

## NATURAL RESOURCE MAPS

### **Floodplain (Map 6)**

The Township of Berkeley Heights Floodplain Map displays the location of the FEMA 100-year floodplain of the Passaic River that delineates the riparian zone of the study area within Berkeley Heights. This color-coded blue floodplain identifies the entire area of the floodplain and provides a planning level of accuracy on the extent of the floodprone area within the municipality.

The floodplain is a geographic area located along rivers and streams, which has been formed by the action of water over time. This area is periodically inundated by floodwaters during spring freshets and summer thunderstorms causing a rapid rise in smaller tributaries and drainages. Flooding is exacerbated by increases in impervious cover and compacted soils, which change surface conditions and thereby increase the velocity and volume of surface run-off.

In New Jersey the floodplain is regulated by the New Jersey Department of Environmental Protection under the Flood Hazard Area Control Act, and is divided into sections, which include the Floodway and Flood Fringe areas. The channel is the area defined by the river under normal flow conditions. The Floodway is the section of the floodplain into which the water flows during a storm event and is defined by the NJDEP as the area required to discharge the 10-year storm. Because this area is the focus of occasional to constant flooding and energy exchange of aggradation and degradation it will contain small vernal pools and is usually the site of the greatest diversity of plant species. The Flood Fringe area is the dynamic zone

topographic quadrangle with the PRC created Berkeley Heights parcel map coverage overlain on top.

### **Wetlands (Map 7)**

The wetlands map displays the extent and location of wetland tracts within Berkeley Heights Township and specifically along the Passaic River corridor. The NJDEP digital wetlands coverage can be broken down by several wetlands classification systems but for purposes of the study have all been color coded yellow to show the extent and influence which they exert over the landscape in Berkeley Heights.

The wetlands are regulated by the New Jersey Freshwater Wetlands Protection Act that determines the quality of wetlands and delineates the size of a protective transition area around them based on a resource value classification. A large portion of the Passaic River Central Basin wetlands are identified as intermediate resource value wetlands, which receive a 50-foot transition area when adjacent property is being developed. The wetlands map displays the NJDEP digital coverage wetlands map created by interpretation of infrared aerial photographs from March 1996 overlaid onto a USGS topographic quadrangle with the PRC created Berkeley Heights parcel map coverage overlain on top.

### **Riparian Forest (Map 8)**

The riparian forest map is a digital coverage created by the PRC from digital aerial ortho-photo images from the 1995 and 1997 flyovers. The photographic images were analyzed and land determined to contain forested areas were digitized to create a new coverage that could be overlain onto existing information to evaluate forested regions within the study area.

The riparian forest of this region is primarily a deciduous floodplain forest containing a canopy layer of red maples, red, pin, and swamp white oaks, green ash, and sycamores. The understory trees generally consist of spicebush, alders, witch hazel, dogwoods, and ironwood. The groundcover (when healthy) contains several ferns, sedges, jack-in-the-pulpit, and (in very wet spots) swamp cabbage and marsh marigold.



# Berkeley Heights Areas of Concern



0.5 Miles

0

Homestead Park

## Key to Features - Map 10 Areas of Concern

- River/Stream
- 1
- 2
- 3-4
- 5-6
- Wetland Boundary
- Apparent Forest
- 100-year Floodplain
- All
- Wetlands
- Wetlands



# Berkeley Heights Wetlands



Homestead Park 300

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Key to Features - Map 7

Wetlands

Thin Lake

Altered Boundary

Lake

Stream/Run

1

2

3

4

5-6

Wetlands

Wetlands

0.5 Miles

0

0.5

This map was created by the Passaic River Coalition using NJ DEP Geographic Information Systems digital data and NGS digital data. MS DuBois, May 2000.