control structures: Any of several types of structures used to control channel gradient (see stabilizer, drop structure, and flume).

Greenbelt: A linear park, usually located along a stream corridor or other right-of-way.

Greentree reservoir: A shallow reservoir in which water levels are manipulated for wildlife and timber production.

Habitat: The physical location in which a population of plants or animals lives,

Hard point: A slope protection technique whereby "soft" or erodible materials are removed from a bank and replaced by stone or compacted clay. These features may also occur naturally along banks where currents have removed erodible materials leaving nonerodible materials exposed.

Headcut: An abrupt change in the longitudinal profile of a stream. Headcuts typically migrate upstream through time.

Heterotrophic: A condition in which respiration by plants and animals exceeds oxygen production by plants. Primary energy sources are organic compounds.

High-flow channel: A channel design employing a subchannel for normal and low flows and high-flow berms that are flooded on an infrequent basis. When the existing natural channel is used for the subchannel, excavation may take place from one or both sides, but the existing channel is disturbed as little as possible.

Hydraulic radius: Equal to A/P , where A is cross-sectional area and P is wetted perimeter. Roughly comparable to average depth in wide, shallow streams.

Interior collection pond: (See Collection pond; sometimes called interior drainage pond.)

Intermittent stream: A stream that ceases to flow seasonally or occasionally because bed seepage and evaporation exceed the supply of water.

Interpolation: Estimation of an intermediate value of one variable (dependent) as a function of a second variable (independent) when values of the dependent variable corresponding to several discrete values of the independent variable are known.

Invert: The bed of a channel or culvert.

Knickpoint: (Same as Headcut.)

Leaching: The removal of materials from a porous medium due to erosion or dissolution occurring because of the passage of water or other fluid through the medium.

Levee: An embankment constructed to provide flood protection from seasonal high water.

Low-flow channel: A subchannel designed to concentrate low flows for biologic, recreational, or aesthetic reasons.

Macroinvertebrates: Large invertebrates found in streams and consisting largely of larval insects, worms, and related organisms.

Manning's n: A resistance coefficient used in the Manning equation for uniform steady flow, $V = \frac{1.49}{n} R^{2/3} S^{1/2}$, where V is mean velocity, R is hydraulic radius, and S is slope, all expressed in non-SI units.

Meander: A broad, looping bend in a stream channel.

Meander amplitude: Amplitude of center line of meandering channel usually expressed as a multiple of stream width (see Figure 4-5).

Meander wavelength: The average distance from crest to crest, or trough to trough, in a series of meander waves.

Natural stream channel: A channel whose alignment, dimensions, cross-sectional shape, and grade have not been modified.

Overbuilt levee: A levee with a cross section larger than that required to meet all engineering considerations.

Oxbow lake: A lake formed in a former stream meander that has been abandoned naturally or cut off during channel construction for navigation or flood control purposes.

Paddleway: A reach of a low-gradient stream developed for canoeing; also called boatway.

Perched lake: A lake whose bed is above the ground-water table.

Periphyton: Invertebrates and plants that attach to solid substrates in aquatic systems. The association of aquatic organisms attached or clinging to stems and leaves or other surfaces projecting above the bottom.

Point bar: A crescent-shaped bar of coarse sediment built out from the convex bank of a meander.

Pool: Topographically low area produced by scour. Pools are located opposite point bars on meandering streams.

Population: An interacting group of organisms of the same species.

Propagule: Seed, cutting, tuber, bulb, rhizome, or other vegetative component used to propagate plants.

Regression: A functional relationship between two or more variables that is of ten empirically determined from data and is used to predict values of one variable when values of the other variables are known.

Resistance coefficient: An empirically derived coefficient used in uniform flow equations to account for flow resistance.

Riffle: A topographically high area in a channel created by the accumulation of relatively coarse-grained sediments.

Riparian vegetation: Vegetation along the bank of a watercourse.

Salmonid or salminoid: Collective term referring to salmon, trout, grayling, or white fish, all of which are found in coldwater environments.

Saltation: Movement of sediment along a channel bed by intermittent bouncing.

Sediment basin: A basin constructed to trap sediment eroded from a slope or being transported by a stream.

Selective clearing and snagging: A modified version of clearing and snagging that limits the types and amount of snags and vegetation removed and uses construction methods that create minimal disturbance.

Sill: A low dam designed to prevent erosion or to create pools for fish habitat.

Sinuosity: A measure of meandering calculated as a ratio of stream length to valley length.

Stabilizer: A low sill across a channel, used to prevent bed erosion.

Stable channel: A channel with no net erosion or deposition over a period of several years; a graded stream.

Stilling basin: An enlarged area in a channel that is deep enough to reduce flow velocity.

Stream power: The product of a stream's discharge rate Q and slope S .

Subchannel: A channel inside a larger flood control channel that is used to convey low and/or normal flows (see low-flow channel).

Substrate: Surface to which stream biota adhere or within which they live.

Suspended load: That portion of a stream's sediment load that is carried suspended on the flow rather than in contact with the bed suspension.

Thalweg: A line connecting the deepest points along a channel.

Threshold: A point or value that, if exceeded, creates either positive or negative feedback. Positive feedback destroys equilibrium conditions in fluvial systems, whereas negative feedback tends to restore them.

Throughflow low: That part of storm runoff that moves through the soil (same as interflow).

Toe: The lower portion of a channel bank or where a levee slope meets the ground.

Tree retards: Slope protection structures made of large trees. Tree retard systems generally consist of groups of trees cabled together, placed perpendicular to the bank line, and anchored in place using cables with fabricated weights. A small stone root is constructed into the bank line to anchor the landward end of the tree and protect the landward end of each retard from flanking by overtopping flows.

Turbidity: Reduction in transparency caused by suspended solids or colloids.

Unit discharge: Discharge per unit width (Q/W).

Warmwater stream: A stream with water too warm to support salmonid fishes.

Water control structure: A device, such as a weir or gated structure, used primarily to control water level.

Wing deflector: A low structure projecting from a channel bank used to create scour holes for fish habitat purposes.