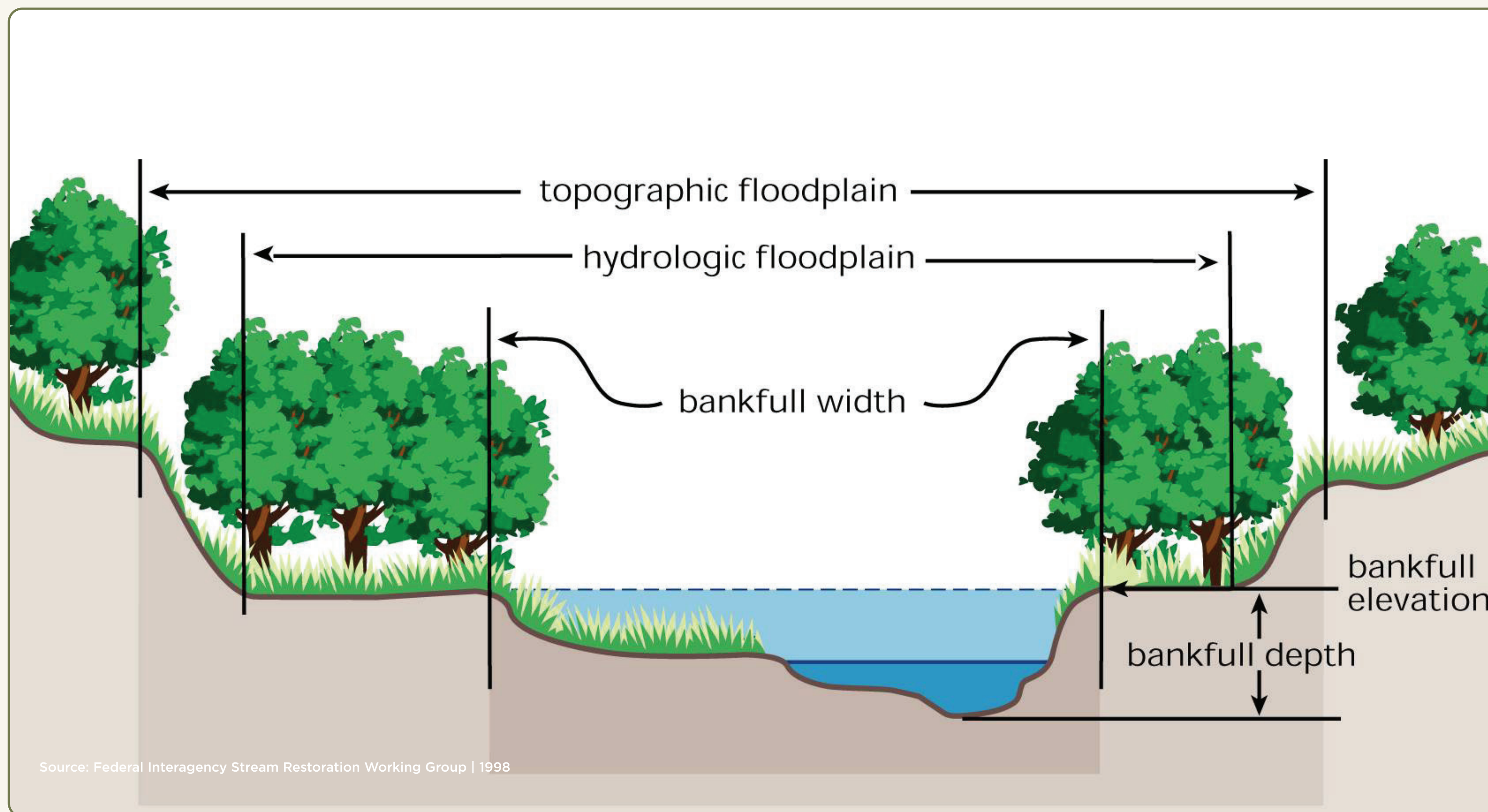


WHAT IS NATURAL STREAM RESTORATION?



Streams and rivers serve many purposes, including water supply, wildlife habitat, energy generation, transportation and recreation. A stream is a dynamic, complex system that includes not only the active channel but also the floodplain and the vegetation along its edges. A natural stream system remains stable while transporting a wide range of flows and sediment produced in its watershed, maintaining a state of “dynamic equilibrium.” When changes to the channel, floodplain, vegetation, flow or sediment supply significantly affect this equilibrium, the stream may become unstable and start adjusting toward a new equilibrium state. This transition may take a long time and cause big changes to water quality, habitat and adjacent property.

Doll, B.A. et al (2003).

Stream restoration is the re-establishment of the general structure, function and self-sustaining behavior of the stream system that existed prior to disturbance. It is a holistic process that requires an understanding of all physical and biological components of the stream system and its watershed. Restoration includes a broad range of measures, including the removal of the watershed disturbances that are causing stream instability; installation of structures and planting of vegetation to protect streambanks and provide habitat; and the reshaping or replacement of unstable stream reaches into appropriately designed functional streams and associated floodplains

Doll, B.A. et al (2003).



The above photographs depict Davis Creek downstream of Rattlesnake Run before (left) and after (right) in-stream structure placement. These structures, referred to as J-hooks, are used to stabilize the banks of newly-constructed stream channels, as well as to create stream bed features such as pools and glides. J-hooks can be found frequently throughout the enhanced section of Davis Creek.