ENVIRONMENTAL Fact Sheet

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

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Bank and Shoreline Stabilization Projects

All projects involving dredge or fill or the placement of structures on or within the banks of surface waters require a permit from the DES Wetlands Bureau. The Wetlands Bureau operates under the NH Code of Administrative Rules Env-Wt 100-900, which requires that impacts to these areas be minimized and avoided whenever possible. Consistent with this requirement, Env-Wt 404 dictates specific criteria for shoreline projects, requiring that they be the least intrusive, but practical stabilization method.

Types of Stabilization
In accordance with the Criteria for Shoreline Stabilization in the rules, the methods of stabilization below are in order of preference.

Vegetative Stabilization & Diversion
Natural vegetation must be left intact to the maximum extent possible and where unstable banks are present; they should be replanted with native, non-invasive trees and shrubs. If steep banks are present, jute or turf reinforcement mats should be considered in order to prepare the site to readily accept native plants and dormant woody plant cuttings called “live stakes.” For complicated projects, bioengineering techniques must be considered before deciding on the appropriate method to improve channel stability with consideration given to the river or stream dynamics and natural stream channel design. Deflecting structures such as stone vanes, stream barbs and root wads combined with re-vegetation of the bank and associated area landward of the stream have been proven to trap sediment and are successful in keeping stream currents away from the bank.

Stone Rip-rap
Rip-rap applications should be considered only where there is demonstrable turbulence, flows or restricted space that render vegetative and diversion methods impractical. Rip-rap is stone placed against a sloping soil surface and keyed into the slope. If stone rip-rap is necessary, then it is preferable to be used at the base or toe of slope and vegetative stabilization techniques are used higher up the bank. All plans for riprap projects in excess of 100 linear feet along a stream or river must be stamped by a New Hampshire licensed engineer, though it is generally recommended that an engineer be consulted for any stone rip-rap project.

Retaining Walls
Construction of retaining walls is the least desirable method and the last alternative considered for bank stabilization. Before a retaining wall can be approved, it must be shown that there is a lack of space or other site limitation that makes alternative stabilization methods impractical. All

proposals for retaining walls adjacent to certain great ponds or surface waters must be stamped by a licensed New Hampshire land surveyor.

While bank stabilization is permissible in some cases, DES typically does not authorize the reclamation of land lost to erosion.

Application Selection, Completion & Review
The Wetlands Bureau encourages applicants to use either the Wetlands Standard Dredge and Fill permit application or Wetlands Expedited Minimum Impact permit application depending on the size, scope and impacts of the proposed project. More information about each of these applications can be found at:
http://des.nh.gov/organization/divisions/water/wetlands/categories/permits.htm.

To minimize delays in the application review and approval process, make sure that you review "How to Make Your Application Complete" at:
http://des.nh.gov/organization/divisions/water/lrm/summary.htm

Once received, you must post your wetlands permit in a conspicuous location at the site.

More Information
For more information, call the Wetlands Bureau at (603) 271-2147 or go on-line at http://des.nh.gov/organization/divisions/water/wetlands/index.htm.