

SELECTING CONSERVATION PRACTICES AND LANDSCAPE CONTEXT FOR PROTECTION OR RESTORATION

It is important to recognize the site-level landscape settings or zones on a streambank or lakeshore that influences the selection of potential practices.

This Companion Document displays a conceptual cross-section schematic of applicable landscape zones, descriptions of each zone, and a short list of appropriate practices. Because of the strong physical and ecological interaction of banks with their adjacent corridors of land and vegetation, project planning should consider the entire bank and adjacent land which includes the bed, banks, and riparian areas. These landscape components strongly interact and are best planned as a whole to optimize desired effects and meet client and ecological objectives.

The planner must match site impairments, landscape zones, and client objectives with conservation practices.

Wisconsin NRCS Technical Standards

- 322 - Channel Bank Vegetation (National NRCS)
- 342 - Critical Area Planting
- 391 - Riparian Forest Buffer
- 393 - Filter Strip
- 395 - Stream Habitat Improvement and Management
- 396 - Fish Passage
- 580 - Streambank and Shoreline Protection
- 584 - Channel Stabilization
- 643A - Shoreland Habitat

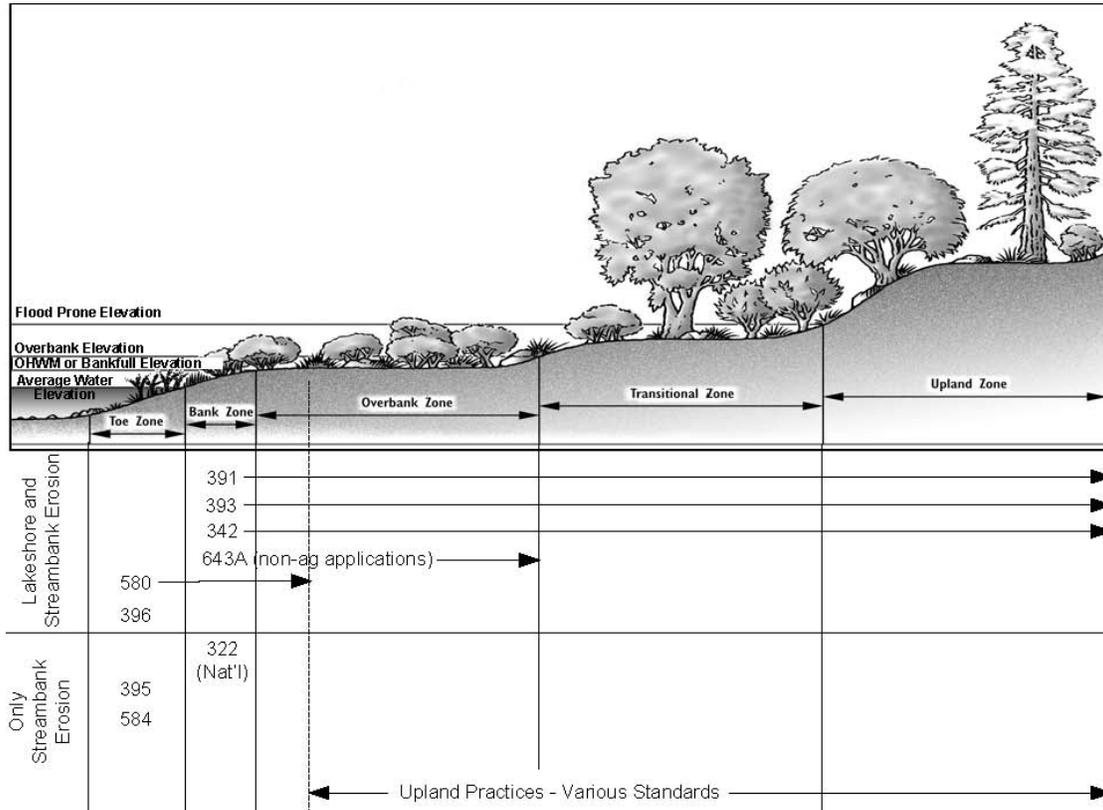
The National Engineering Handbook (NEH), 210-VI, Part 654, NRCS Stream Restoration Design, has additional resources. It is available at the eDirectives Website, <http://policy.nrcs.usda.gov/index.aspx>, see Title 210-Engineering/National Engineering Handbook listing. Individual chapters, technical supplements, and case studies can be downloaded from this site.

NEH-654 provides tools for designing stream restoration projects. Over 200 practitioners from government, private, and academic fields have participated in its production.

NEH-653, "Stream Corridor Restoration: Principles, Processes, and Practices," was released in 1998 and provides basic principles about stream restoration and how to plan stream restoration projects.

NEH-654 complements NEH 653 by providing assessment and design tools that are applicable to any stream restoration work, whether it primarily follows a natural stream restoration or is strictly a structural project.

Location of Hydrologic Zones Along a Streambank or Shoreline and Applicable NRCS Technical Standards



Definitions and Descriptions of Hydrologic Zones

Bank Zone - The area above the Toe Zone located between the average water level or the bankfull elevation or OHWM. Vegetation may be herbaceous or woody, and is characterized by flexible stems and rhizomatous root systems.

Flood Prone Elevation (streams only) - Twice the maximum bankfull depth.

Overbank Zone - The area located above the top of the bank, or the bankfull elevation continuing upslope to an elevation equal to two thirds of the flood prone depth. Vegetation is generally small to medium shrub species.

Toe Zone - The portion of the bank that is between the average water level and the bottom of the lakebed or channel, at the toe of the bank. Vegetation is generally herbaceous emergent aquatic species, tolerant of long periods of inundation.

Transitional Zone - The area located between the overbank zone, and the flood prone width elevation. Vegetation is usually larger shrub and tree species.

Upland Zone - The area above the Transitional Zone; this area is seldom if ever saturated.

OHWM (both streams and lakes) or Bankfull Elevation (streams only) - The point on the bank or shore up to which the presence and action of the water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation, or other easily recognized characteristics (the elevation of the water during the flow that occurs on average, every 1.2 years. In many channels this is the point where water begins to flow out on to the floodplain. Since floodplains may be small, indistinct or newly developing, it is important to verify correct identification of the bankfull surface by checking against the 1.2-year discharge using one of the methods for determining discharge listed in Companion Document 580-8, Detailed Instructions for Reference Reaches.

Note: Some locations have fewer than four hydrologic zones because of differences in soils, topography, entrenchment and/or moisture regime, erosion or human influence.