BROADKILL WETLANDS

Issue Definition

Wetlands are areas where water covers the soil, or is present at near the soil surface for varying periods of time during the year. An area is considered a wetland when three key characteristics are present: water saturation (hydrology), wetland soils (hydric soils), and wetland plants. Wetlands generally include swamps, marshes, bogs and similar areas.

For many years, wetlands were viewed as disease-ridden, worthless wastelands, requiring filling, dredging or channelization. Their value was only recognized after the connection between wetlands, wildlife, water quality and other ecological and economic factors were studied.

Research over the past couple of decades has found that wetlands provide many benefits to society. In fact, some of these values are vital to human existence. Wetlands trap pollutants and nutrients from upland runoff and protect organisms dependent on clean water (people included) from the poisonous effects of both nonpoint and point source pollution. In addition, wetlands furnish food and habitat for a variety of fish, birds, mammals, amphibians, reptiles, and invertebrates. Moreover, wetlands have benefits directly important to humans, including: flood and stormwater damage protection, water supply and ground water recharge, and timbering, and hunting.

The Broadkill watershed is one of 16 watersheds in the Delaware Estuary Basin. The Broadkill watershed is located within an area that is noted for **********. In addition to forested floodplain wetland communities along various rivers or streams, this region contains a number of unique or threatened wetland types such as bald cypress, Atlantic white cedar and coastal plain ponds (i.e., Carolina Bays/Delmarva Bays). These wetlands are considered priorities for protection due to rare species that they often contain, their growth form, and/or their unusual landscape setting (McAvoy and Clancy, 1993).

Acreage Inventory of Wetland Types in the Nanticoke Watershed

Wetlands in the United States are broadly classified into 5 systems: Marine, Estuarine, Riverine, Lacustrine, and Palustrine. Marine and Estuarine are associated with high salinity coastal environments, and are not found in Delaware's portion of the Chesapeake Basin. Riverine Systems are systems associated with rivers and streams. Lacustrine systems are associated with freshwater lakes or deepwater habitats greater than 20 acres in size. Palustrine are also freshwater systems but differ from lacustrine systems on the basis of water depth and size. Palustrine systems are wetland systems such as marshes, swamps, and bogs. Palustrine wetlands and water bodies are less than 2 meters deep at low water, and smaller than 20 acres in size.

Table 1: Wetland Types and Acreages of the Nanticoke Watershed

Wetland Type	Acreage
Lacustrine	674.82
Palustrine	60072.21
Riverine	6177
Total Acreage	66924

As can be noted from the preceding table, on the basis of land acreage, Riverine wetlands are the predominant wetland type found in the ******** watershed while Palustrine wetlands are a close second. Wetlands are estimated to occupy approximately 21% of the watershed's land base.

The Clean Water Act

In 1972, Congress enacted national clean water legislation, known as the Clean Water Act, to address pollution of the nation's waters. The objective of the Clean Water Act is to maintain the chemical, physical, and biological integrity of our water so they are safe for fishing and swimming. Under this objective are two fundamental national goals:

- Elimination of all point source pollutants that have an identifiable concentrated discharge of pollutants. The principal sources of these pollutants are large waste treatment plants and industrial sources.

- Drastically reducing all nonpoint sources of pollutants. Sources of these pollutants include: oil and gas residue from stormwater runoff; manure, fertilizers, pesticide, and herbicides from agricultural lands; effluent from septic disposal systems; and homeowner applied fertilizers, pesticides, and herbicides.

The Clean Water Act focuses on improving the quality of the nation's waters using a variety of tools to address the many causes of water pollution, poor water quality and habitat destruction. Two such tools are provisions within the Clean Water Act - Section 404 and Section 303(d). The principal federal regulatory program regulating or protecting wetlands resources is section 404 of the Clean Water Act. Under Section 404 of this act the Army Corps of Engineers (Corps) is authorized to issue permits for the discharge of dredged or fill material into waters of the United States, including wetlands. Such permit allows an individual to legally fill only a small portion (usually less than a 1/3 of an acre) of a non-tidal freshwater wetland, and only under very limited specific restrictions.

Section 303(d) addresses water quality issues via establishment of a Total Maximum Daily Load (TMDL) in order to meet water quality standards. Poor water quality impacts the habitat integrity of a wetland ecosytem, and an unhealthy or stressed wetland ecosystem is unable to wholly provide some of the important wetland functional attributes (e.g., nutrient or pollutant retention /detoxification) necessary for organisms

dependent (humans included) on high water quality. Therefore, wetlands are an important media, useful for reducing nonpoint source pollutants (e.g., nutrients, pesticides, or herbicides), and critically important for achieving Water Quality Standards prescribed under Section 303(d).

The recent SWANCC Decision and its Impacts

On January 9, 2001, the Supreme Court struck down a lower court decision rejecting the Army Corps of Engineers and Environmental Protection Agency's (EPA) position that the Solid Waste Authority of Northern Cook County (SWANCC) conform to Corps and EPA's section 404 requirements in regards to the migratory bird rule.

The issue in this ruling was the scope of the Clean Water Act section 404 program for discharging fill or dredged materials into navigable waters. Navigable waters are waters which are currently being used, were used in the past, or may be susceptible to use in interstate or foreign commerce. Prior to the SWANCC ruling, section 404 was broadly applied to all "waters of the United States," not just traditional navigable waters. For example, isolated wetlands were broadly interpreted under the migratory bird rule as navigable waters subject to interstate commerce because they served as habitat for migratory birds, waterfowl, or were used for recreation by interstate visitors. Following the ruling, interstate commerce could not be effectively established and the migratory bird rule was essentially abandoned.

Unfortunately, the greatest impact from this ruling may be the relaxing of 404 permit requirements, allowing many isolated wetlands to be destroyed through dredge and fill operations. In fact, a recent wetlands inventory analysis utilizing geographic information system (GIS) technology and software to assess the acreage of vulnerable isolated wetlands, has confirmed this suspicion. From this analysis, it has been demonstrated that approximately 15% of the wetland acreage in the watershed may now be excluded from Section 404 regulatory protection because of SWANCC (Mark Biddle, personal communication). Some of these "isolated" wetlands such as, coastal plain ponds and Atlantic white cedar wetlands plant communities, which are among some of our most valuable wetlands, may be destroyed.

McAvoy, W., and K. Clancy, 1993. Characterization of Category I Non-tidal Wetland Communities in Delaware: Bald Cypress Taxodium distichum (L.) Richard and Atlantic White Cedar Chamaecyparis thyoides (L.) BSP. Dover: Delaware Natural Resources and Environmental Control, Div. of Fish and Wildlife.

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This fact sheet was prepared by the Delaware Department of Natural Resources and Environmental Control's Whole Basin Team, at the request of the Broadkill Tributary Action Team for citizens and stakeholders.

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