

# Chatham Township Natural Resources Inventory 2013

## Introduction



The Chatham Township Environmental Commission has updated its 1999 NRI with new and revised content and maps. The 1999 NRI, prepared by volunteers, was based on the first Township NRI done by volunteers in 1974. The 2013 NRI was carried out by volunteer members of the Environmental Commission in consultation with the Township engineer, John Ruschke of Hatch, Mott, MacDonald, and the Township planner, Frank Banisch of Banisch Associates.

The purpose of an NRI is to provide information to the Planning Board when considering development applications, revisions to the Master Plan and zoning, to developers so they can plan environmentally sensitive construction, to the Open Space Committee to show opportunities for open space acquisition, currently preserved properties and possibilities for creating and connecting trails, to the Board of Adjustment for evaluating variance applications, to the Township Committee when planning services, and to the Environmental Commission and other groups for planning activities.

The environment of Chatham Township is dominated by the Great Swamp National Wildlife Refuge, which occupies about a third of the township. Most of the Refuge is wetlands; they are the remnant of a lake formed when the Wisconsin glacier melted ten thousand years ago. The wetlands don't stop at the border of the refuge; they extend into most of the township and up some of the eastern slopes.

The two main environmental changes in Chatham Township between 1999 and 2013 were the redevelopment and infill of parcels and small subdivisions, with many modest houses being demolished and replaced with bigger homes ("McMansions"), and the preservation of large tracts of open space. With the recent acquisition of the Platt property over half of the Hickory section is preserved open space. Of Chatham Township's 9.4 square mile area over 40% is preserved as open space. There are other large open areas which are privately owned.

Other significant environmental events in the period included the adoption of strict stormwater control regulations and the requirement by the New Jersey Department of Environmental Protection that its conservation easements on wetlands and wetland transition areas be recorded in the office of the Morris County Clerk. The first means that often lot grading plans can be required to include stormwater management features and the second means that a parcel can easily be checked for a wetland easement by searching the on-line Morris County database.

The 1999 NRI gives information on changes in the Township between the 1970s and 1999 including the construction of the Tanglewood sewage treatment plant, the identification of an important recharge area lying roughly between Southern Boulevard and Shunpike Road for the Buried Valley aquifer, and studies showing increased stormwater runoff from development.

This Natural Resources Inventory is a report of all the natural features in Chatham Township. It has chapters on history, geology and topography, hydrology, climate and air quality, soils, vegetation, wildlife, open space and land use, transportation and regional connections. Some independent reports are made available: Banisch Build-out Analysis, Banisch Walkway and Bikeway Plan, Apgar Report 1997 on the Rolling Knolls landfill. The NRI

includes a discussion of each of the Township's 12 natural sections: Passaic River, Esternay, Orchard, Mountainview, Fairmount, Southern Boulevard, Averett, Moraine, Giralda Farms, Loantaka, Hickory, and Delta. The NRI includes 15 stand-alone maps with a description of each: the Buried Valley aquifer, conservation easements, contaminated sites, critical habitat for imperiled species, environmentally sensitive sites, geology, land use/land cover 1986 to 2007, open space, parcels with potential for development, slopes in percent, soils, stormwater recharge, streams requiring a 300 foot buffer, topography, and wetlands.

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Acknowledgements

Chapter 1 - History

Chapter 2 - Geology and Topography

Chapter 3 - Hydrology

Chapter 4 - Climate and Air Quality

Chapter 5 - Soils

Chapter 6 - Vegetation

Trees of the Great Swamp National Wildlife Refuge

Wildflowers of the Great Swamp National Wildlife Refuge

Chapter 7 - Wildlife

Chapter 8 - Open Space and Land Use

Banisch Build-out Analysis

Chapter 9 - Transportation and Regional Connections

Banisch Walkway and Bikeway Plan

Chapter 10 - Natural Regions

Overview map of updated regions and sections

Passaic River section discussion

Passaic River section map

Esternay section discussion

Esternay section map

Orchard section discussion

Orchard section map

Mountainview section discussion

Mountainview section map

Fairmount section discussion

Fairmount section map

Southern Boulevard section discussion  
Southern Boulevard section map

Averett section discussion  
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Moraine section discussion  
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Giralda Farms section discussion  
Giralda Farms section map

Loantaka section discussion  
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Hickory section discussion  
Hickory section map

Delta section discussion  
Apgar Report 1997  
Delta section map

Descriptions of the Maps of Environmental Features in Chatham Township

**Maps**

- Buried Valley Aquifer - A Sole Source aquifer underlying part of Chatham Township
- Conservation Easements
- Contaminated Sites
- Critical Habitat for Imperiled Species
- Environmentally Sensitive Sites - Permit extension law does not apply to these sensitive sites
- Geology
- Land Use/Land Cover 1986 to 2007
- Open Space
- Parcels with Potential for Development
- Slopes In Percent
- Soils
- Stormwater Recharge
- Streams Requiring a 300 Foot Buffer
- Topography
- Wetlands

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