

Wetland Mitigation

Emerging Opportunities for Forest Landowners

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Preservation or creation of forested wetlands is a new opportunity for forest landowners to profit from their existing forestland base while benefiting the local community. Benefits and societal values include strategic habitat preservation for a wide array of animals, non-point source pollution control from agricultural and suburban areas, and storm water retention. Utilizing private land as wetland mitigation sites allows landowners to financially profit from their land, and more importantly, to build a beneficial relationship with the community through protection of valuable forested wetland functions.

Virginia has lost nearly half of her wetlands since the 1780's, mostly due to conversion of wetlands to agricultural, urban, industrial and recreational uses. Today, Virginia has about 1 million acres of wetlands, and forested wetlands are the most common wetlands in the State. Some of the tree and shrub species found in Virginia's forested wetlands are listed in Table 1 (page 4). In July 2000, Virginia General Assembly Legislation created the non-tidal wetlands program in which the Commonwealth started to regulate excavation in wetlands, impacts to isolated wetlands, and require mitigation for most permitted impacts to achieve *no net loss* of wetland function and area.



View of the portion of the Julie J. Metz mitigation bank in its eighth growing season. The area was planted with a mix of stock sizes (seedling, 1-gallon, and 1 ½ caliper) and a diverse seed mix of herbaceous and woody species. Canopy closure due to black willow volunteers combined with planted trees is starting to occur. This wetland mitigation site in Prince William County was donated to the Board of Supervisors.

Wetland mitigation is required as a form of compensation when impacts to wetlands cannot be avoided, such as development of a residential community, commercial, industrial, institutional or transportation facility. Under section 404 of the Federal Water Pollution Control Act amendments of 1972 and subsequent amendments (The Clean Water Act) and the Virginia Department of Environmental Quality (DEQ) wetland protection program, the approval to fill, drain or otherwise alter a



Overview of North Fork in its sixth growing season. Although slightly north of its species range, several patches of bald cypress (*Taxodium distichum*) were planted in the wetter areas. This mitigation site was donated to the National Capital Area Council of the Boy Scouts of America and provides an invaluable outdoor education venue.

wetland may be conditional upon restoring, creating or enhancing wetlands to compensate for any unavoidable loss in wetland area and function. In Virginia, forested wetlands are typically mitigated at a ratio of 2:1, which means that for every one acre of forested wetland impacted, two acres of forested wetland are to be created.

Finding available sites that are suitable for wetland creation, enhancement and preservation can be difficult, especially in northern Virginia (NOVA) where land prices are very high. This means there is a seller's market for forest landowners. Wetland Studies and Solutions, Inc. (WSSI) has been very fortunate to partner with several investors willing to venture into the wetland creation market. Listed below are examples from Prince William County, Virginia, where we have worked with landowners recently.

- **Julie J. Metz** - This is an 8-10 year old wetland mitigation bank consisting of approximately 19 acres of constructed wetlands, as well as ±201 acres of preserved existing wetlands and an upland buffer on a ±227 acre parcel of

land along Neabsco Creek (Photo #1). It is the first "true" wetland bank in Northern Virginia and was donated by the bank sponsors to the Prince William County Board of Supervisors in April 2000.

- **North Fork** - Created from a 125-acre cattle pasture, the North Fork Wetlands Bank is an ecologically diverse system providing 7 acres of open water, 76 acres of wetlands, and 42 acres of upland buffers (Photo #2). It features a diverse mixture of forested, shrub-scrub and emergent wetlands. After only two years, 170 bird species, as well as high densities of turtles and amphibians, were documented at this site. It was later donated to the National Capital Area Council of the Boy Scouts of America to be incorporated into the Scouts' 380-acre Camp Snyder.
- **Bull Run** - This Wetland Bank, located along Bull Run, consists of nearly 50 acres of a mixture of upland forested buffers and islands, open water, floating aquatic wetlands, emergent wetlands, shrub-scrub wetlands, and forested wetlands. It was constructed in 2002 on an easement and the landowner retained ownership of the land.
- **Cedar Run** – The Cedar Run Wetlands Bank consists of nine different tracts of land comprising a total of approximately 730 acres with approximately 370 acres of created, restored, enhanced, and preserved wetlands, including mature bottomland forest, all located within the Cedar Run watershed. Upon completion of monitoring (required by the regulatory agencies), the phases have different future scenarios; either be returned to the previous landowner, or become part of the open space requirement associated with a residential development.

Stewards of the land will appreciate the benefits that owning a wetland mitigation site brings. Although profit will likely be gained from the transaction, the establishment of habitat for a wealth of wildlife, as well as contribution to other societal values already mentioned, is invaluable.

Making one's land available for use as a mitigation site has little or no direct monetary costs. However, the wetland mitigation site generally has a restrictive covenant dictating that the land remains a wetland in perpetuity, which has indirect costs and includes a potential reduction in land value and lost development rights because of the restrictive covenant that is placed on the mitigation site. On the flip side, landowners are generally paid for use of an easement to construct and monitor the wetland mitigation site. This can be in the form of a percent of gross sales or a fixed fee payment paid upfront and based on the number of wetland mitigation credits the site will generate. Compensation to the landowner selling the land to be used to create wetlands ranges from \$15,000 to \$25,000 per usable acre in NOVA.

A mitigation bank is similar to the easement exchange in the National Resource Conservation Service (NRCS) Wetlands Reserve Program (WRP), but differs in focus such that mitigation is in direct exchange for a wetland impact. However,

sites that are entered into an agreement with NRCS under the Conservation Reserve Program or U. S. Fish and Wildlife Service (USFWS), (i.e., federally-funded wetland mitigation projects) cannot be used for mitigation credits. Such restored habitats can not be used for restoration credit of a site-specific mitigation plan; however, restored wetlands may be used as preservation credit at a minimum ratio of 10:1.

Allowable uses mentioned in past restrictive covenants include, but are not limited to, hunting, fishing, and harvesting of wild and edible plants. However, the regulatory agencies (U.S. Army Corps of Engineers, DEQ, USFWS) currently do not allow timber harvesting. It would be a worthy challenge to educate the regulatory agencies that timber harvesting is a practical management objective that should be included for wetland mitigation sites.

In summary, wetland mitigation is bringing new opportunities for forestry landowners. The preservation or creation of forested wetlands is a great opportunity for forest landowners to utilize, and expand on, their existing forestland in a manner that benefits the local community, as well as, the individual.

For more information about wetland mitigation, or WSSI, see www.wetlandstudies.com.

Table 1. Some of the woody species that occur in Northern Virginia forested wetlands.

Common Name	Scientific Name
Trees	
Red Maple	<i>Acer rubrum</i>
River Birch	<i>Betula nigra</i>
Green Ash	<i>Fraxinus pennsylvanica</i>
Sweetgum	<i>Liquidambar styraciflua</i>
Blackgum	<i>Nyssa sylvatica</i>
Sycamore	<i>Platanus occidentalis</i>
Swamp White Oak	<i>Quercus bicolor</i>
Water Oak	<i>Q. nigra</i>
Pin Oak	<i>Q. palustris</i>
Willow Oak	<i>Q. phellos</i>
Black Willow	<i>Salix nigra</i>
Bald Cypress	<i>Taxodium distichum</i>
American Elm	<i>Ulmus americana</i>
Shrubs	
Smooth Alder	<i>Alnus serrulata</i>
Buttonbush	<i>Cephalanthus occidentalis</i>
Silky Dogwood	<i>Cornus amomum</i>
Hibiscus	<i>Hibiscus moscheutos</i>
Virginia Willow	<i>Itea virginica</i>
Spicebush	<i>Lindera benzoin</i>
Blueberry	<i>Vaccinium corymbosum</i>