



Prince William County

Historic Preservation Division

Julie J. Metz Neabsco Creek

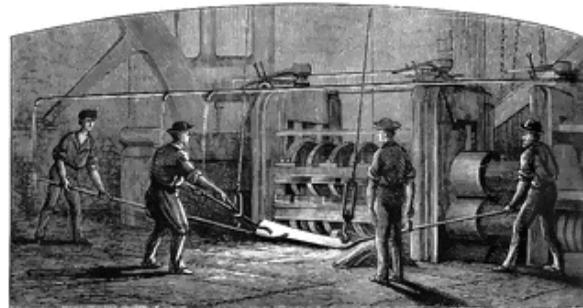
Wetlands Preserve

This preserve is the first wetlands bank in Northern Virginia approved by the U.S. Army Corps of Engineers. This wetlands bank provides a valuable alternative to wetlands mitigation requirements for projects permitted by the Corps in Northern Virginia. The bank is a ±227 acre parcel of land that will be preserved in perpetuity by a recorded conservation easement, containing over 217 acres of created and preserved wetlands, 10 acres of upland buffers and almost 2 miles of nature trails. Pods 1 and 2 were built in the last half of 1995, the other pods were constructed in the last half of 1997. Wetlands mitigation banks are areas of constructed, restored, or preserved wetlands consisting of quantified value units termed "credits" that can be purchased by developers in advance of anticipated wetlands losses due to construction activities.

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History of Neabsco Creek

Neabsco Creek was first mapped by John Smith in 1608. The name is a legacy of the Indian residents from the Monohoac tribe: the translation of Neabsco is "at a point of rock". Neabsco has also been shown on some charts (1657) as Niobsco.

Since the early 1700's, Neabsco Creek has served as a waterway for trade and commerce. Approximately one and one-half miles upstream from this site is the location of John Tayloe's iron surface mine and foundry called Neabsco Iron Furnaces. Local iron deposits, combined with the availability of water power, provided the resources for this industry to develop. However, the low grade ore had to be combined with a higher grade ore for efficient iron smelting, prompting the import of ore from Maryland by way of the Potomac River and Neabsco Creek.

Munitions were cast at the foundry for the patriot armies during the Revolutionary War. These iron works were considered so important that in August of 1814 the English Naval War Council ordered the ironworks to be destroyed, but the operation failed. The mine was closed sometime thereafter, but was reopened in 1889 and was operated until 1920 when strikes caused its abandonment.

In addition to the commerce on Neabsco Creek generated by the iron works, shipyards and wharves were developed to accommodate the mineral, timber and agricultural resources of this area. Review of old charts of Neabsco Creek indicate that the Willis Saw Mill was probably located in the wetland areas of this site.

Commencing in 1881 the U.S. Army Corps of Engineers was authorized to maintain a channel seven feet deep and 100 feet wide from the Potomac River to Atkinson's Upper Landing. Atkinson's Upper Landing is only a few hundred feet from the northernmost corner of the property. River traffic, consisting of barges and lighters, proceeded upstream of this point through the site and west to serve the iron works and a slate mine.

Barges continued moving upstream to serve the slate mine up until the 1930's when the U.S. Route 1 bridge was constructed. Until then the main highway crossed Neabsco Creek further west of U.S. 1 and was called the Richmond-Washington Highway.

Neabsco Creek's character was changed significantly by the deposition of silt due to uncontrolled runoff from tobacco farming (as has been documented with respect to the Port of Dumfries) that followed the extensive timbering of this area. Poor forestry practices utilized in providing timber to local mills such as Willis Saw Mill also contributed to this siltation process.

The area on the north shore of Neabsco was called "Smoketown" (hence the name Smoketown Road) because a cloud of smoke caused by continuous burning of brush from intensive logging operations hung over the valley.

Historical research suggests that in the late 1800's this entire site was clear cut for timber, and that the lower areas were open water. Subsequently siltation occurred that developed significant areas of emergent and shrub/scrub wetlands. Possibly, this siltation also contributed to an increase in water levels that converted adjacent low lying areas to wetlands as well.



Prince William County Department of
Public Works Historic Preservation Division

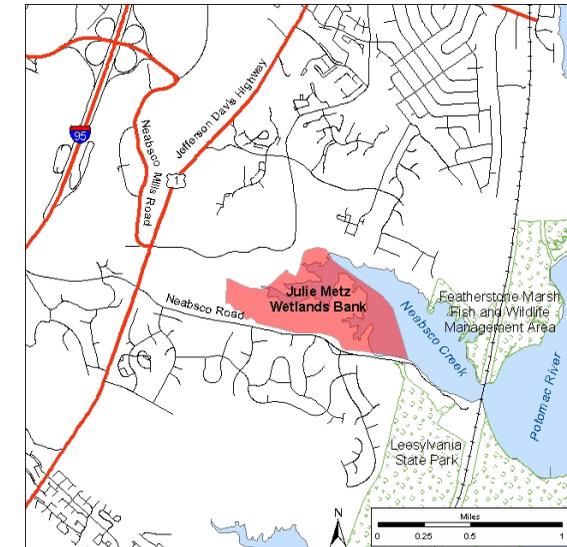
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Julie J. Metz Neabsco Creek Wetlands Preserve Nature Trail

1. In front of you is the largest pod of the Wetlands, built in summer/fall of 1997. A nature trail extends both west and east of here. The older portion of the Wetlands is located to your left (west), while additional new pods are located to your right (east). Look to your right and behind you, but don't touch the red-dish-brown hairy vines growing on the trees in this preserved area of upland forest. Do you recognize this plant? You may be more familiar with it in a smaller form about which we say: "Leaves three, let it be!" This vine is poison ivy (*Toxicodendron radicans*) and can cause an allergic reaction in humans just like the leaves can. Yet many species of bird relish the waxy, gray fruits as a winter food, in particular, yellow-rumped warblers, hermit thrush, chickadees, titmice and five species of woodpeckers. Even large pileated woodpeckers will daintily cling to the thin branches of poison ivy to feast on these fruits. Thus, while this plant can be a nuisance for humans, it does provide a wildlife food of considerable importance, especially in winter when other foods are scarce.

2. Part of this pod will be used to do an experiment on survival of tree seedlings. By measuring the growth of the seedlings, we will test the use of tree tubes, netting, and other measures designed to protect young seedlings after planting to determine which are most effective.

3. You are now looking at the oldest portion of the Wetlands, completed in October 1995. Designed as a forested wetland with emergent and shrub/scrub pockets, this pod and the one further to the west are presently dominated by emergent (i.e., herbaceous) vegetation as the trees are still seedlings. During winter, look for the drooping flowers of wool-grass (*Scirpus cyperinus*), actually a member of the sedge family despite its name - they are reddish-brown and fuzzy. If you look closely, other winter weeds present

include blue vervain, cardinal flower, beggar-ticks and monkey-flower. What colors were these flowers during the summer and fall? Can you find any seedlings of red maple or sweet gum trees that will dominate this wetland in the future? You are probably wondering about the plastic tubes that are present throughout this wetland. These are ground water monitoring wells, which we use to show the establishment and maintenance of wetlands hydrology in the Wetlands.

4. This bird observation blind offers an opportunity to sit for a spell and enjoy this tidal freshwater marsh and the diverse wildlife that calls it home. Depending upon the season, even the time of day, your view will be different. The bright green floating leaves of spatterdock or yellow pond lily (*Nuphar lutea*) are replaced by bare mud flats at low tide in the winter. Note the different zones of vegetation at different elevations throughout this wetland. Great blue herons, wood ducks, mallards, red-winged blackbirds and several species of sparrows, including song sparrows and the shier swamp sparrow commonly use this marsh. Watch for ring-billed gulls, red-tailed and red-shouldered hawks overhead. Even bald eagles are not uncommon.

5. Looking out towards the marsh, notice the two piles of sticks and mud. These are beaver lodges. Bright-colored, freshly peeled sailticks are evidence that beavers are currently using these lodges which they enter under water. Beavers do not actually eat wood (except for small diameter twigs). Instead they peel the bark to eat the bright green cambium layer between the bark and the wood. Box-elder, black willow and brook-side alder are among their favorite food trees. What is the purpose of the odd looking contraption consisting of black plastic tubing enclosed by chicken wire? It is known as a Clemson Water Leveler and is designed to prevent beaver from blocking the flow of water out of this wetlands area. Note the remains of the small

beaver dam which was broken to install this outlet pipe. Without the chicken wire protection, beavers would quickly block this outlet, flooding the wetland area at a greater depth than desired.

6. The trees in front of you with the big leaves are pawpaws (*Asimina triloba*). They produce highly aromatic, delicious edible fruits which have a ripe taste that resemble a creamy mixture of banana, mango and pineapple. They are also high in vitamins and minerals. You can eat them fresh when fully ripe and you can use them in recipes such as pawpaw bread, pie or cookies. How about a pawpaw smoothie the next time you run out of bananas! The leaves, bark and twig tissues of this tree produce natural compounds which possess anti-tumor and pesticidal properties.

7. Scratch and sniff a twig of the shrubs in front of you. Does it smell lemony? It is known as spicebush (*Lindera benzoin*) and is a common understory shrub of forested floodplain wetlands. In the early spring, before the trees leaf out, it is covered with bright yellow fragrant flowers. Later in the spring and during summer, Tiger Swallowtail butterflies lay their eggs on this plant which is a favorite food for the caterpillars of this brightly colored butterfly. During autumn, the bright red fruits are a favorite food of robins and other thrushes and are quickly consumed.

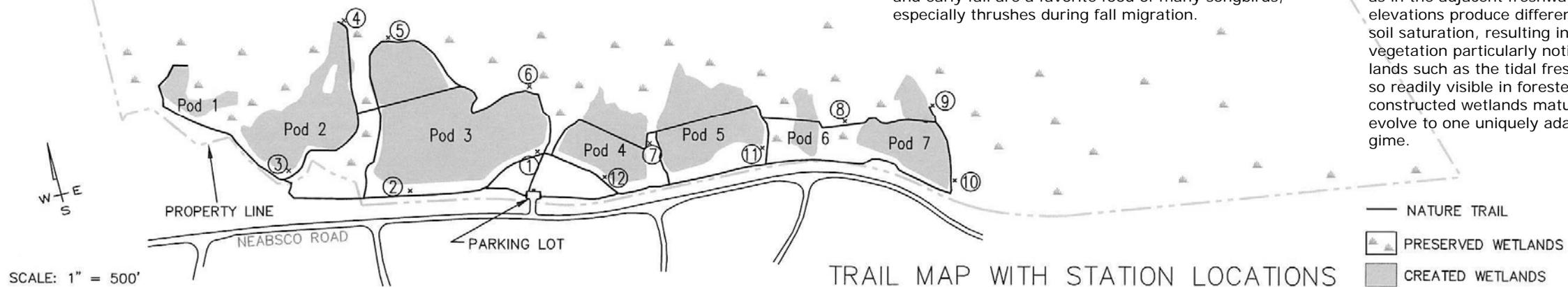
8. Note the bright red stems of the shrub in front of you - they are most colorful during the winter months. This shrub of wet woods and stream banks is Cornus amomum (Silky Dogwood), one of several species of shrubby dogwoods valued by the landscape trade for their colorful red twigs. Silky Dogwood is also valued by many species of wildlife. The creamy white flowers in spring provide nectar for butterflies and bees. Leaves provide food for the Spring Azure butterfly's caterpillar. The blue fruits which ripen in late summer and early fall are a favorite food of many songbirds, especially thrushes during fall migration.

9. The vegetation in the existing marsh varies with the depth of water. This location shows marsh mallow (*Hibiscus moescheutos*), wild rice (*Zizania aquatica*), a favorite food of many of the birds frequenting the marsh, as well as a large stand of broad-leaf cattail (*Typha latifolia*). While cattails are part of almost every wetlands system, and are a favorite of red winged blackbirds, they are a highly invasive species and will crowd out more desirable species in newly established wetlands. Therefore we actively manage and control cattails within the Wetlands by hand pulling and careful herbicide applications during the first two or three growing seasons, or until a dense cover of other plant species has been able to establish itself.

10. The large fern in front of you, which looks a little like a locust tree, is a royal fern (*Osmunda regalis*). Royal fern will grow to a height of 6' and is a real water loving fern. The tree to your right with the peeling bark is a river birch (*Betula nigra*).

11. You may have wondered why there are dead trees lying on their side scattered throughout the constructed wetlands. What purpose could they possibly serve? These trees provide perches for wildlife, particularly during the warm sunny days of summer. Great blue herons and green herons have been observed waiting for small minnows or tadpoles to swim by. Eastern kingbirds will rest on the exposed roots between their aerial flycatching forays. And turtles and water snakes will bask in the sun. As you wander throughout the wetland, be sure to check these dead trees for wildlife.

12. As you complete your tour of the Wetlands, notice the different elevations in this pod. Some areas are only shallowly flooded or just saturated to the surface periodically, while others have a deeper pool of standing water. This illustrates a key feature of wetlands - present throughout these constructed wetlands as well as in the adjacent freshwater tidal marsh. Different elevations produce different durations of flooding or soil saturation, resulting in the characteristic zones of vegetation particularly noticeable in emergent wetlands such as the tidal freshwater marsh. While not so readily visible in forested communities, as these constructed wetlands mature, the vegetation will evolve to one uniquely adapted for its hydrologic regime.



TRAIL MAP WITH STATION LOCATIONS