

# Glossary

**Active channel** – The nonvegetated part of the channel that typically coincides with the scour line and/or greenline on the streambank.

**Aggradation** – The geologic process by which a stream bottom or floodplain is raised in elevation by the deposition of material.

**Alluvial** – Deposited by running water.

**Altered potential** – The best possible ecological status and channel form that can be attained under permanent human alterations.

**Anastomosing channels** – Multiple channels with relatively permanent, stable, vegetated islands. Banks are cohesive and sediment load is primarily suspended load.

**Bankfull or bankfull stage** – The elevation of the bank where flooding begins. Bankfull is the streamflow level that just fills the channel to the top of its banks where water begins to overflow onto the floodplain. This streamflow level is often associated with moving sediment, bar formation, and generally, the formation of the morphological characteristics of the stream channel (Wolman and Miller 1960).

**Bankfull channel** – The channel size and shape that hold the bankfull discharge.

**Bankfull discharge** – The maximum discharge that a particular stream channel is capable of carrying without flooding.

**Channel avulsion** – Rapid abandonment of a river channel and the formation of a new river channel.

**Community type** – A repeating classified and recognizable assemblage or grouping of plant species. They often occur as patches, stringers, or islands and are distinguished by floristic similarities in both their overstory and understory layers.

**Degradation** – A geologic process that lowers the stream channel due to erosion. Also referred to as downcutting.

**Ecological site (riparian)** – A conceptual division of the landscape, defined as a distinctive kind of land based on recurring soil, landform, geological, and climate characteristics that differs from other kinds of land in its ability to produce distinctive kinds and amounts of vegetation and in its ability to respond similarly to management actions and natural disturbances. Ecological site is synonymous with range site.

**Ecotone** – A transition area of vegetation between two communities that has characteristics of both kinds of neighboring vegetation as well as characteristics of its own. Ecotones vary in width depending on site and climatic factors.

**Entrenchment** – The relationship of the stream channel to its valley and landform features. It is qualitatively defined as the vertical containment of a channel and the degree to which it is incised in the valley floor.





**Ephemeral system** – A stream system that flows only in direct response to precipitation. It receives no water from springs and no long-continued supply from melting snow or other surface sources. Its stream channel is at all times above the water table. The term ephemeral may be arbitrarily restricted to streams or stretches of streams that do not flow continuously during periods of as much as 1 month (Meinzer 1923). An ephemeral stream does not exhibit the typical biological, hydrological, and in some cases, physical characteristics associated with the continuous or intermittent availability of water (Nadeau 2011). The PFC assessment protocol is not designed for use on ephemeral streams or ephemeral reaches.

**Floodplain** – A relatively flat landform adjacent to a stream that is composed of primarily unconsolidated depositional material derived from the stream and that is subject to periodic flooding. The floodplain is inundated at least once or twice (on average) every 3 years.

**Fluvial** – Shaped by the movement of water, particularly channelized flow.

**Gaining stream** – A stream reach that gains water from the inflow of ground water through the streambed. In some environments, streamflow gain can persist; that is, a stream might always gain water from ground water. However, in other environments, flow direction can vary a great deal along a stream; some reaches receive ground water, and other reaches lose water to ground water. Furthermore, flow direction can change in very short timeframes as a result of individual storms causing focused recharge near the streambank, temporary flood peaks moving down the channel, or transpiration of ground water by streamside vegetation (Winter et al. 1998).

**Geomorphology** – The study of landforms and the processes that shape them.

**Greenline** – The first perennial vegetation that forms a lineal grouping of community types at or near the water's edge along a stream channel. Most often it occurs at or slightly below the bankfull stage (Burton et al. 2011; Winward 2000).

**Hydraulic control** – A feature of landform (bedform and bed material), vegetation, or organic debris that controls the relationship between stage (water depth) and flow rate (discharge) of a stream.

**Hydraulic radius** – The ratio of the cross-sectional area to the wetted perimeter (the part of the channel bed that is in contact with water in a cross-sectional view.)

**Hydric** – Characterized by, relating to, or requiring an abundance of moisture.

**Hydroperiod** – The period of time during which soils, water bodies, and sites are wet.

**Hyporheic zone** – A unique hydrochemical and biological region beneath and lateral to a streambed, where there is mixing of ground water and surface water.

**Incised channel** – A stream channel that has cut into the bed of the valley due to erosive lowering of the streambed, which keeps the stream from accessing its floodplain in relatively frequent events.

**Intermittent system** – A stream system that flows only at certain times when it receives water from springs or gradual and long, continued snowmelt. The intermittent

character of streams of this type is generally due to fluctuations of the water table whereby part of the time the streambed is below the water table and part of the time it is above the water table. The term intermittent may be arbitrarily restricted to streams or stretches of streams that flow continuously during periods of at least 1 month (Meizner 1923). An intermittent stream may lack the biological and hydrological characteristics commonly associated with the continuous conveyance of water (Nadeau 2011). The channel may or may not be well defined.

**Interrupted reach** – A stream that contains: (1) perennial stretches with intervening intermittent or ephemeral stretches, or (2) intermittent stretches with intervening ephemeral stretches (Meizner 1923).

**Lentic** – A riparian system characterized by still water (such as lakes, ponds, or swamps).

**Losing stream** – A stream reach that loses water to ground water by outflow through the streambed. Losing streams can be connected to the ground-water system by a continuous saturated zone or can be disconnected from the ground-water system by an unsaturated zone. In some environments, streamflow loss can persist; that is, a stream might always lose water to ground water. However, in other environments, flow direction can vary a great deal along a stream; some reaches receive ground water, and other reaches lose water to ground water. Furthermore, flow direction can change in very short timeframes as a result of individual storms causing focused recharge near the streambank, temporary flood peaks moving down the channel, or transpiration of ground water by streamside vegetation (Winter et al. 1998).

**Lotic** – A riparian system characterized by actively moving water.

**Mean-annual flood** – The average of annual peak flows for a period of record.

**Perennial system** – A stream system that flows continuously in all or most years. It is generally fed in part by springs, and the streambed is often located below the water table for most of the year. Ground water supplies the baseflow for perennial streams during dry periods, but flow is also supplemented by stormwater runoff and snowmelt (Meizner 1923; Nadeau 2011). A perennial stream exhibits the typical biological, hydrological, and physical characteristics commonly associated with the continuous conveyance of water (Nadeau 2011).

**Potential** – The highest ecological status a riparian area (stream reach) can attain in the present climate.

**Redoximorphic features** – Soil features formed by the process of reduction, translocation, or oxidation of iron and manganese oxides; formerly called mottles and low-chroma colors (USDA-NRCS 2010.)

**Sinuosity** – The ratio of channel length to valley length.

**State-and-transition model** – A method to organize and communicate complex information about the relationships among vegetation, soil, animals, hydrology, disturbances (fire, lack of fire, grazing and browsing, drought, unusually wet periods, insects, and disease), and management actions on an ecological site (USDI-BLM et al. 2013.)





**Stream energy or stream power** – A measure of a stream’s ability to erode and transport sediment that is equal to the product of shear stress and velocity.

**Thalweg** – The line that connects the lowest or deepest (or maximum water depth) points along the streambed.

**Watershed** – A region or area that is bounded peripherally by a drainage divide and that drains ultimately to a particular watercourse or body of water; a drainage basin for a stream or a catchment.

**Woody material** – Pieces of wood in a stream that affect channel morphology by splitting flows, dissipating stream energy, and capturing and storing sediment/bedload. Beyond a minimum threshold, size varies with stream size but generally can be described as large enough to have a low probability of being moved by the stream (Bilby and Ward 1987). Pieces with a length of one-half the channel width or larger are generally considered stable (Bisson et al. 1987).