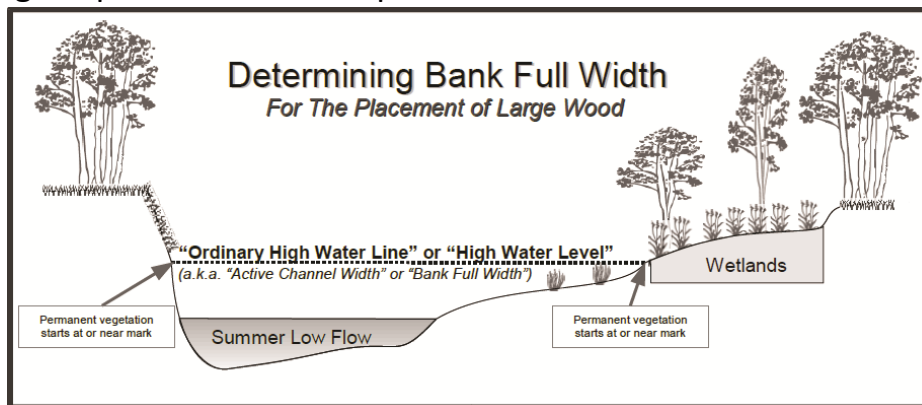


Maine Stream Smart Road-Stream Crossing Field Workshop Glossary*

Subset of Terms Used in Stream Assessment Measurements

Bankfull—Describes the volume of flow, and the flow width or depth associated with the bankfull elevation: that point where water fills the channel just before beginning to spill onto the flood plain.



Discharge— The rate of flow of water (and other material) through a given cross-sectional area (generally in square feet), given normally in cubic feet per second (cfs).

Grade control—Anything that controls channel elevation and therefore local channel slope. Grade controls can be natural streambed structures or manmade dams, sills, culverts, etc. As used in this guide, the term most commonly refers to natural structures, such as logs, riffle crests, boulder steps, etc. See also Key features.

Headcut—An abrupt change in channel bed elevation resulting in local steepening. Headcuts may be nearly vertical, or more gradual, depending on grain size and consolidation of channel materials.

Hydraulics— The study of the forces and dynamics of water in open channels and closed conduits as they relate to stream crossings to model and evaluate the likely

* From US Department of Agriculture Forest Service, "STREAM SIMULATION: An Ecological Approach to Providing Passage for Aquatic Organisms at Road-Stream Crossings", May 2008.

effects of various discharges on proposed crossing designs. Hydraulic modeling of stream crossings typically tests designs at given discharges with outputs of inlet and outlet water depths and velocities to assess capacity, scour and sediment transport.

Hydrology— The study of the distribution and movement of water, primarily on the land surface, generally as defined within a given drainage area. As it relates to stream crossings, hydrology particularly focuses on the accumulation and movement of water in streams, ponds and wetlands.

Invert—The bottom of a full-bottom (closed) culvert.

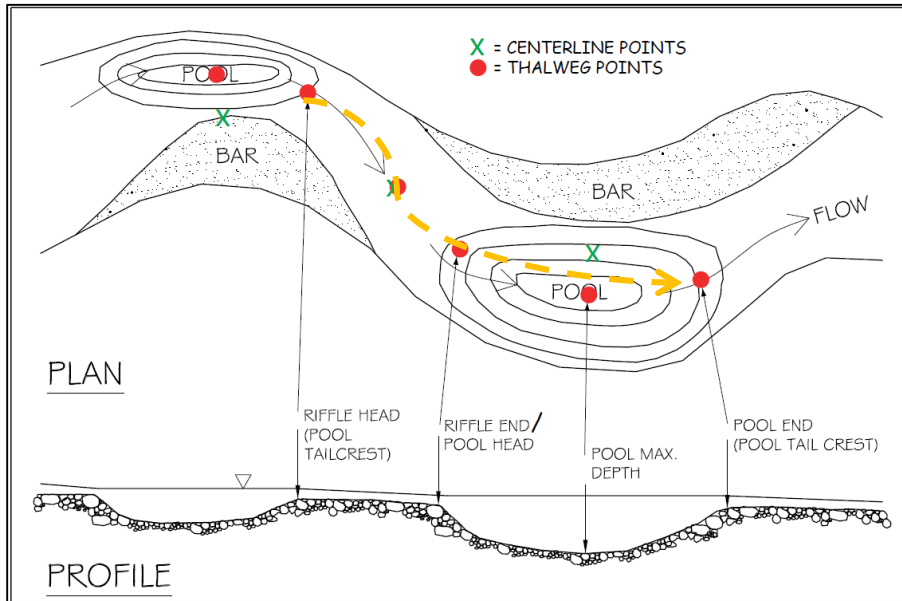
Key features—Anything in the stream channel that the current stream either cannot move or that moves only in infrequent floods, and that plays an important role in channel morphology and stability. Key features may control grade, provide roughness, retain bed material, and stabilize banks, among other functions. They can be rocks, logs, living trees, roots, etc.

Nickpoint or Knickpoint—An abrupt drop, or point of inflection, in the longitudinal profile of a stream. Usually associated with a lowering of base level, nickpoints can migrate upstream and can cause rapid channel incision upstream. See also Headcut.



* From US Department of Agriculture Forest Service, "STREAM SIMULATION: An Ecological Approach to Providing Passage for Aquatic Organisms at Road-Stream Crossings", May 2008.

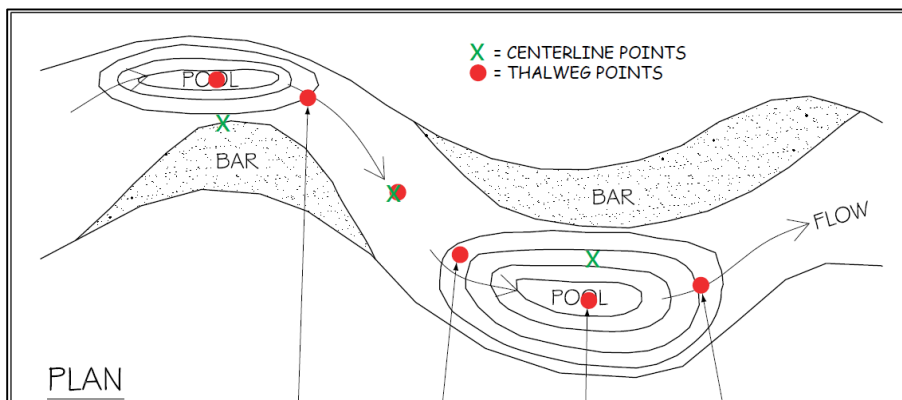
Pool spacing—The distance between two successive pools, measured from pool tail to pool tail or pool head to pool head.



Project reach—The stream segment that will be affected by the project, including segments not directly constructed, but expected to adjust to the changes made by the project.

Reference reach—A natural stable channel reach used as the design template for stream simulation.

Thalweg—The longitudinal profile line, or line connecting the lowest points along a streambed. (see lines connecting red dots in image below)



* From US Department of Agriculture Forest Service, "STREAM SIMULATION: An Ecological Approach to Providing Passage for Aquatic Organisms at Road-Stream Crossings", May 2008.

Vertical adjustment potential—the vertical range of possible streambed elevations over the life of the structure.

Woody debris—Logs, limbs, and rootwads found in streams. Woody debris plays important roles in stream ecosystems by increasing boundary roughness and flow resistance; providing storage areas for sediment and organic material; providing cover for fish; controlling grade and increasing profile and substrate diversity.



* From US Department of Agriculture Forest Service, “STREAM SIMULATION: An Ecological Approach to Providing Passage for Aquatic Organisms at Road-Stream Crossings”, May 2008.