

1.11 Wetlands

Wetlands were greatly abused in the first half of the 20th century, until they were properly recognized for their functions and values they provide both to people and to wildlife. Wetlands are characterized as areas where water covers the soil or is present at or near the surface for varying periods of the year. Hydrology (water saturation) largely determines how soils develop and the types of plant and animal communities living in and on the soil. Wetlands can support both terrestrial and aquatic species. Wetlands vary widely at both regional and local scales due to differences in soils, topography, climate, hydrology, water chemistry, and degree of disturbance.

Wetlands are generally grouped into two categories: coastal or tidal estuarine wetlands and inland or non-tidal freshwater wetlands. Coastal wetlands are characterized as areas that are under the affected by of tidal action: salt marshes, mud flats, sand flats, rock and sand shorelines, and sub-merged aquatic beds are some of the more prevalent types. Inland wetlands are most common along the edges of rivers, streams, lakes and ponds but also can occur in low-lying areas where the groundwater intercepts the soil surface or where rainfall saturates the soil for a period of time. Typical types of inland freshwater wetlands include marshes, wooded swamps, wet meadows, bogs, and fens. Many of these inland wetlands are seasonal in nature and are dry for a period of time. It is these type of wetlands, such as vernal pools, that provide critical habitat for many amphibians.

Wetlands are among the most productive ecosystems in the world and play an integral role in the ecology of a watershed. They provide the ideal conditions for the development of organisms that form the base of the food chain. Many species rely on wetlands for food, water and shelter. More than one-third of the endangered species live only in wetlands, and nearly half use wetlands at some point in their life cycle.

Wetlands offer many functions and values to people including water quality improvement, groundwater recharge, flood protection, shoreline stabilization, recreational opportunities and aesthetics. Given their juxtaposition to waterways wetlands act as a retention area that stores and slows storm water runoff. As the runoff passes the wetland will retain nutrients, pollutants and sediment. Wetland vegetation also stabilizes shorelines and controls the erosion of stream banks. Wetlands offer recreational opportunities to hunters, fisherman, birdwatchers, hikers, boaters, and wildlife photographers.

Status and Trends

According to the National Wetlands Inventory database (Plate 1.11.1), wetlands represent about 5,600 acres or 6% of the watershed management area. Actual areas are believed to be lower because the mapping effort is dated, occurring in the late 1980's and 1990's. According to the New Jersey Department of Environmental Protection (NJDEP) GIS database within the New Jersey portion of the watershed management area there was a loss of 304 acres of wetlands between 1986 and 1995. Urban development accounted for

245 acres (80%) of the total loss, and conversion to open water resulting from damming or other modifications accounted for 57 acres (19%) of the total loss.

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