

# Channel realignment: Floodplain

Braided Stream – Tangle of converging and diverging stream channels with sand bars and islands.

Slope – rate of the change in elevation over the width of the floodplain, or over the horizontal distance of the water surface of the flowing stream (stream gradient).



Confluence – The meeting of two or more streams flowing together to combine into one channel.

Meander – Winding of a stream channel characterized by curved flow and alternating banks

Streambed – Unvegetated portion of the channel where water runs or ran, and where gravel and sediments are deposited.

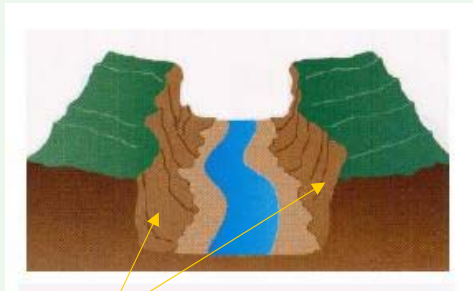
Top of bank – break in the slope between the bank and the surrounding terrain

Toe – break in the slope where the bank meets the bed

Floodplain – Broad, flat lands along the creek that become regularly inundated during floods, resulting in the deposition of sediments (sedimentation).

# Bank Stabilization

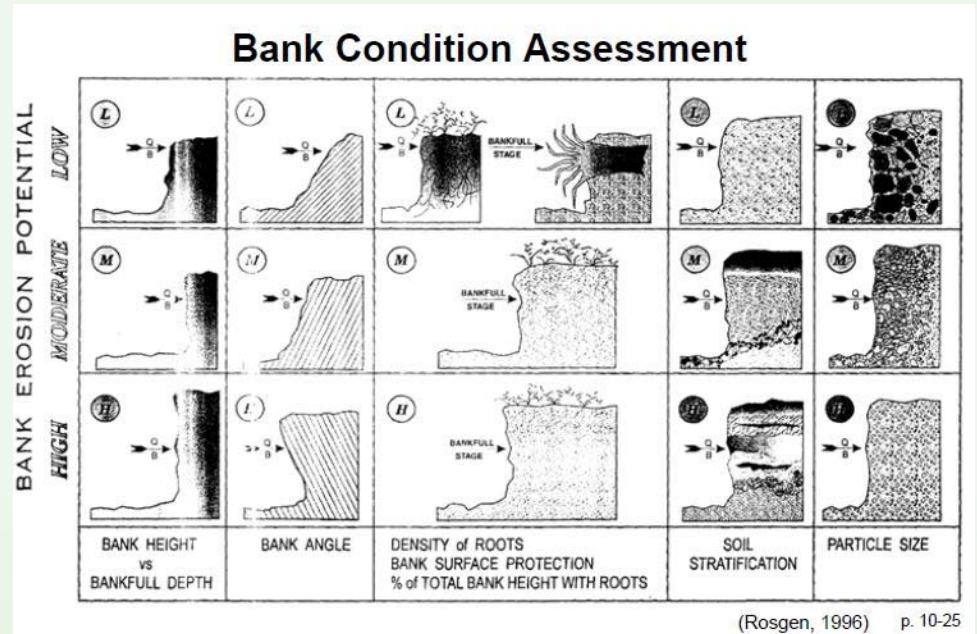
The properties of a stream that counteract erosion create bank stability (i.e. soil type, vegetative cover).



Stream bank – the side slopes of the active channel which normally confine stream flow

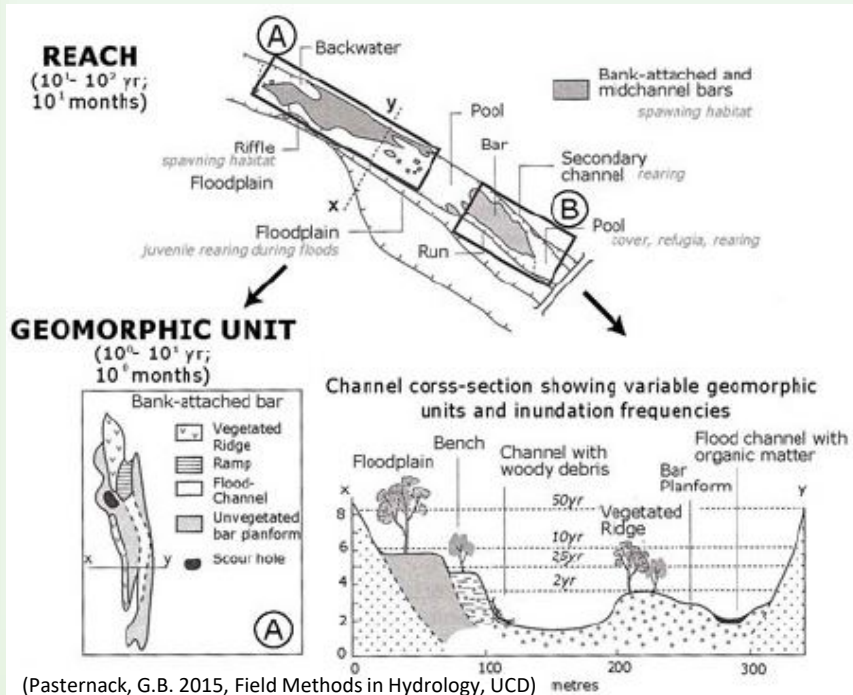
Scour – the erosive action of running water in streams, which excavates and carries away materials from the bed and banks

Discharge – the volume of water passing a certain point along the creek in a given period of time

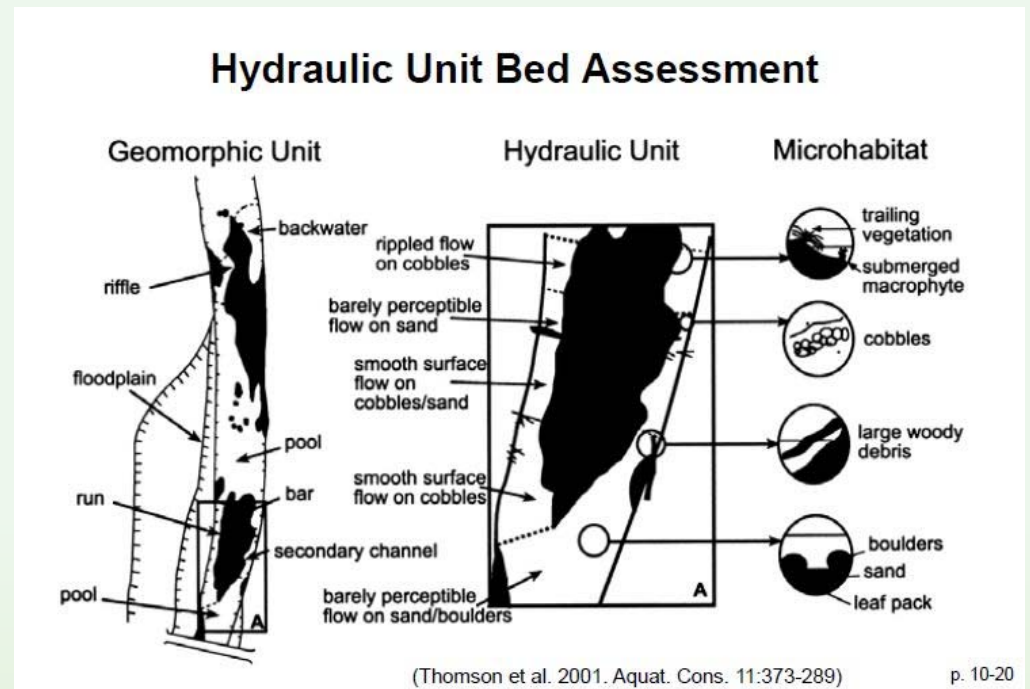


Energy of moving water dissipates due to internal turbulence, bottom friction, large rocks, and other obstacles that impede flow resulting in loss of kinetic energy.

# Stream Morphology: Form, Shape, and Structure



(Pasternack, G.B. 2015, Field Methods in Hydrology, UCD)



Backwater – small, shallow body of water with no current created by water pushed back from the main channel.

Pool – reach of the stream characterized by deep, slow moving water and a smooth surface.

Reach – Section of the stream between two points.

Riffle – Reach of the stream characterized by shallow, fast moving water and a surface broken by rocks and boulders.

Clay – Particles smaller than 0.003 mm in diameter

Silt – Particles 0.003-2.0 millimeters in diameter

Sand – Particles .062-2.0 millimeters in diameter

Gravel - .08-2.5 inches in diameter

Cobble – 2.5-10 inches in diameter

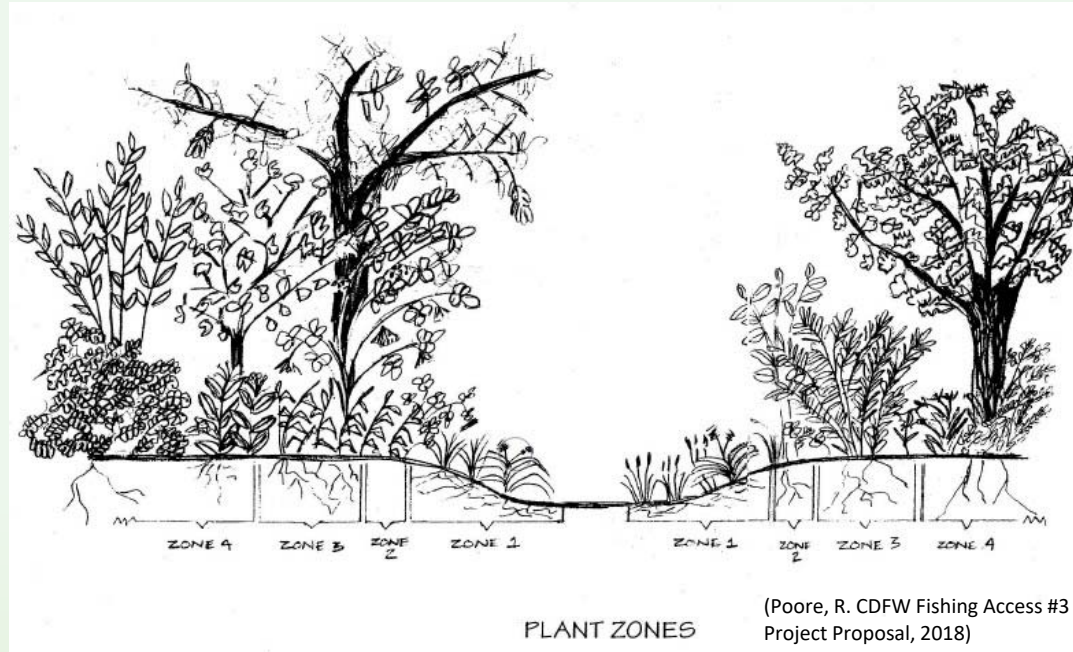
Boulders – over 10 inches in diameter

# Native Riparian Vegetation: Bank Stabilization and Weed Control

Riparian vegetation – Plants that grow rooted in the water table of the creek.

Productivity – A measure of the ability of an ecosystem to sustain life, with factors that include fertility, climatic conditions, and available sunlight and water.

Native plant – Locally sourced species indigenous to California.  
Non-native plant – imported from outside of California.



Riparian area – Land (floodplain and woodland) and vegetation adjacent to the creek that has a direct effect on the creek.

Instream cover – Layers of trees, shrubs, and overhanging vegetation, in and adjacent to the wetted channel.

Plant Zones: Used to categorize vegetation and define conditions of a riparian site.

Zone 1: Emergent – Rooted plants that tolerate flooded soils if not submerged for extended periods.

Zone 2: Wetland and overhanging plants.

Zone 3: Lower bank trees, shrubs, and groundcover connected to the creek.

Zone 4: Upper bank trees and grasses connected to the groundwater table.