

WHY THE FOCUS ON FORESTED BUFFERS & PERENNIAL STREAMS?

If you live in or are developing property in Tidewater Virginia, you already know the answer to this question, but for many, the thought of natural forested upland buffers along sensitive wetlands or streams may seem like a complete waste of valuable real estate. The formal use of upland buffers in Virginia started with the ratification of the Chesapeake Bay Preservation Act (CBPA) and the adoption of Chesapeake Bay Preservation Area Designation and Management Regulations in 1989. In turn, 84 different local governments in Tidewater adopted these regulations. The regulations mandated a 100-foot upland buffer adjacent to tidal waters and non-tidal waters connected by surface flow. The purpose behind the requirement was to utilize the filtering characteristics of upland buffers to help preserve and improve water quality via a reduction in non-point source pollution (untreated runoff).

During the 1990's and through the turn of the century, these regulations were a focal point for controversy regarding their implementation. In March 2002, the Chesapeake Bay Local Assistance Department (CBLAD) changed the regulations. The revisions eliminated the practice of wholesale reduction of the upland buffer from 100 feet to 50 feet and it clearly identified perennial stream systems as the nexus for Resource Protection Area (RPA) status. The changes, however, did little to clarify which method(s) should be used for perennial flow determinations.

By the time the changes to the Chesapeake Bay regulation had taken effect, the U.S. Army Corps of Engineers (Corps) and the Virginia Department of Environmental Quality (DEQ) had already begun a more deliberate assessment of streams and the use of upland buffers as mitigation to offset impacts to jurisdictional resources. This is important because the historic methodologies for determining perenniality had not been universally agreed-upon and stream values, which are now being mitigated, are not easily measured.

You must also keep in mind that RPA Buffers differ from the voluntary non-RPA buffers developers put in place as part of an overall mitigation proposal. RPA buffers are protected by local regulation and administered locally. The non-RPA buffers are governed by deed restrictions that were previously agreed upon by the client and/or both the Corps and DEQ. Proposed changes within a previously deeded non-RPA buffer may involve formal modification of the respective federal or state permit while proposed changes to RPA buffers will require local approval of an exception request and may require the preparation of a Water Quality Impact Assessment.

The methods currently used to assess perenniality most often include Field Indicator Protocols, which involve the evaluation of stream geomorphology, hydrology, and biology. The North Carolina Division of Water Quality (Version 2) and the Fairfax Method have been approved by CBLAD for making site-specific determinations. Groundwater monitoring, surface water monitoring, drainage area based on sampling, and documented observation are additional mechanisms to determine flow regime. Specific guidance issued by CBLAD is available at <http://www.cblad.virginia.gov/guid.cfm>. Proper application of the Field Indicator Protocols is dependent upon training and experience. Regional geologic and physiographic differences also may play a significant role in determining the origin of perennial flow.

Mitigation for stream channel impacts has been an ongoing debate. What constitutes stream compensation? How does stream restoration compare to buffer restoration? What is the cost of stream mitigation? All good questions that have been under review by the agencies for nearly two years. Currently, stream compensation can vary widely depending upon project need and geographic location. Inconsistencies in application, costs, and success criteria have prevented stream work from being completed. The regulatory agencies are on the verge of adopting formal stream mitigation guidance to standardize stream compensation.

Streams will likely be assessed based on channel incision, riparian buffer, bank stability, instream habitat, channel alteration, and water quality. Collectively, these metrics will be computed to determine the total "value" or amount of Stream Condition Units (SCU) or compensation required as mitigation. Stream mitigation may include preservation, enhancement, restoration, Low Impact Development (LID) measures, and/or in-lieu fee contributions. In the end, proposed stream compensation will need to demonstrate an overall benefit to the aquatic system and ensure "no net loss" to the greatest extent practicable. Stay tuned, as the new methodology is expected to be public noticed by January 2005.

Perennial stream determinations and the methods used to characterize streams not only drive the CBPA process, they play an important role in determining the permits you may qualify for and the overall cost of mitigation. If you have any questions on forested buffers or how perennial determinations are made, please give us a call. In addition, CBLAD also revisited questions regarding work in buffers and, in September 2003, published a Riparian Modification and Mitigation Guidance Manual. The Manual describes the different functions of a buffer but also outlines specific modification questions that routinely seem to plague the regulated public, i.e., sight lines and vistas, access paths, woodlot management, and shoreline erosion. The Manual is available online at the following address: <http://www.cblad.state.va.us/ripbuffstat.cfm>.



TECHNICAL UPDATE

3000 Easter Circle
Williamsburg, Virginia 23188
Phone: (757) 220-6869
Fax: (757) 229-4507
Email: akennedy@wegnet.com

Branch Offices:
46030 Manekin Plaza, Suite 160
Sterling, Virginia 20166
Phone: (703) 406-1390

7401 Beaufont Springs Drive, Suite 205
Richmond, Virginia 23225
Phone: (804) 267-3474

Williamsburg Environmental Group (WEG) provides innovative solutions to the environmental challenges facing the industry today. For more information contact:
Williamsburg: Chuck Roadley at croadley@wegnet.com
Richmond: Mike Kelly at mkelly@wegnet.com
Sterling: Loreta Cummings at lcummings@wegnet.com
(757) 220-6869
(804) 267-3474
(703) 406-1390