# Considering Natural Vegetation Development Processes In Streambank Stabilization Design

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Stabilizing eroding streambanks is a common component of stream and river restoration projects and is addressed by various disciplines using a wide range of techniques. A native species revegetation approach to streambank stabilization has numerous benefits and is being used with increasing success in western Montana. The most successful streambank stabilization efforts combine techniques from the tool boxes of different disciplines, such as incorporating soil bioengineering techniques with natural channel design structures like log vanes and engineered log jams. In addition to improving channel function and stability, including native species revegetation as part of streambank stabilization accounts for ecological processes necessary for long-term self-maintenance of restoration projects. Ecological processes that influence vegetation development along streams include alluvial bar deposition, plant community succession and related soil development, surface water/groundwater connection, and wildlife influences such as deer browse and beaver dams. Considering different vegetation development pathways in the context of these processes will result in streambank stabilization efforts that are self-sustaining and support objectives for instream habitat, riparian revegetation, and dynamic stability at the reach scale.