Chapter 6

VEGETATION

The floodplain along the Passaic River and Loantaka Brook contains typical floodplain trees - red maple, silver maple, American elm, white ash, pin oak, white oak, swamp white oak and grey birch. Floodplain shrubs found here are greenbrier, Japanese barberry, multiflora rose, poison ivy, spice bush, northern arrowwood, witch hazel, dogwood, and highbush blueberry.

The Great Swamp and Black Brook area contain typical wetland as well as floodplain vegetation. Areas of wetland can often be identified by the occurrence of skunk cabbage which only grows in wetlands. Other understory plants commonly seen in and near the wetlands include jewelweed, greenbrier, soft rush and Japanese barberry along with cattails, spice bush, swamp azalea, and phragmites. The cattails are still holding their own against the phragmites along the power lines.

Upland areas on lands surrounding the Great Swamp contain sugar maple, Norway maple, black cherry, eastern red cedar, and white ash, with shrub and herbaceous understory species including mountain laurel, multiflora rose, poison ivy, Japanese barberry, microstegium, white snake root, garlic mustard, forsythia, and Japanese honeysuckle. Other plants commonly found are sensitive fern, smartweed, spotted wintergreen, round-leaved pyrola, sedges, bittersweet, winged euonymus, tatarian honeysuckle, shagbark hickory, bitternut hickory, and tulip tree. One area across the northerly section of the Township is characterized by sandy soils. Vegetation here is pioneer because of the poor nutrient content of the soil. Grey birch and horsetail along with andropogon grass such as little bluestem are commonly found.

The western slopes of Long Hill were characterized by oak forest, remnants of which remain on the developed streets.

Vegetation, both native and ornamental, never before threatened, has become the favorite forage for an increasing population of white-tailed deer. Jewelweed, azalea, day lily, rhododendron, and many perennials must be fenced if they are to survive. Shrinking habitat and absence of predators all contribute to the imbalance represented by the deer herds in the area - vegetation is not the only victim. Our area is now recognized as a hot spot for Lyme disease.

Multiflora rose has increased in density throughout the floodplains and uplands. Because of deer browsing little other understory remains in those areas. While multiflora rose does serve to anchor stream banks and banks along the Passaic River it obstructs foot travel through most woodlands and presumably crowds out native plants.

Local conditions bring vegetative variety. Where bedrock is close to the surface, pioneer plants such as birch, andropogon grasses, and mosses can predominate. Where wetlands and floodplains prevail, cattails, rushes, red maple, and spicebush are common.

Vegetation is an important climate modifier. Vegetation can decrease wind velocities and turbulence, cool slowly, warm slowly, conserve moisture, produce oxygen for air replenishment and produce a clean air shed (Figure 14). The presence of vegetation is also a key factor in tempering climate on a smaller scale such as a house lot. A single tree transpiring 100 gallons-of water a day is equivalent to the cooling effect of five average room air conditioners, each of which runs 20 hours a day (Federer, 1970). Temperatures over grass are 10 degrees to 14 degrees cooler than over exposed soil on a sunny summer day. Vegetation can also play a variety of other climate-related roles, many of which are discussed in Plants, People and Environmental Quality by G.O. Robinette (1972).

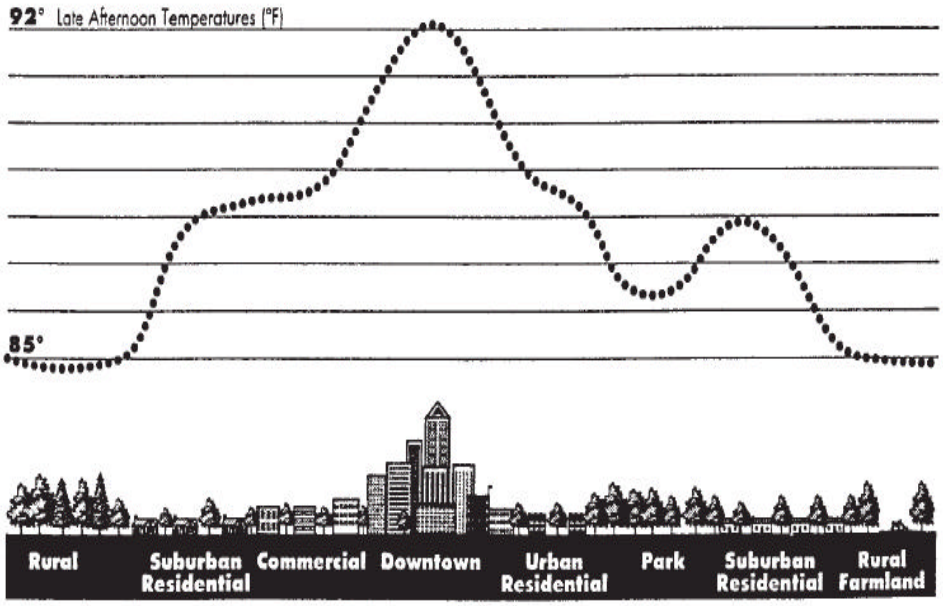

Figure 14—Temperatures by Vegetation Cover
Source: U.S. Environmental Protection Agency, 1992.

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