Extracted from:  ***[SIGNIFICANT HABITATS AND HABITAT COMPLEXES OF THE NEW YORK BIGHT WATERSHED:  Great South Bay; COMPLEX #14](http://training.fws.gov/library/pubs5/web_link/text/gsb_form.htm" \t "_blank) :*** *US Fish and Wildlife Service*

*Completed November 1996; Published November 1997**;* <http://library.fws.gov/pubs5/begin.htm>

Retrieved from: <http://brookhavensouthhaven.org/carmens_river_note.htm>

**Carman's River Estuary**: The Carmans River estuary is one of only four major riverine ecosystems on Long Island. The river drains approximately 184 square kilometers (71 square miles), and has an average annual discharge of about 0.7 cubic meters per second (25 cubic feet per second). The tidal river begins approximately 3 kilometers (2 miles) north of Bellport Bay (part of Great South Bay) just below the Southaven Dam, and is primarily within the 972-hectare (2,400-acre) Wertheim National Wildlife Refuge. Extensive and undeveloped tidal wetlands on both sides of the river provide outstanding habitat for a great diversity of fish and wildlife species. The freshwater and tidal portions support over 40 species of fish. The Carmans River estuary is one of the most significant nursery areas for yearling striped bass in Great South Bay. Juvenile bluefish are also found in abundance. Both species may spend a year or more in tidal portions of the river before commencing coastal migration. Alewife, sea-run brown trout, and white perch spawn in the estuary, which also provides important nursery habitat for these species. Freshwater fish species that occur in the river and ponds include a naturally reproducing population of brook trout, yellow perch (Perca flavescens), white perch, and common carp (Cyprinus carpio). The commercially and recreationally valuable blue crab spawns around the nutrient-rich salt marshes fringing the estuary. Forage fish such as killifish and Atlantic silverside also use the shallow waters of tidal wetland areas as spawning and nursery grounds. The estuary provides regionally important wintering habitat for high concentrations of waterfowl including canvasback, hooded merganser (Lophodytes cucullatus), redhead, northern shoveler (Anas clypeata), northern pintail (Anas acuta), gadwall (Anas strepera), American wigeon (Anas americana), American black duck, mallard, red-breasted merganser, scaup, and bufflehead. Other species of birds inhabiting the wetlands bordering the river are breeding osprey, sharp-tailed sparrow, seaside sparrow, and clapper rail, and migrating and wintering northern harriers, peregrine falcons, and other raptors that hunt over the tidal marshes during migration. Wetlands and uplands in the Carmans River watershed support nesting by nearly 100 species of migratory birds, including many Neotropical migrant songbirds.

The Carmans River is one of two rivers draining the Long Island Pine Barrens; the other is the eastward-flowing Peconic River. The network of wetland and upland habitat in the pine barrens supports regionally significant concentrations of rare plant and animal species. The four-toed salamander (Hemidactylium scutatum) breeds in the upper reaches of the Carmans River and Eastern tiger salamander breed in a network of ponds in the watershed. Rare plants occurring in the Carmans River watershed include pygmyweed and purple milkweed along the river and Collin's sedge in a red maple swamp. A coastal plain pond in the upper watershed (**Week's pond**) has several rare plant species, including an exemplary occurrence of fibrous bladderwort, few-flowered nutrush, whip nutrush, and button sedge. The headwaters of the Carmans River are within the central Long Island Pine Barrens.

**Yaphank Creek:** Yaphank Creek is a completely undisturbed tributary of the Carmans River. At the creek's headwaters is an extensive emergent freshwater marsh; this regionally rare natural community is in excellent condition. Bordering the marsh is acidic bog vegetation, including Sphagnum moss, round-leaved sundew (Drosera rotundifolia), bladderwort (Utricularia spp.) and gerardia (Agalinis spp.), specifically adapted to live in the low-nutrient waters characteristic of sandy coastal plain soils. The fast-moving headwaters of upper Yaphank Creek are a spawning ground for one of Long Island's naturally reproducing populations of native brook trout, as well as for redfin pickerel. Upper Yaphank Creek provides nesting and foraging habitat for diverse avian species, including osprey, wood duck, American black duck, mallard, gadwall, and eastern bluebird. Northern harriers forage over the wetlands and associated sphagnum bog. Yaphank Creek is one of only four known New York State locales where the eastern mud turtle breeds in the brackish marshes and is one of the few Long Island habitats suitable for declining northern water snake (Nerodia sipedon). Lower Yaphank Creek also supports yearling striped bass and is a spawning area for white perch and several forage fish species.

Wetlands and the Clean Water Act:

<http://water.epa.gov/type/wetlands/outreach/facts_contents.cfm>

Wetlands subject to Clean Water Act Section 404 are defined as “areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”

Activities in waters of the United States regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports) and mining projects. Section 404 requires a permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation (e.g. certain farming and forestry activities).

The Clean Water Act was originally meant to eliminate discharge of untreated wastewater from municipal and industrial sources (point pollution) and to make waterways safe for fishing and swimming. The use of surface and groundwater for drinking is addressed in the Safe Drinking Water Act.

Why do we need to protect wetlands?

At one time, people thought of wetlands as being “useless wastelands.” We now know that wetlands are one of our more important natural resources because of the many environmental and economic benefits that they provide.

What Benefits are provided by wetlands?

Flood Control-After storm events, wetlands intercept and slowly release large quantities of water, which could otherwise flood upland areas and neighboring properties.

Water Quality Improvement- Wetlands filter and remove toxins and excess nutrients from the water passing through them to keep surface water bodies suitable for swimming, fishing, and sometimes as a source of drinking water.

Productivity- Regular inputs of water, sediments and nutrients cause most wetlands to be highly productive. Vegetation grows very quickly in wetlands, producing a great deal of timber and food for plant-eating animals.

Habitat- Many animals live in wetlands for all or part of their lives and many others depend on wetland creatures as a food source. Wetlands are especially important as nesting and nursery grounds.

Economic Benefits- Wetlands are important to because they support our commercial fishing, tourism and recreation industries.

Erosion Control- Maintaining wetlands between moving water and uplands is an effective and economical way to protect property from erosion.

Aquifer Recharge—Most ground water supplies are recharged from the water that collects in wetlands and then infiltrates into the ground.

HELPFUL SITES:

<http://www.portaltodiscovery.org/carmans/docs/CarmansRiver.pdf>

<http://www.savetheyaphanklakes.org/history/earlyyears.pdf>