

## CC – Why Protect Wetlands

In the late winter months of February and March, when much of the outdoor world has gone South or is hibernating, my office suddenly becomes a whirlwind of citizens preparing for spring. It is in these waning months of winter doldrums that everyone begins to plan and design their new additions, decks, sunrooms, garages, or landscaping. My office becomes frenzied with homeowners overwhelmed by the less than simple wetlands permitting process. My time is spent explaining how the Conservation Commission protects wetlands.

Wetlands perform many functions. Pollution prevention, flood control, groundwater recharge and protection of wildlife habitat are a few. However, it is difficult to separate these functions from other more human-centered functions such as the protection of our water supplies, storm damage prevention, recreation, and the protection of the fish and shellfish industry. Some of the functions of wetlands are shared by uplands. Some are unique to or performed more efficiently by wetlands.

Wetlands naturally reduce water pollution. Many wetlands are either adjacent to or upstream from surface waters. These wetlands serve as a living filter, improving the quality of the water that flows through them. Wetlands can trap, transform, and recycle sediments, excess nutrients, trace metals, and organic materials. Not only do wetland plants and soils contribute to this effect, but wetlands host aquatic organisms such as algae and bacteria that take up minerals and break down organic matter. The water in rivers and stream travels too quickly for the plants and soils to take up pollutants. Water travels slowly through a wetland. The ability of a wetland to prevent pollution becomes especially important if that wetland is adjacent to a public water supply.

Wetlands provide flood control by temporarily storing surface water. This short term water storage reduces downstream flood peaks and can prevent damage caused by floodwaters. Floodplains along rivers and streams and wetlands upstream of a river or stream frequently perform this function. Wetlands associated with lakes and streams store floodwaters by spreading water out over a large flat area. As every last lot of Sutton is sought for development, the flood control of wetlands becomes ever more important. Increased development in upland areas brings larger areas of paved-over land. These vast impervious surfaces greatly increase the rate at which storm waters move over the land and increase the impacts of flooding.

Groundwater recharge occurs throughout the landscape and is not a unique function of wetlands. Groundwater recharge is the movement of surface water through the soil to an underlying groundwater system. Wetland plants, soils bind or temporarily take up potential groundwater pollutants.

Although wetlands are most commonly associated with slimy creatures, they provide benefits to a large variety of wildlife. Many organisms depend on wetlands during some stage of their lifetime. Shellfish are filter feeders and dependent on wetlands to prevent pollution. Over 200 kinds of fish are dependent on wetlands. Wetlands serve as a spawning area and nursery for many species of fresh and saltwater fish. Wetland shallow waters and abundant plant life often serve as a retreat from predators. Wetlands support an aquatic food web that fish depend upon— zoo plankton eat phytoplankton, insects devour zooplankton, and insects become food for fish. Over 150 kinds of birds are dependent on wetlands, including some of Massachusetts more endangered birds. The Northern Harrier searches cattail marshes for rodents. Great Blue Heron and Canada Geese use wetlands as a migratory corridor. Dozens of species would disappear completely from Massachusetts if wetlands were not protected.

Lastly, many birdwatchers, fishermen, naturalists, and photographers enjoy wetlands for their recreational values.