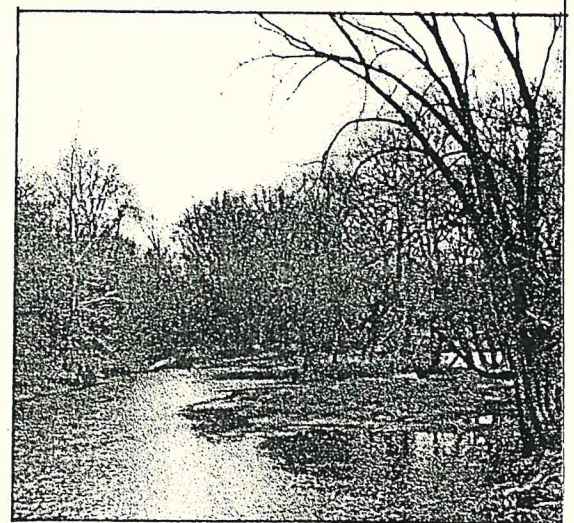
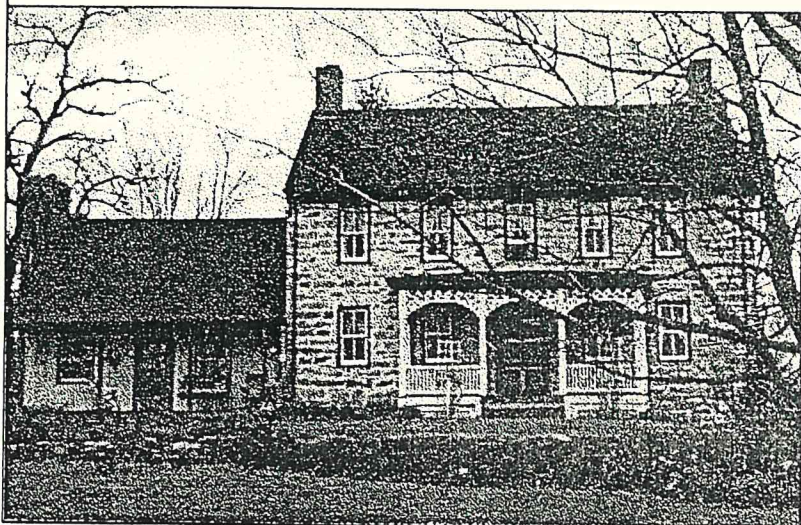
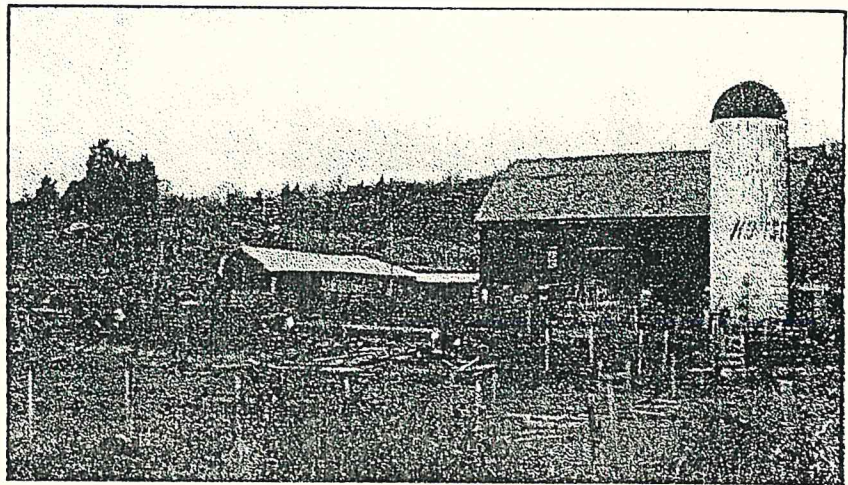
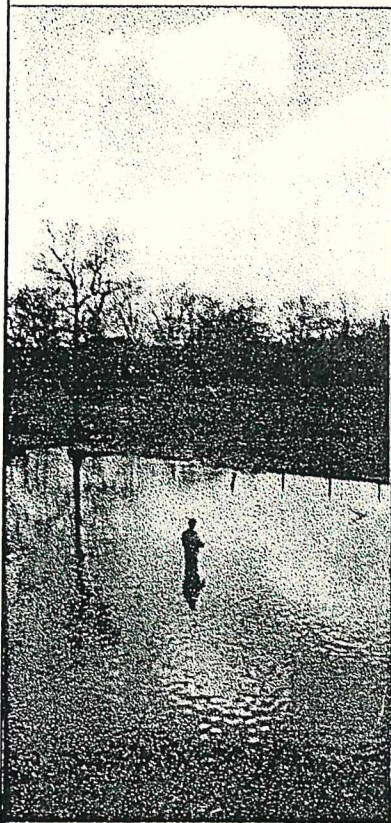


## 1999 Master Plan Revision

Stillwater Township  
Sussex County, NJ



Prepared by  
Heyer, Gruel & Associates, PA  
*Community Planning Consultants*  
1999



# MASTER PLAN

Township of Stillwater, Sussex County, NJ

1999

Prepared by

**Heyer, Gruel & Associates, PA**


*Community Planning Consultants*

63 Church Street, 2nd Floor

New Brunswick, NJ 08901

732-828-2200

The original of this report was signed and  
sealed in accordance with N.J.S.A. 45:14A-12.

  
Fred Heyer, P.P. #3581

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Ted Rodman, Engineer

Mary Lou Kolody, Secretary

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# STILLWATER TOWNSHIP MASTER PLAN

## INTRODUCTION

The Master Plan is the Planning Board's most important tool in guiding the development of the physical environment. Stillwater Township has a long history of comprehensive planning and has continuously examined its planning and regulatory documents. The Township prepared its last comprehensive plan in 1983, which was subsequently the subject of a reexamination report in 1989.

The Stillwater Township Master Plan has been prepared in accordance with the requirements of the Municipal Land Use Law (NJSA 40:55D-28). It includes a Land Use Plan Element, a Conservation Plan Element, an Historic Preservation Plan Element, and a Recycling Plan Element. Stillwater Township previously adopted a separate Housing Plan Element.

The Land Use Plan provides the basis for a revised zoning map and land use ordinance. The Conservation Plan determines which land areas should be protected or conserved. Finally, the Master Plan should be used as a guide to making decisions on individual development applications. The Master Plan is an issue-oriented document based upon input solicited from the general public and Stillwater Township's various boards, commissions and agencies.

## **MASTER PLAN GOALS AND OBJECTIVES**

### **INTRODUCTION**

The New Jersey Municipal Land Use Law requires that all municipal master plans contain a statement of goals, objectives, principles, assumptions, policies and standards upon which the comprehensive master plan is to be based. The individual master plan elements provide the means of implementing the established goals. These goals guide the development of the Township in terms of physical development as well as preservation, open space and protection of the environment.

The master plan goals represent an evaluation and refinement of the goals of past master plans and new goals suggested in response to current concerns. These goals have been established through discussion at past Planning Board meetings and research and analysis of the planning issues unique to Stillwater Township. The master plan goals are general and are intended to provide an overall framework for development and preservation of the Township.

### **LAND USE PLAN**

#### **Goal 1: To Preserve The Rural Character Of Stillwater Township.**

##### **Implementation Policies**

1. Protect against incompatible development which would adversely affect the rural character of Stillwater. Developments of this type would include "cookie-cutter" subdivisions and strip commercial developments.
2. Develop community design standards to ensure good visual quality and design for all land use categories.
3. Ensure that new development is visually and functionally compatible with the physical character of the Township.



4. Ensure that all development is designed to respect the architectural heritage of the Township.
5. Establish designs standards which preserve the streetscapes of the villages and the rural roads within the Township.
6. Encourage the establishment of green areas around the historic villages to provide a "hard edge" in order to properly frame the existing villages.
7. Establish development techniques which will preserve the identified viewsheds within Stillwater.
8. Protect and enhance the Township's historic resources from encroachment of roads and adjacent development.
9. Preserve rural features such as stone rows, tree lines, barns, outbuildings and other such structures.
10. Reduce the visual impact of development in wooded areas, a wooded buffer should be maintained between the development and off-site public roadways.

**Goal 2: To Provide For The Economic Development Of The Township.**

**Implementation Policies**

1. Recognize that there will not be a great deal of pressure for large scale nonresidential development within the Township for the short term.
2. Reserve sufficient land in appropriate locations for the long term commercial development of the Township.
3. Direct nonresidential development into areas which have appropriate access to the road network and avoid environmentally sensitive features and incompatible proximity with residences.

**Goal 3: To Ensure The Implementation Of The Goals And Policies Of The Master Plan.**

**Implementation Policies**

1. The Master Plan provides a policy basis for a community's direction. The Plan is implemented through development regulations. To be effective, the Master Plan must be accompanied by land development regulations to assure implementation of goals.
2. Encourage developers to use the informal review process in order to provide opportunity at an early phase to make suggestions for changes to development proposals.
3. Encourage cooperation and seek input from all municipal agencies which have an interest in land development.

**COMMUNITY FACILITIES PLAN**

**Goal: To Maintain A Level Of Community Service That Meets The Demand Of The Township's Population.**

**Implementation Policies**

1. Plan community facilities to accommodate anticipated future population growth.
2. Maintain appropriate emergency services for Township residents.
3. Encourage lot averaging and cluster development where appropriate to minimize public service costs.
4. Require all new development to pay its fair share of any off-tract improvements for community facilities to the extent permissible by law.
5. Enter into intermunicipal agreements where appropriate for "economies of scale" for the provision of services.



6. Make improvements to the Township's public facilities in an orderly way through the adoption of a Capital Improvements Program.

## **CONSERVATION PLAN**

**Goal: To Preserve And Enhance The Township's Environmental Resources.**

### **Implementation Policies**

1. Recognize that environmental systems as well as unique individual physical features should be preserved.
2. Establish a greenway plan which will provide for a continuous network of open space along streams, scenic areas and critical environmental areas. These greenways should include a mixture of both active recreation facilities, i.e. hiking and biking, as well as passive environmental corridors.
3. Protect the groundwater supply of the Township both in terms of quantity and quality.
4. Guide development away from environmentally sensitive areas, including limestone sinkhole areas and areas of poor drainage.
5. Avoid development to the maximum extent practical on slopes in excess of 30 percent.
6. Hold site disturbance caused by development to an absolute minimum and to set as a goal, the retention of at least 80 to 85 percent of low density residential sites in the undisturbed state.
7. Use stream corridors and topographic ridgelines as part of a linked open space system with larger contiguous open spaces. These areas should be preserved through acquisition, dedication, conservation easement or other innovative techniques.
8. Require replacement plantings in areas of disturbance that reflect the natural vegetation in these areas.

9. Encourage lot averaging or cluster development techniques which preserve natural amenities, farms, woodlands, scenic view and open space.

## **HISTORIC PRESERVATION PLAN**

**Goal: To Preserve The Quality And Integrity Of The Historic Districts And Structures In The Township.**

### **Implementation Policies**

1. Identify significant historic resources within the Township, both within the villages and in the countryside.
2. Develop historic preservation ordinances which effectively protect these historic resources from incompatible development and insensitive renovation.

## **HOUSING PLAN**

**Goal: To Provide For Stillwater Township's Affordable Housing Obligation.**

### **Implementation Policies**

1. Prepare and adopt a Housing Plan Element which addresses the Township's affordable housing obligation through the year 1999.
2. Adopt a Housing Trust Fund ordinance which requires developers, both residential and nonresidential projects, to contribute money toward the construction of low and moderate income units.
3. Use the provisions of the Council on Affordable Housing rules to maximize the use of Regional Contribution Agreements to send out as much of Stillwater's affordable housing obligation to an eligible receiving municipality.
4. Rehabilitate existing substandard housing within the Township.



## **CONSERVATION PLAN ELEMENT**

### **INTRODUCTION**

This section of the Master Plan is intended to be used as a resource in the review of development applications and in the land use decision making process. It inventories many of the physical characteristics which affect the suitability of land for development.

The environmental characteristics provide a basis for the location of various land uses and development intensities. Additionally, recommendations have been made regarding the preservation of greenways and open spaces throughout the Township, given its unique environmental character.

## **TOPOGRAPHY**

Elevations in the Township vary widely from approximately 400 feet to nearly 1,400 feet. The lowest elevations in the Township are in the Paulins Kill Valley located in the southern third of Stillwater. The central third of the Township consists of gradually rising topography with scattered knolls in the 800 to 900 foot elevation range. The northern third of Stillwater rises rapidly with the eastern slope of the Kittatinny Ridge forming the Township's northern border. (See Topography map on next page.)



## **GEOLOGY**

### **Bedrock Geology**

Four formations comprise the bedrock geology of Stillwater Township. They are: Martinsburg, Kittatinny, Jacksonburg and Shawangunk formations.

#### *Martinsburg Formation:*

The martinsburg formation "is an intensely crumpled and faulted sequence of shale, slate, sandstone and calcareous silt loam."<sup>1</sup>

Throughout much of Stillwater Township, the gray moderately weathered to highly weathered shale is interbedded with dark bluish gray sandstone and blue slate. In many areas, a thin soil (Nassau rocky silt loam) has developed in the highly weathered shale beds.

The slate in the formation is fine grained. Groundwater is held mainly in faults and fractures in the rock. However, in localized areas where the rock is highly weathered and fractured, the bedrock is more porous than is described in most of the literature. Approximately 60 percent of the municipality consists of the Martinsburg formation. The estimated normal yield in the Martinsburg is 150,000 gallons per day per square mile. <sup>1</sup> However, Natural Resource Dynamics estimates that the Martinsburg will produce substantially more per square mile at least in local areas.

#### *Kittatinny Formation:*

The Kittatinny formation consists of gray to blue gray dolimitic limestone. This rock type is generally fine grain. It may be slightly to highly fractured in places. The rock is slightly soluble in water. In places, because of the solubility, solution caverns have developed in the bedrock. The solution caverns increase the potential groundwater storage capacity of the rock, but at the same time, they increase the groundwater pollution potential. The Kittatinny formation is the

---

<sup>1</sup> Bulletin #73, N.J. Bureau of Geology & Topography-The Geology & Groundwater Resources of Sussex County and the Warren County Portion of the Tocks Island Impact Area.

most productive bedrock type in Stillwater. (The estimated normal yield is 350,000 gallons per day per square mile.)<sup>1</sup>

#### Jacksonburg Formation:

The Jacksonburg formation consists of black or dark blue limestone, often with limestone conglomerate at the base and a limey shale at the top. This is a formation (of small extent) that lies along the contact zone between the Kittatinny formation and the Martinsburg formation. Identified and/or unidentified faults of various extent often are situated on or adjacent to the Jacksonburg formation. The estimated normal yield in the Jacksonburg is 300,000 gallons per day per square mile.

#### Shawangunk Formation:

The Shawangunk formation is a conglomerate of white quartz pebbles in a hard siliceous matrix. Its color is generally steel blue at depths, with reddish layers near the top of the formation. The rock is cemented and extremely hard. Pores are few. Water is held mostly in fractures and crevices. The Shawangunk formation is interbedded with beds of coarse, hard, red sandstone in Stillwater Township. This formation is of minor extent. It comprises the Kittatinny Mountain section of the municipality.

### **Surficial Geology**

In recent geologic history (10,000-12,000 years), the Township was covered by the Wisconsin Glacier. The ice sheet scoured many areas of the Township, broke crests of bedrock and, subsequently, left deposits of (soil parent) material (drift) over the bedrock. Where the drift was deposited directly by the ice sheet, it is called "till" or unstratified drift by geologists. Material carried directly by moving water is called stratified drift because the material settles out of the water based on the weight of particles, thereby stratifying themselves into layers.

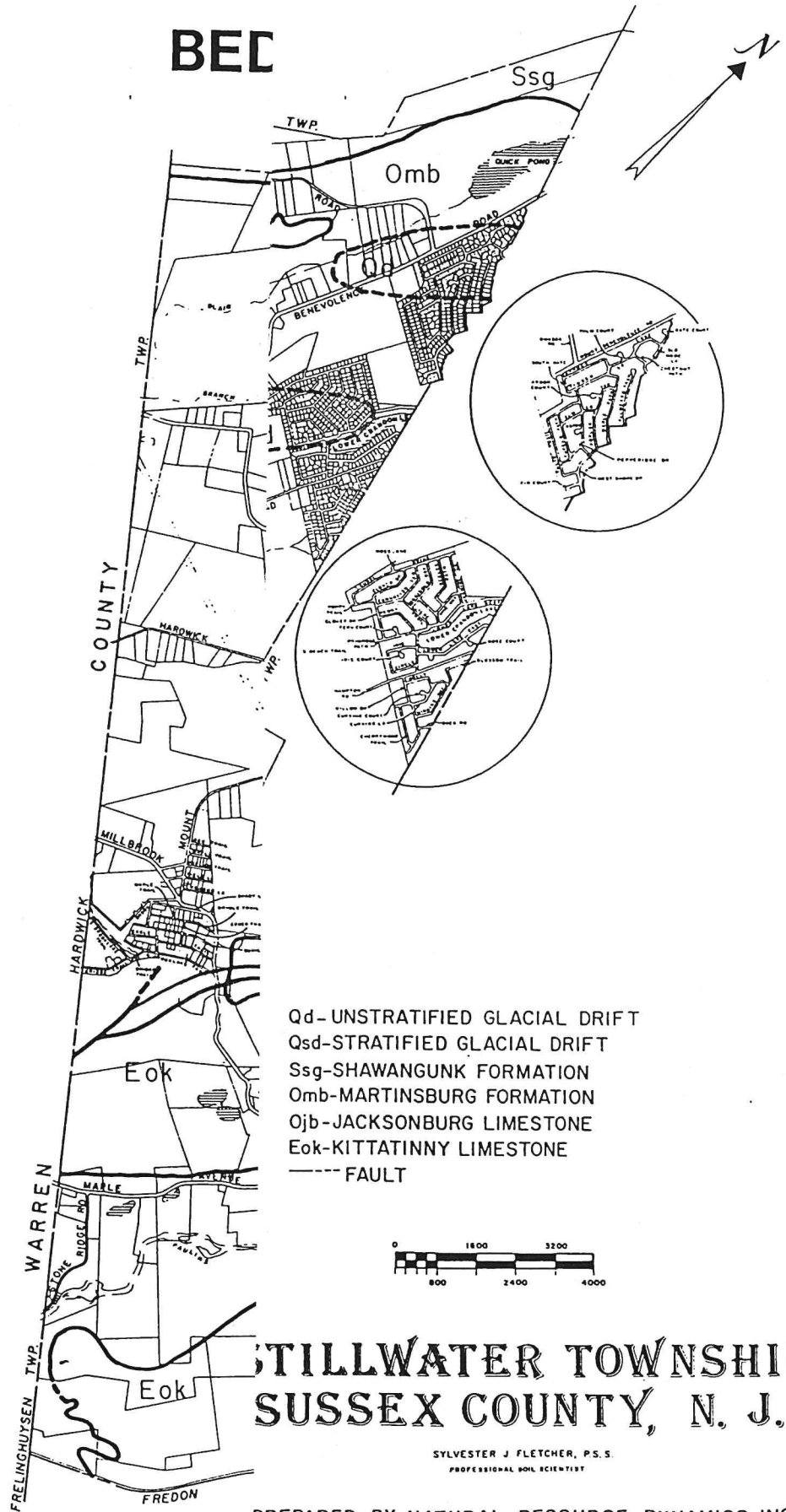
The unstratified drift and stratified drift vary in overall character, thickness and permeability in different parts of the Township. These differences are reflected in the character of the soils that have developed in each area.



The thickness and permeability of the drift directly influence the groundwater recharge potential of all bedrock types. (i.e. The groundwater recharge potential is greater in areas of thick, permeable drift. Groundwater recharge is lower irrespective of bedrock porosity where the drift is slowly permeable.)

The hydrologic character of soils, surficial (unconsolidated) geologic deposits and the kind and physical character of the bedrock constitute the components of hydrology.

# BEC



## STILLWATER TOWNSHIP SUSSEX COUNTY, N. J.

SYLVESTER J. FLETCHER, P.S.S.  
 PROFESSIONAL SOIL SCIENTIST

PREPARED BY NATURAL RESOURCE DYNAMICS, INC  
 NEWTON, NEW JERSEY

## **WETLANDS**

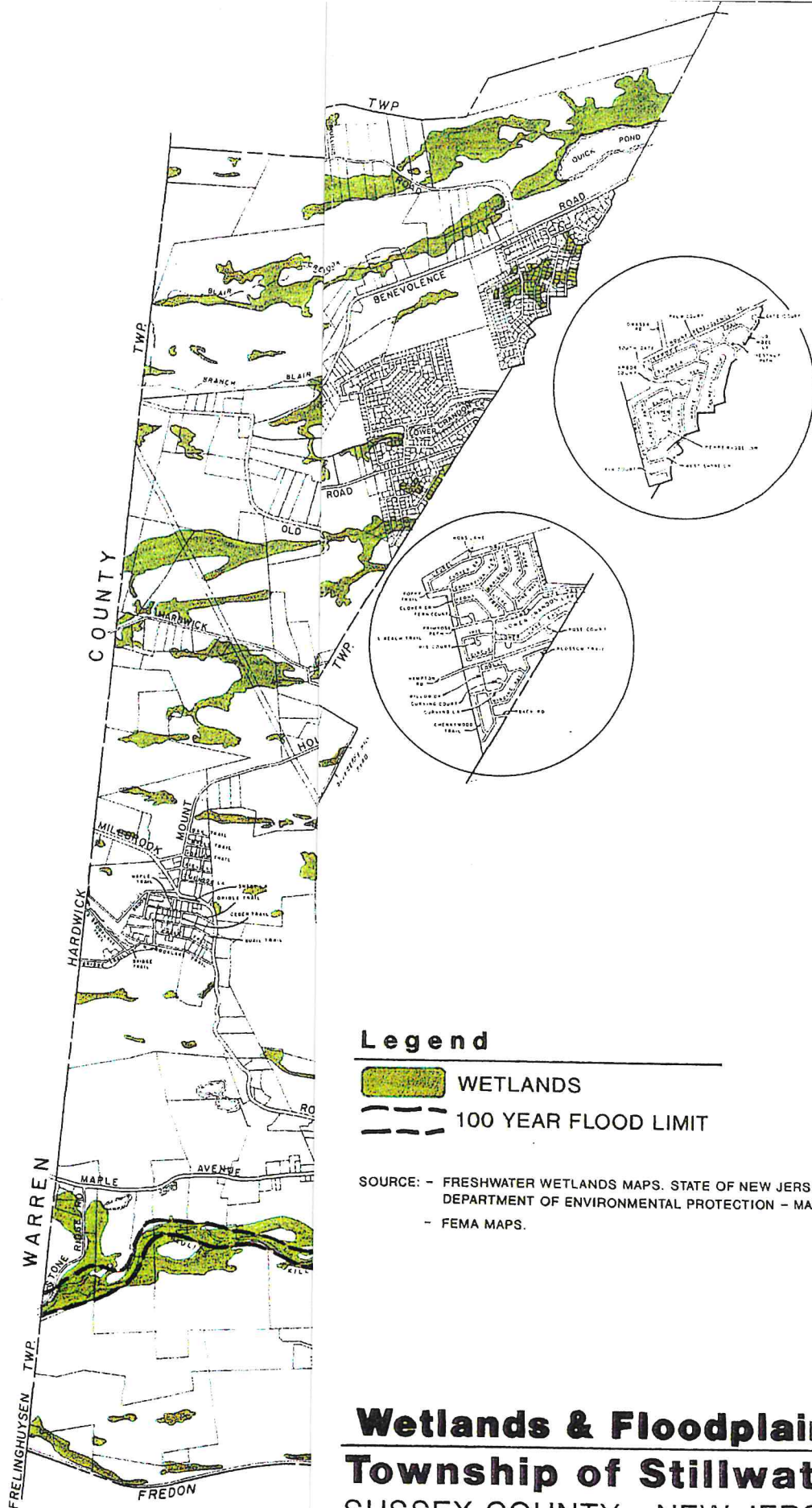
Wetlands, including areas of open water, are widely scattered throughout the Township. These wetlands have been identified by the New Jersey Department of Environmental Protection (DEP) in their Freshwater Wetlands Map for the State for the New Jersey. (See accompanying map.) Wetlands have been defined as having one or more of the following three attributes:

1. At least periodically the land supports predominantly hydrophytes or wetlands vegetation;
2. The substrate is predominantly undrained, hydric soil which is periodically flooded and/or saturated with water; or
3. The substrate is nonsoil and saturated with water or covered by water at some time during the growing season each year.

With the adoption of the Freshwater Wetlands Act virtually all activities within freshwater wetlands have been precluded. Wetlands and their acquired transition areas currently represent the most significant regulatory constraints to development.

As can be seen from the accompanying wetlands and flood plains map, the Township's wetlands are scattered in small pockets, generally located along watercourses.

Flood plains present a severe constraint to development. They pose a threat to life and property if developed improperly. Additionally, many of these flood plains serve as a very important ecological function as habitat for rare and endangered species. The wetlands and flood plains maps show the location of the mapped 100-year flood plains which have been identified by the Federal Emergency Management Agency in their Flood Insurance Rate Maps. The only mapped flood plain within Stillwater Township is the flood plain associated with the Paulins Kill, traversing the Township from north to south from Paulins Kill Lake to the Frelinghuysen border.



### Legend

- WETLANDS
- 100 YEAR FLOOD LIMIT

SOURCE: - FRESHWATER WETLANDS MAPS. STATE OF NEW JERSEY  
DEPARTMENT OF ENVIRONMENTAL PROTECTION - MARCH 1986.  
- FEMA MAPS.

## Wetlands & Floodplains Township of Stillwater SUSSEX COUNTY, NEW JERSEY

Prepared by: Moskowitz, Heyer & Gruel, PA - 1995

BASE MAP SOURCE:  
- NATURAL RESOURCE DYNAMICS, INC.  
- UPDATED BY: MOSKOWITZ, HEYER & GRUEL, PA - 4/19/95

## **SURFACE HYDROLOGY**

The general pattern of surface water hydrology within the Township has been shown on the accompanying map. As shown on the map, virtually all of Stillwater drains toward the Delaware River via the Paulins Kill. A small portion of the Township located in the northwest corner drains to the Delaware River via Van Campen's Brook.

### **High Quality Watersheds**

High quality watersheds are a resource of statewide significance. These pristine watersheds include Category One and Trout Maintenance Waters. These watersheds are shown on the surface hydrology map. The watersheds have been identified in the New Jersey Administrative Code and have been mapped by the New Jersey Department of Environmental Protection. These are waters which are of high quality due to "color, clarity, scenic setting, or other characteristics of aesthetic value, exceptional ecological significance, or exceptional fishery resources" (Surface Water Quality Standards, N.J.A.C. 7:9-4.1).

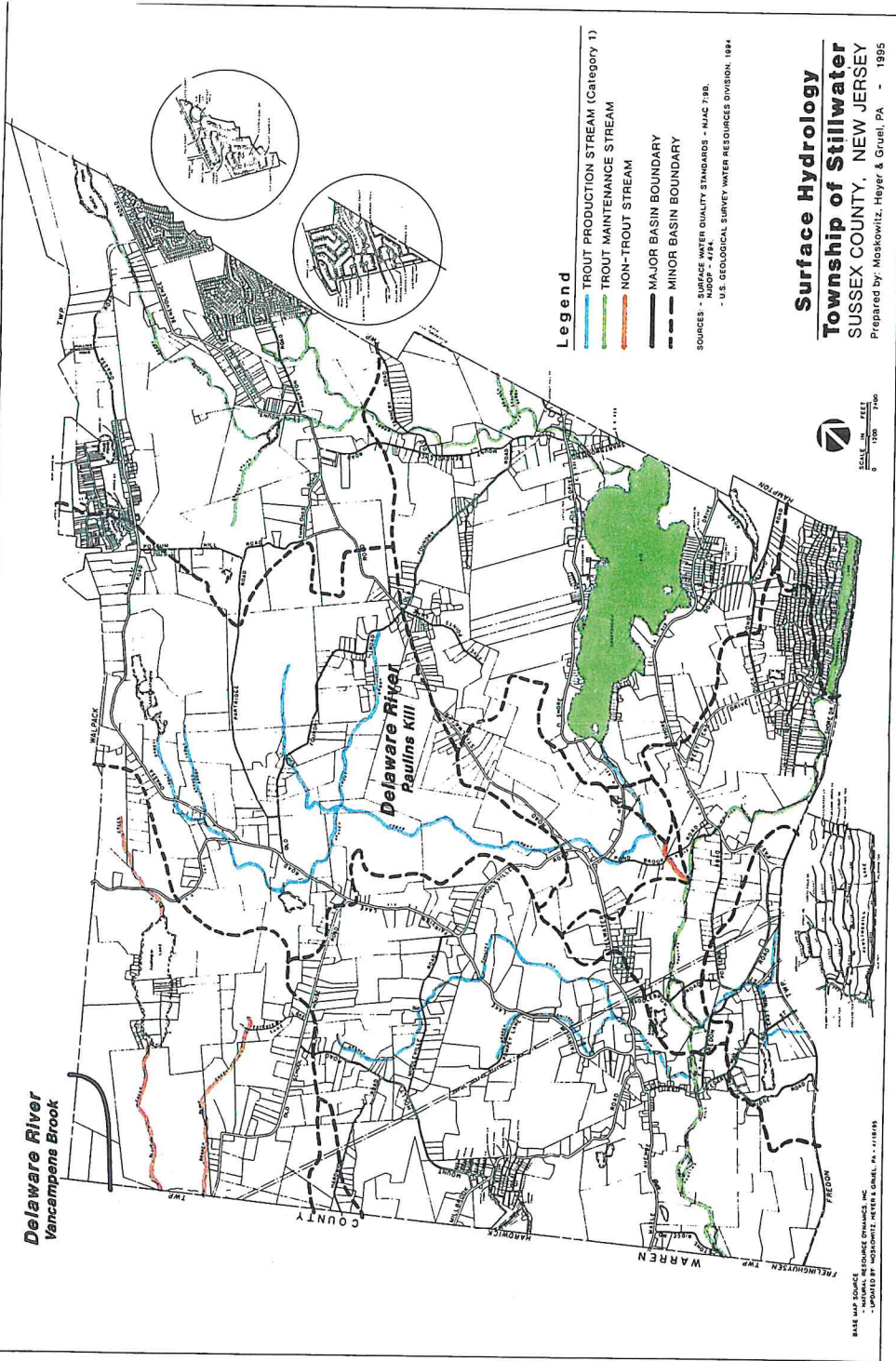
These waters may include but are not limited to the following:

- Waters originating wholly within Federal, Interstate, State, County or Municipal parks, forests, fish and wildlife lands, and other special holdings;
- Waters classified as Trout Production Waters and their tributaries;
- Surface waters classified as Trout Maintenance or Nontrout which are upstream of waters classified as Trout Production;
- Shellfish waters of exceptional resource value; or
- Other waters and their tributaries that flow through, or border, Federal, State, County or Municipal parks, forests, fish and wildlife areas, and other special holdings.

All Category One Waters merit protection from any measurable change.



**Delaware River  
Yancampens Brook**



**Legend**

- TROUT PRODUCTION STREAM (Category 1)
- TROUT MAINTENANCE STREAM
- NON-TROUT STREAM
- MAJOR BASIN BOUNDARY
- MINOR BASIN BOUNDARY

SOURCES - SURFACE WATER QUALITY STANDARDS - NJAC 7:29.

U.S. GEOLOGICAL SURVEY WATER RESOURCES DIVISION, 1984

**Surface Hydrology**  
**Township of Stillwater**  
 SUSSEX COUNTY, NEW JERSEY  
 Prepared by: Moskowitz, Heyer & Gruel, PA - 1995

SCALE 1" = 100' FEET

BASE MAP SOURCE  
 - NATIONAL RESOURCE PHYSICS, INC.  
 - U.S. GEOLOGICAL SURVEY, WATER RESOURCES DIVISION, PA - 1984

All of Stillwater Township, with the exception of the Blair Creek Basin in the northwestern portion of the Township, have been identified as high quality watersheds.

In 1992, the New Jersey DEP published a Water Quality Inventory Report that specifically discussed the water quality of the Paulins Kill. The report noted that the water quality in the Paulins Kill improves as one proceeds in a downstream direction going from fair quality in the upper watershed to good conditions in the lower portions. This conclusion is based upon ambient monitoring conducted at Balesville (north of Stillwater) and Blairstown (downstream of Stillwater). The report noted that the Paulins Kill at Balesville experiences excessive fecal coliform and phosphorous concentrations as well as some elevations in cadmium levels. The Balesville station experienced deteriorated water quality during warm weather months approaching poor conditions. High stream temperatures in July and August may cause periodic stress to cold water fish life.

With respect to lakes, in the Paulins Kill Watershed, Swartswood, Little Swartswood, and Paulins Kill Lake all support warm and cold water fisheries. Swartswood Lake and Little Swartswood Lake are judged to support healthy fish communities. Paulins Kill Lake contains moderately degraded fish population due to eutrophication.

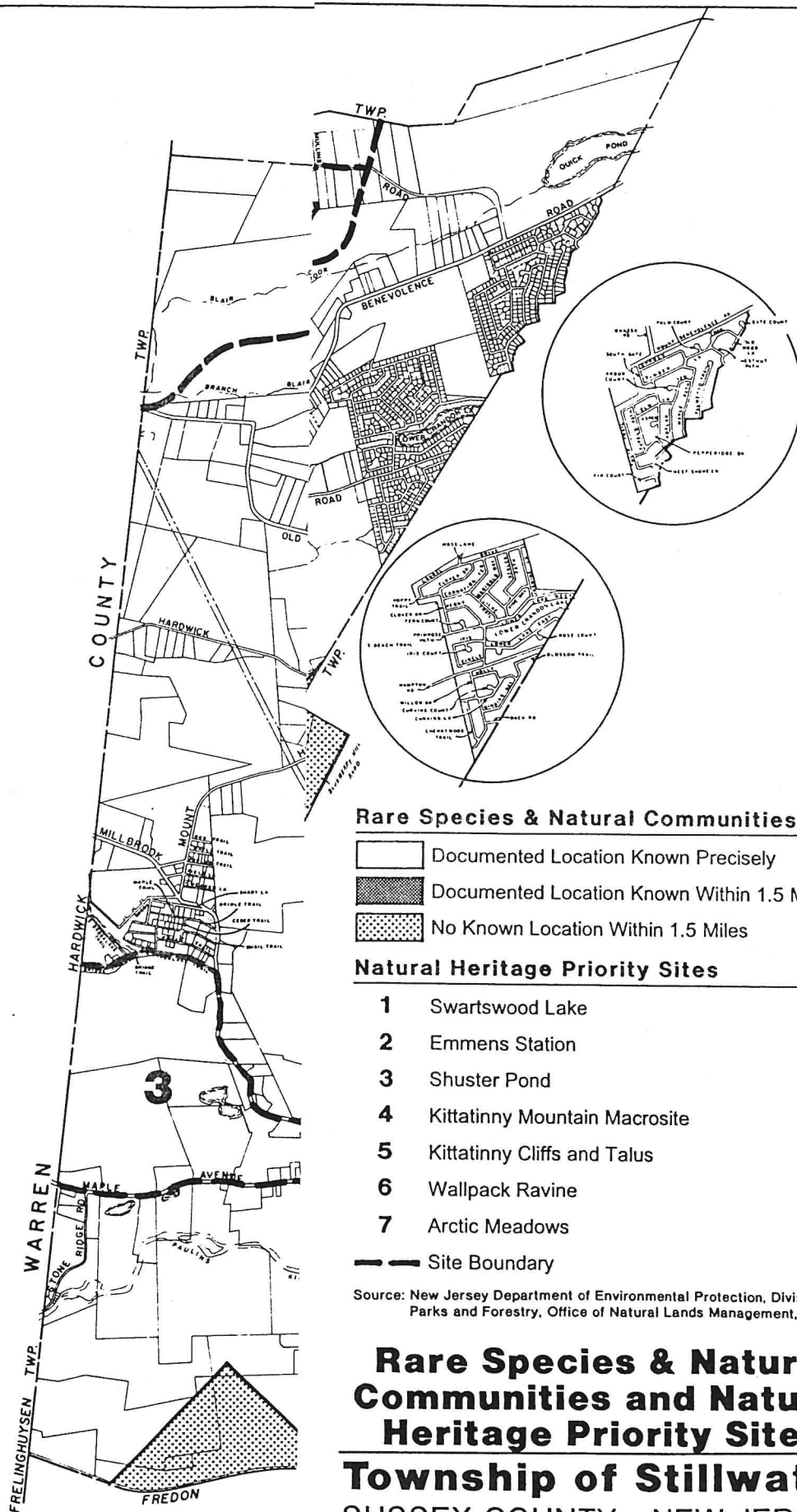
### **Surface Water Problems**

One of the most significant impact upon the upper reaches of the Paulins Kill is the Newton Sewerage Facility. The facility has completely been upgraded and should significantly reduce the nutrient loading the Upper Paulins Kill. With respect to nonpoint problems, the major problem identified is suburban / agricultural runoff which appears to be contributing to the water quality problems in the Paulins Kill and the eutrophication of Paulins Kill Lake below Balesville. The DEP's report states: "The Paulins Kill Watershed is assessed to be experiencing an increase in runoff associated with rapid suburban land development, housing construction site runoff, suburban surface runoff, as well as heavy winter road salting, are all suspected to be on the increase. This is coupled with a decline in the agricultural runoff from crop production activities. Additional water quality degradation has resulted in leachate coming from Hamms

Landfill, a severe problem at times, although believed to be on the decline. Nonpoint sources have caused eutrophication on many of the lakes in this watershed, including Swartswood Lake."

### **RARE SPECIES AND NATURAL HERITAGE PRIORITY SITES**

The rare species habitats and natural communities designation includes areas which are probable habitats for rare and endangered species as well as other significant natural communities. Generalized maps have been prepared by the New Jersey Natural Heritage Program (in the Division of Parks and Forestry). Natural communities are those areas which present rare habitat such as "old growth forest" or which possess a unique "element of natural diversity." An examination of the rare species and natural communities map for Stillwater Township indicates the overwhelming predominance of these unique areas. Virtually all of Stillwater is within an area of known rare species and natural community areas. Additionally, the Township contains seven (7) Natural Heritage Priority sites. These priority sites are some of the most important sites in the State for endangered and threatened plants, animals and ecosystems. If these areas are allowed to be degraded or destroyed, we may lose some of the unique components of our natural heritage. Details regarding the rare and endangered species and the significance of Stillwater's natural heritage priority sites can be found in the appendix.



## Rare Species & Natural Communities and Natural Heritage Priority Sites

### Township of Stillwater SUSSEX COUNTY, NEW JERSEY

Prepared by: Moskowitz, Heyer & Gruel, PA - 1995

BASE MAP SOURCE:  
- NATURAL RESOURCE DYNAMICS, INC.  
- UPDATED BY: MOSKOWITZ, HEYER & GRUEL, PA - 4/19/95

## **LAND USE PLAN ELEMENT**

### **INTRODUCTION**

Stillwater Township is a 28.5 square mile rural community located in southwestern Sussex County. The Township is bordered by Fredon Township to the south, Frelinghuysen Township and Hardwick Township to the west, Walpack Township to the north, and Hampton Township to the east. The Township is a rural community consisting of vacant, wooded and agricultural lands and low density residential development interspersed with several higher density residential centers in the form of villages and lake communities.

The southern portion of the Township is the valley of the Paulins Kill. The Kittatinny Ridge in the National Recreation Area forms the northern boundary of Stillwater. No major state highways pass through the Township. The major road network consists of County roadways which function as collectors and minor arterial streets.

As part of the Master Plan process, an existing Land Use Map has been prepared using the municipality's tax records and supplemented with limited field verification. As indicated in the accompanying map, the overwhelming majority of Stillwater Township's land area, nearly 55 percent, is in farmland assessment. The second most prevalent land use designation is residential use which accounts for about 18 percent of Stillwater's area. Nearly 15 percent of Stillwater Township is in public and semi-public uses such as parks, schools, churches and other tax exempt land uses. Eleven (11) percent of the Township is identified as vacant. Only a little over one percent of Stillwater is classified as commercial or industrial.

### **EXISTING ZONING**

The 1983 Master Plan and the Zoning Map of Stillwater identify eight (8) distinct land use classifications. These include four (4) different single-family residential zones, ranging in size





from 15,000 square foot minimum lot size to a five (5) acre minimum lot size. There is a Recreation and Conservation zone, a Business zone, a Commercial Recreation zone, and an Intensive Commercial zone.

The vast majority of Stillwater Township is within an R-5, Single-Family Residential Zone with a minimum lot size of five (5) acres. Roughly 65 percent of Stillwater is within this zone.

The Township's R-3 zones are confined to the southern portion of the Township, south of Fredon Road and Potters Road, east of Cedar Ridge Road and west of County Route 619. The R-3 zone is a single-family zone with a minimum lot size of three (3) acres.

Stillwater's R-2, two (2) acre residential zone is located in several areas in the southern third of Stillwater. This includes the area south of Route 619 and north of the Paulins Kill Lake community as well as the area south of Stillwater Road and west of Pond Brook Road extending to the Frelinghuysen and Fredon borders in the extreme southwestern corner of Stillwater.

The Township's R-15 is a single-family zone with a minimum lot size of 15,000 square feet. The zone is limited to the established lake community associated along Paulins Kill Lake.

The C Business District is a neighborhood commercial zone which permits a variety of retail sales and service uses as well as gasoline service stations. These zones are generally small in size and scattered throughout the Township.

The IC, Intensive Commercial District permits more community-oriented commercial uses such as shopping centers, lumber yards, warehousing and wholesale distribution uses. This zone is limited to a single tract in the south-central portion of the Township adjacent to the Fredon border and east of Route 619.

The CR, Commercial Recreation District permits commercially operated swimming pools and indoor and outdoor tennis courts, golf courses, hotels and motels. These CR zones are located adjacent to Lake Kathryn on Route 617 and the north end of Swartswood Lake south of Route 521. Another CR zone is located south of Swartswood Lake on both sides of County Route 619.

The R-C, Recreation-Conservation zones generally correspond to existing camps and parks such as Fairview Lake, Quick Pond, Saddle Back Pond and the Spring Brook area east of Mount Benevolence Road.

### **1999 LAND USE PLAN**

Stillwater Township has a long history of comprehensive planning and has continually updated its planning documents. In the time period since the last adopted Master Plan, a number of changes have occurred which affect the underlying assumptions upon which prior planning efforts were based. Perhaps the single most important development was the adoption of the State Development and Redevelopment Plan.

The Township is located within Planning Areas 4 and 5 which are the Rural and Environmentally Sensitive Planning Areas. The State Plan identifies the number of existing hamlets within Stillwater including Five Points, Middleville, Paulinskill and Swartswood. There are no new planned villages nor are there any major development areas identified in Stillwater in the State Plan. The Township has no centralized wastewater facilities nor are any contemplated. A limited public water system is available for development located generally north of Paulinskill Lake. The Township can be characterized as rural with sparse development scattered throughout the Township. There are large areas of publicly held property including the New Jersey Department of Environmental Protection (DEP) owned Swartswood Lake, the National Park Service lands and the YMCA property is located in the northwestern portion of the Township.

After careful consideration and a number of public meetings, this land use plan establishes a direction for the future physical development of Stillwater Township which reflects a general consensus on goals and objectives.

The Land Use Plan recommends seven designations as follows:

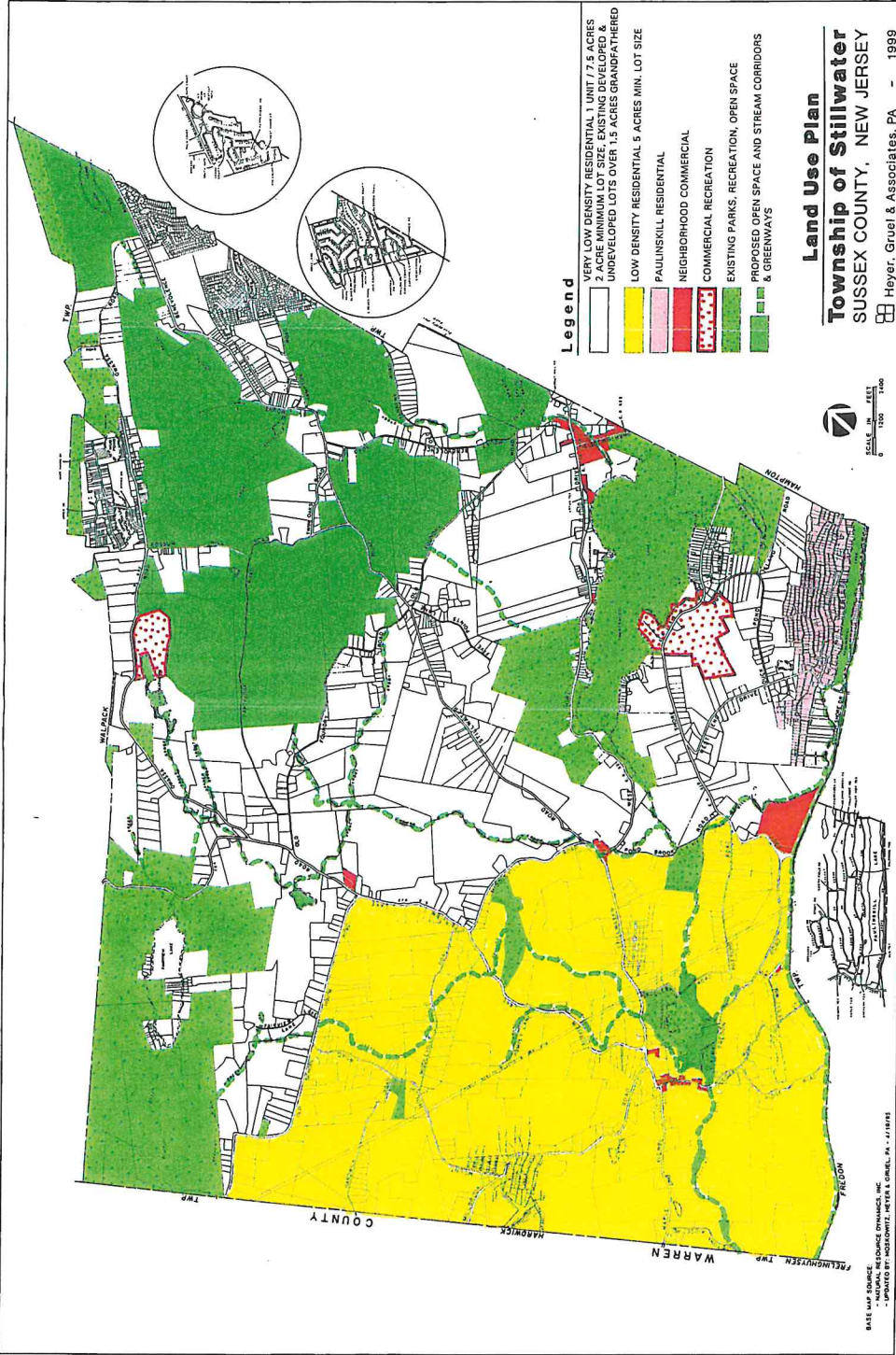
1. Very Low Density Residential
2. Low Density Residential
3. Paulinskill Residential
4. Commercial Recreation
5. Neighborhood Commercial
6. Existing Parks Recreation And Open Space
7. Proposed Open Space And Greenways.

#### **VERY LOW DENSITY/RESIDENTIAL**

It is recommended that the vast majority of lands lying within the Township be placed within a very low density residential category. This designation is intended to replace those areas of the Township previously zoned for R-5 five acre development. The maximum density in this designation is one unit per seven and one half acres. A minimum net lot size of two acres is recommended. Given the pattern of scattered development within the Township which has taken place under prior zoning regulations, it is recommended that a "grandfather" clause be enacted which allows for the development of existing developed and undeveloped lots in excess of one and one-half acres. That is, lots of less than the ordinance specified minimum can be developed with single-family homes if they are in excess of one acre in size.

It is recommended that there be a great deal of flexibility and creativity in the design of subdivisions in these areas. Individual home sites could be as small as two acres while the







overall density would allow for variation in lot sizes and possible dedication of open space in instances where the net result is an open space tract in accordance Master Plan's designated open spaces and greenways. Options such as the use of reduced road standards and the possible use of common driveways to provide access should be considered to reduce environmental impact and to avoid the creation of an extensive public road network.

### **LOW DENSITY RESIDENTIAL**

This designation corresponds to areas of the Township previously designated for 2 and 3 acre lot sizes. These properties share many of the characters of the areas identified for very low density development but they are somewhat less environmentally constrained.

### **PAULINSKILL RESIDENTIAL**

The Paulinskill residential designation is limited to those properties located in the vicinity of Paulinskill Lake which had been previously zoned R-15 15,000 square foot residential. The intent of this designation is to recognize the established pattern of lotting in the vicinity while discouraging further development which would adversely impact the area's environmentally sensitive features. It is recommended that the minimum lot size for new lots created by subdivision be 30,000 square feet. All existing lots should be "grandfathered."

### **COMMERCIAL RECREATION**

The commercial recreation designation acknowledges existing recreation oriented businesses. This designation is confined to two tracts, one located along the east shore of Swartswood Lake on County Route 619 and the second located south of Owassa Road adjacent to Lake Kathryn.

### **NEIGHBORHOOD COMMERCIAL**

The neighborhood commercial designation corresponds to areas generally located at crossroads within the Township and some scattered sites which have some existing nonresidential development. These include the villages of Stillwater and Middleville as well as the area

surrounding the intersection of Swartswood Road with West Shore Drive and an area east of East Shore Drive near the Fredon border.

### **EXISTING PARKS, RECREATION AND OPEN SPACES**

A significant portion of the Township is presently located within existing parks, recreation and open spaces. These include the DEP's holdings in and around Swartswood Lake, Camp Nejeda, scattered Township owned parcels, parcels held by the Boy Scouts and Girl Scouts, lands of the YMCA, Blair Academy's holdings and National Park Service and Nature Conservancy lands. Most of the lands are presently within an RC recreation/conservation zone.

### **PROPOSED OPEN SPACE AND GREENWAYS**

The Land Use Plan Map identifies areas of recommended acquisition and a greenway/stream corridor system designed to link proposed open space areas with the existing open space network.

The most significant component of this plan is the recommendation that DEP acquire in excess of 1,900 acres by way of outright acquisition or through the use of conservation easements located in the northcentral portion of the Township. The lands are generally located south of Owassa Road, and north of Old Foundry Roads. The Township endorses the efforts to acquire this land for "passive recreation uses" including wildlife management areas. Also recommended for acquisition is a 240 ± acre parcel located north of Benevolence Road including Quick Pond.

Tying the existing and proposed open spaces together is a network of greenways and stream corridors shown on the Land Use Plan Map. These greenways are shown in conceptual form and are generally located utilizing existing stream corridors and wetlands areas for the purpose of wildlife protection and stream corridors. It is the intent to show the overall scheme and not be site specific to the individual properties shown.

## **HISTORIC PRESERVATION IN THE VILLAGE OF STILLWATER**

During 1995 a detailed study was undertaken to prepare exterior design guidelines for the Village of Stillwater. The document entitled "Exterior Design Guidelines for the Village of Stillwater," dated September 1995, serves as a technical appendix to the Master Plan pursuant to 40:55D-28b(11).

At the present time it is anticipated that the historic guidelines will be voluntarily used. That is, the Township will not be creating a Historic Preservation Commission pursuant to 40:55D-107. If at a future date the Township elects to pursue historic preservation pursuant to statute, it is recommended that inventories be made for the Village of Middleville and the Township as a whole to determine the appropriate methods of preservation for potential sites and districts.

To the extent that the exterior guidelines can be translated into zoning standards, that is, nonarchitectural standards, it is recommended that the ordinance be revised for the commercial district within the Village of Stillwater.

## **DEMOGRAPHIC PROFILE**

### **INTRODUCTION**

This element presents general demographic, housing and economic information for Stillwater Township. While it is difficult to generalize about the "average resident of Stillwater," it is important to understand demographic and economic conditions and population trends in an effort to comprehensively plan for the Township. The Demographic Profile analyzes the changes that have taken place over time in population, housing, income and economic characteristics. Although past trends do not necessarily guarantee those of the future, they do provide an historic sense of direction and call attention to emerging trends.

### **SUMMARY OF DEMOGRAPHIC CHARACTERISTICS**

Stillwater Township is a rural residential and agricultural community that has grown slowly over the past 60 years. Many of the major trends relating to Stillwater's demographics are similar to county, state and national trends. Major demographic trends in Stillwater Township are as follows:

- The Township exhibited its greatest growth in terms of population between 1950 and 1980, when the population increased by over 3,070 residents, a 380 percent increase. Since 1980, however, the population growth rate has decreased. A total of 366 additional people resided in the Township by 1990, an increase of only 9.4 percent since 1980.
- Household size decreased from 3.03 in 1980 to 2.90 in 1990, similar to national and state trends.
- Between 1980 and 1990, the population composition of Stillwater changed as the number of persons between the ages of 15 and 34 decreased, the number of persons between the ages 35 and 54 increased, and the number of persons aged 55 and over decreased.
- Stillwater has a very low population density in comparison to other Sussex County municipalities. The Township ranks 17th out of 24 municipalities in terms of density.

## **POPULATION**

### **Population Trends**

The population of Stillwater Township has grown slowly since 1930 and reached a peak of 4,253 persons in 1990. The greatest growth period was between 1970 to 1980 when the population increased from 2,158 to 3,887 persons, or 80.1 percent. Overall, the greatest population growth was during the post World War II era (1950 - 1980) when the population increased by over 3,070 residents, a 380 percent increase. Since 1980, however, the population growth rate has decreased. A total of 366 additional people resided in the Township by 1990, an increase of only 9.4 percent since 1980.

The population trends experienced by the Township are somewhat similar to those of Sussex County as a whole, also shown in Table 1. During the 1950 to 1960 decade, the County's growth increased significantly with a 43.1 percent increase, representing an additional 17,832 persons. In terms of absolute numbers, the County experienced it's largest growth between the 1970 and 1980 decade, with an increase of 38,591 persons, representing a 1980 population of 116,119 persons or a 49.8 percent increase. In terms of percentages, the largest increase occurred in the 1960 to 1970 decade with an increase of 57.4 percent. The 1980 to 1990 decade showed a reduced rate of population growth with a population increase 14,824 persons, representing a 1990 population of 130,943 persons.

Without substantial residential development, it is unlikely that the population of Stillwater will increase significantly in the future. Several national trends affecting the region will continue to keep population levels down. These trends include the aging of the baby boom generation (those born 1945 to 1964), the reduced birth rates of the baby bust cohort (1965-1976), and the increase in the elderly.

Table 1

POPULATION CHANGE, 1930 to 1990  
Township of Stillwater and Sussex County

**Township of Stillwater**

Year	Population	Population Change	
		Number Changed	Percent
1930	706	---	---
1940	679	-27	-3.8
1950	816	137	20.2
1960	1,339	523	64.1
1970	2,158	819	61.2
1980	3,887	1,729	80.1
1990	4,253	366	9.4

**Sussex County**

Year	Population	Population Change	
		Number Changed	Percent
1930	27,830	---	---
1940	29,632	1,802	6.5
1950	34,423	4,791	16.2
1960	49,255	14,832	43.1
1970	77,528	28,273	57.40
1980	116,119	38,591	49.8
1990	130,943	14,824	12.8

Source: U.S. Bureau of the Census



## **Population Composition By Age**

Between 1980 and 1990, the population composition of Stillwater changed as the number of persons between the ages of 15 and 34 decreased, the number of persons between the ages 35 and 54 increased, and the number of persons aged 55 and over decreased. Table 2 indicates the 1980 and 1990 population by age groups for the Township of Stillwater. Over the ten year period, there were significant shifts in many of the age charts. The most significant change was in the age 35 - 44 age category, which increased by 350 people, or 69 percent. This age group now constitutes 20.2 percent of the Township population compared to 13.0 percent in 1980. Declines took place in the 15 to 24, 25 to 34 and 55 to 64 year age cohorts, decreasing by 12.1, 1.8 and 16.7 percent, respectively. Conversely, there were moderate and significant increases in the under 5, 5 to 14, 35 to 44 and 45 to 54 age cohorts, of 12.9, 5.5, 69.0 and 35.4 percent respectively. Finally, a moderate decrease occurred in the 65 and over age category, which decreased by 43 persons, or almost 11 percent.

These changes are local manifestations of national trends. The general increase in the 35-54 age cohort represents the aging of the baby boom generation; those born between 1946 to 1964. Rutgers Center for Urban Policy Research identifies this group and the process as "middle-aging." As this group passes through the age pyramid, it will constitute a fairly affluent, stable market. Most will be married, with children and find the Stillwater environment a good place to live and raise a family. Of importance to education officials, this trend portends increasing school enrollments in the 1990's.

The general decline of the 15 to 24 age group also reflects national trends. This is the baby bust generation reflecting the low national birth rate experienced between 1965 through 1976. As this group ages, they will constitute a smaller market for those goods and services that serve young adults.

Finally, the decrease in the 65+ category really has two components. The decrease of this age cohort between the 1980 and 1990 decade represents an out-migration of the elderly, presumably to smaller residences which require less care or to areas with larger centers and conveniences. In

addition, if national and state trends continue, those persons in the Township aged 75 and over will increase and may indeed require significant public expenditures in terms of specialized housing and services. The 65-74 age group will probably continue to decline during the coming decade. This age group are the products of the low birth rates of the late 1920's and depression years.

Table 2

POPULATION BY AGE, 1980 & 1990  
Township of Stillwater

	1980		1990		Change, 1980-90	
	No. of Persons	Percent	No. of Persons	Percent	Number	Percent
Under 5	326	8.4	368	8.7	42	12.9
5-14	686	17.7	724	17.0	38	5.5
15-24	545	14.0	479	11.3	-66	-12.1
25-34	770	19.8	756	17.8	-14	-1.8
35-44	507	13.0	857	20.2	350	69.0
45-54	325	8.4	440	10.4	115	35.4
55-64	336	8.6	280	6.6	-56	-16.7
65 and Over	392	10.1	349	8.2	-43	-11.0
Totals:	3,887	100.00	4,253	100.00	366	9.4

Source: U.S. Bureau of the Census, 1980 and 1990

Table 3 compares the age group distribution for the Township and Sussex County in 1980 and 1990. Both the County and Township experienced increases in the population in the under 5, 35 to 44, and 45 to 55 age cohorts, while registering decreases in the 5-14, 15-24, 25-24 and 55-64 age categories. As previously discussed, the Township declined in persons aged 65 and over while there was a small increase in the County as a whole.

Compared to the County in 1990, the Township had essentially the similar percentage of its population in the 25 to 54 age categories but a higher proportion in the youth group (under 5 & 5-14). Even with the loss of the elderly population in the Township, the County and the Township had similar populations aged 65 and over, percentage wise.

Table 3

POPULATION DISTRIBUTION, 1980 AND 1990  
Township of Stillwater and Sussex County

	1980		1990	
	Township (percent)	County (percent)	Township (percent)	County (percent)
Under 5	8.4	8.2	8.7	8.3
5-14	17.7	18.2	17	15.2
15-24	14	15	11.3	12.6
25-34	19.8	19	17.8	18
35-44	13	14.3	20.2	18.6
45-54	8.4	9	10.4	11.6
55-64	8.6	7.6	6.6	6.7
65 and Over	10.1	8.7	8.2	8.9
Totals:	100.00	100.00	100.00	100.00

Source: U.S. Bureau of the Census, 1980 and 1990

## EXISTING HOUSING CHARACTERISTICS

### Household Size

As indicated in Table 4, the mean 1990 household size in the Township was 2.9 persons, down from 3.03 persons in 1980. The County also experienced a decline in mean household size. The 1990 mean household size in Sussex County was also 2.9 persons, down from 3.08 in 1980. A household is defined as one or more persons, whether related or not, living together in a dwelling unit.

Various trends during the late 1970's and 1980's, which have continued, contributed to the reduction in household size. These include the tendency to marry at later ages, increases in divorce rates, increases in the number of elderly living alone, and the desire by single working

persons to have their own housing units. Collectively, these trends have resulted in reductions of household size. This is also represented by the number of occupied households in Stillwater increasing between 1980 and 1990 from 1,284 to 1,446 while the population increased by 366 persons.

Table 4

HOUSEHOLD CHARACTERISTICS - 1980 & 1990  
 Occupied Housing Units By Persons In Unit  
 Township of Stillwater and Sussex County

**Township of Stillwater**

Household Size	1980		1990		Change, 1980-90	
	Number	Percent	Number	Percent	Number	Percent
1 person	169	13.2	209	14.5	40	23.7
2 persons	422	32.9	440	30.4	18	4.3
3 persons	241	18.8	285	19.7	44	18.3
4 persons	248	19.3	325	22.5	77	31.1
5 persons	119	9.3	139	9.6	20	16.8
6 or more persons	85	6.6	48	3.3	-37	-43.5
Totals:	1,284	100.0	1,446	100.0	162	12.6
Mean Persons/Household:	3.03		2.9			

**Sussex County**

Household Size	1980		1990		Change, 1980-90	
	Number	Percent	Number	Percent	Number	Percent
1 person	5,422	14.6	7,193	16.2	1,771	32.7
2 persons	10,536	28.3	13,182	29.7	2,646	25.1
3 persons	6,891	18.5	8,965	20.2	2,074	30.10
4 persons	7,911	21.3	9,332	21	1,421	18
5 persons	4,081	11	4,033	9.1	-48	-1.2
6 or more persons	2,380	6.4	1,751	3.9	-629	-26.4
Totals:	37,221	100.0	44,456	100.0	7,235	19.4
Mean Persons/Household:	3.08		2.9			

Source: U.S. Bureau of the Census, 1980 & 1990

## Household Types

Table 5 details the types of households in Stillwater in 1990. As indicated, one-person households represented 14.5 percent of the total households, or 209 households. Persons aged 65 and over comprised 253 households, or 17.5 percent of the total number of households.

Table 5

### TYPES OF HOUSEHOLDS Township of Stillwater

Type of Household	Number in Subgroup	1990 Total
<b>One Person:</b>		<b>209</b>
Male Householder	100	
Female Householder	109	
<b>Two or More Persons:</b>		<b>1,237</b>
Married Couple Family:		1,029
w/related children	581	
w/no related children	448	
<b>Other Family:</b>		<b>148</b>
Male Householder, No Wife Present:		43
w/related children	19	
w/no related children	24	
Female Householder, No Husband:		105
w/related children	69	
w/no related children	36	
<b>Non-Family*</b>		<b>60</b>
Male Householder	40	
Female Householder	20	
<i>One or More Persons, 65 Years or Over</i>	253	

\* Not a member of a family; roomers, boarders, resident employees, foster children, etc. , are included in this category.

Source: U. S. Bureau of the Census, 1990



### Per Capita And Household Income

As shown in Table 6, the Township of Stillwater had a per capita income of \$17,562 in 1989, which is somewhat lower than the per capita income of Sussex County (\$18,566) and the State's per capita income (\$18,714). In 1989, median household income for the Township was \$46,994, higher than the State median income of \$40,927, but lower than the County median of \$48,823. The relatively low per capita income and the relatively high household income is indicative of the number of families with children that live in Stillwater compared to the state as whole, since families with children generally have a lower per capita income but a higher household income than non-families or families with no children.

These figures represent a significant increase in income for Stillwater since 1979. The Township's per capita income increased by over 140 percent between 1979 and 1989, while the County and State per capita income increased by 138 and 130 percent, respectively. The Township's median household income increased by 129 percent over the ten year period, while the County increased by 123 percent, slightly lower than Stillwater. Both were higher, however, than the State's increase of 107 percent.

Table 6

#### PER CAPITA AND HOUSEHOLD INCOME, 1979 and 1989 Township of Stillwater, Sussex County and State of New Jersey

	1979 Median Household Income	1979 Per Capita Money Income	1989 Median Household Income	1989 Per Capita Money Income
Township	\$20,523	\$7,215	\$46,994	\$17,562
County	\$21,870	\$7,813	\$48,823	\$18,566
State	\$19,800	\$8,183	\$40,927	\$18,714

Source: U.S. Bureau of the Census, 1980 & 1990

## Income Distribution

As indicated in Table 7, there were 220 households in the Township in 1989 with incomes less than \$25,000, or 15.4 percent of the total number of households. On the other hand, 212 households, or 14.9 percent had incomes of \$75,000 or more. In comparison, the County had 8,270 households, or 18.6 percent earning \$25,000 or less, while 8,781 households or 19.7 percent earned more than \$75,000.

Table 7

### 1989 HOUSEHOLD INCOME DISTRIBUTION Township of Stillwater and Sussex County

Income	Township		County	
	Number of Households	Percent	Number of Households	Percent
Less than \$5,000	33	2.3	779	1.8
\$5,000 - \$9,999	31	2.2	1,692	3.8
\$10,000 - \$14,999	66	4.6	1,802	4.1
\$15,000 - \$24,999	90	6.3	3,997	9.0
\$25,000 - \$34,999	213	15.0	5,520	12.4
\$35,000 - \$49,999	351	24.7	9,087	20.4
\$50,000 - \$74,999	428	30.1	12,834	28.9
\$75,000 - \$99,999	116	8.2	5,439	12.2
\$100,000 - \$149,999	61	4.3	2,355	5.3
\$150,000 or more	35	2.5	987	2.2
Totals:	1,424	100.0	44,492	100.0

Source: U.S. Bureau of the Census, 1990

## Poverty Status

Of the 4,182 persons in Stillwater Township in 1989, 140 or 3.3 percent were considered to be living in poverty status. This compares to the County which had 4,444 persons or 3.4 percent living in poverty in 1989. Of the 140 persons in Stillwater, 77 were persons aged 18 to 65 years. Poverty status for the Township and County are also indicated on Table 7A.

Table 7A

### POVERTY STATUS - 1989 Township of Stillwater and Sussex County

Poverty Status	Stillwater Township		Sussex County	
	Number	%	Number	%
1989 Persons	4,182	100.0	129,032	100.0
Total persons below poverty level	140	3.3	4,444	3.4
Persons under 18 years of age	30	21.4	1,498	33.7
Persons aged 18 to 65 years	77	55.0	2,261	50.9
Persons aged 65 years or more	33	23.6	685	15.4

Source: 1990 STF-3 Census Data - March, 1992

## Selected Social Characteristics

As of 1990, 74 percent of the persons aged 3 years or more in the Township were enrolled in elementary or high school. This is somewhat higher than the 67.5 percent for Sussex County as a whole. The County however had over 21 percent of persons aged 3 years or more enrolled in college while the Township had a slightly lower 17.3 percent enrolled.

In Stillwater Township, 37.6 percent of the residents aged 25 years or more are high school graduates. This is higher than the 34.6 percent for Sussex County as a whole. In addition, 30.8 percent of the residents, aged 25 years or more in the Township had received their college degree (associate, bachelor's and graduate/professional) which is only slightly lower than the 31.8 percent for the entire County.

School enrollment and education attainment for 1990 is shown in Table 7B for Stillwater Township and Sussex County.

Table 7B  
SELECTED SOCIAL CHARACTERISTICS - 1990  
Township of Stillwater and Sussex County

	Township of Stillwater		Sussex County	
	Number	%	Number	%
<u>School Enrollment (Ages 3+)</u>				
Pre-Primary School	94	8.7	3,918	11.3
Elementary/High School	801	74.0	23,399	67.5
College	188	17.3	7,329	21.2
<u>Education Attainment (Ages 25+)</u>				
Less than 9th grade	141	5.3	4,432	5.3
9th-12th grade, no diploma	216	8.2	8,064	9.6
High school graduate	994	37.6	28,933	34.6
Some college, no degree	477	18.1	15,569	18.6
Associate Degree	192	7.3	5,750	6.9
Bachelor's Degree	417	15.8	14,448	17.3
Graduate or Professional Degree	204	7.7	6,393	7.6

Source: 1990 STF-3 Census Data - March, 1992

## Housing Unit Data

In 1990 there were 1,805 housing units in the Township, of which 80.1 percent or 1,446 units were year-round. This is lower, however, than the 86.2 percent of year-round units in all of Sussex County. Table 8 also indicates that over 87 percent of the units in Stillwater are owner occupied, somewhat higher than the 82.3 percent in Sussex County.

Table 8

### HOUSING UNIT DATA - 1990 Township of Stillwater and Sussex County

<i>Unit Type:</i>	Township of Stillwater		Sussex County	
	Number	Percent	Number	Percent
Occupied Year Round	1,446	80.1	44,456	86.20
Vacant, Seasonal & Migratory	359	19.9	7,118	13.80
Total:	1,805	100.00	51,574	100.00
<i>Tenure of Occupied Units:</i>				
Owner Occupied	1,265	87.5	36,574	82.3
Renter Occupied	181	12.5	7,882	17.7
Total:	1,446	100.00	44,456	100.00

Source: U.S. Bureau of the Census, 1990

## Tenure Of Households

Table 9 details the breakdown of units in the Township and Sussex County by tenure, or the year the current householder moved into the unit. Approximately 67.1 percent of the households in the Township moved into their current residence after 1980 and over 48 percent since 1985. This represents a relatively high turnover of housing between 1980 and 1990.

This is relatively similar to Sussex County as a whole. Approximately 62.5 percent of the householders in the County moved into their current residence after 1980, and over 47 percent since 1985.

Table 9

### OCCUPIED HOUSING UNITS BY TENURE - 1990 Township of Stillwater and Sussex County

Year Householder Moved Into Unit	Township of Stillwater		Sussex County	
	Number	Percent	Number	Percent
1989 - 3/1990	138	9.8	6,380	14.4
1985 - 1988	547	38.7	14,532	32.7
1980 - 1984	264	18.7	6,856	15.4
1970 - 1979	261	18.5	9,948	22.4
1960 - 1969	112	7.9	3,840	8.6
1959 or earlier	92	6.5	2,900	6.5
Totals:	1,414	100.00	44,456	100.00

Source: U.S. Bureau of the Census, 1990



## **Housing Unit Type And Size Characteristics**

The majority of the housing stock of the Township of Stillwater is single-family detached housing. As shown in Table 10, in 1990, there were 1,619 single-family detached homes, or approximately 89.7 percent of the total housing stock. There were 20 single-family attached housing units (townhouses), which constituted only 1.1 percent of the total housing stock. The remainder are multi-family units and other housing types.

Table 10 also indicates the year the structure was built. As indicated, the largest percentage of units were constructed before 1939 when almost 24 percent of the housing in the Township was built. In Sussex County as a whole, however, the largest percentage of homes were built during the 1970's when almost 23 percent of all the housing units in the County were constructed. This indicates that the Township is an older, more established community.

Housing units by the number of rooms are also shown. Structures with six rooms were the largest category in the Township and in the County. In the Township, 1,054 of the units or over 58 percent consist of 6 rooms or more. This reflects the predominance of single-family detached homes which tend to be larger than multi-family units.

The number of bedrooms per structure are also shown in Table 10. Over 45 percent of Stillwater residences consisted of 3 bedrooms, which is slightly higher than the 43 percent for all of Sussex County.

Table 10

HOUSING UNIT DATA - 1990  
Township of Stillwater and Sussex County

<i>Characteristics:</i>	Township of Stillwater		Sussex County	
	Number	Percent	Number	Percent
Total Units	1,805	100.0	51,574	100.0
<i>Year Structure Built:</i>				
1989-3/90	21	1.2	1,144	2.2
1985-1988	256	14.5	5,845	11.3
1980-1984	151	8.6	3,767	7.3
1970-1979	262	14.9	11,809	22.9
1960-1969	323	18.3	8,754	17.0
1950-1959	218	12.4	6,981	13.5
1940-1949	110	6.2	4,074	7.9
1939 or earlier	421	23.9	9,200	17.8
<i>Units in Structure:</i>				
One (Single Family Detached)	1,619	89.70	42,015	81.5
One (Single Family Attached)	20	1.1	2,407	4.7
Two or more Units	80	4.4	6,069	11.8
Mobile Home, Trailer, Other	86	4.8	1,083	2.1
<i>Number of Rooms:</i>				
1 room	83	4.60	432	0.8
2 rooms	44	2.4	836	1.6
3 rooms	90	5	2,900	5.6
4 rooms	220	12.2	6,691	13.0
5 rooms	314	17.40	8,947	17.4
6 rooms	378	20.9	10,210	19.8
7 rooms	324	18	8,786	17.0
8 rooms	187	10.4	6,905	13.4
9+ rooms	165	9.1	5,867	11.4
<i>Number of Bedrooms:</i>				
No bedroom	124	7	553	1.1
1 bedroom	163	9.3	4,244	8.2
2 bedrooms	383	21.7	12,396	24.0
3 bedrooms	796	45.2	22,218	43.1
4 bedrooms	247	14	10,151	19.7
5+ bedrooms	49	2.8	2,012	3.90

Source: U.S. Bureau of the Census, 1990

## Source Of Water And Sewage Disposal

Stillwater Township has a limited (public) private water supply and public sewer systems as reflected by the low percentages. Approximately 23 percent utilize (public) private water systems and only 6 percent utilize public sewers. Over 70 percent of the homes in the Township receive water from individual drilled wells and almost 93 percent dispose of their sewage via individual septic tanks. Approximately 53 percent of Sussex County homes as a whole, however, are served by public/private water systems but only 22 percent are serviced by public sewers. Table 10A indicates water source and sewage disposal for Stillwater and Sussex County.

Table 10A

### SELECTED HOUSING CHARACTERISTICS - 1990 Township of Stillwater and Sussex County

Source of Water	Stillwater Township		Sussex County	
	Number	%	Number	%
Public system/Private Company	410	23.3	21,892	42.4
Individual drilled well	1,236	70.1	27,421	53.2
Individual dug well	97	5.5	1,647	3.2
Other source	19	1.1	614	1.2
<b>Sewage Disposal</b>				
Public Sewer	106	6.0	11,331	22.0
Septic Tank	1,629	92.5	39,724	77.0
Other means	27	1.5	519	1.0

## House Heating Fuel

The majority of homes in Stillwater Township are heated by fuel oil or kerosene. Approximately 60 percent or 855 homes are heated in this manner. This compares to 66.9 percent or 29,735 homes in Sussex County as a whole. The relative lack of public utility gas systems in Sussex County is indicated by the low percentage of users. As indicated, only 5.3 percent of all the housing units in Sussex County utilize public gas. No public gas systems are located in the Township. The other main sources for home heating in Stillwater Township are electricity, bottled LP gas and wood representing 16.5, 10.0 and 9.0 percent of the homes respectively. Table 10B indicates home heating sources in the Township and County in 1990.

Table 10B

### SELECTED HOUSING CHARACTERISTICS - 1990 Township of Stillwater and Sussex County

Source of Heat	Stillwater Township		Sussex County	
	Number	%	Number	%
Utility Gas	0	0.0	2,344	5.3
Bottled, tank, or LP gas	141	10.0	2,901	6.5
Electricity	233	16.5	7,552	17.0
Fuel oil, kerosene, etc..	855	60.5	29,735	66.9
Coal or Coke	20	1.4	210	0.5
Wood	127	9.0	1,529	3.4
Solar energy	0	0.0	18	0
Other fuel	0	0.0	117	0.3
No fuel	38	2.7	50	0.1

Source: 1990 STF-3 Census Data - March, 1992

## Housing Conditions

Housing conditions in Stillwater are considered good. As Table 11 indicates, 22 units or 1.25 percent of the units lack complete plumbing and 40 units, or 2.27 percent lack complete kitchen facilities. This is higher percentage wise, however, than Sussex County with 0.41 percent and 0.43 percent, respectively.

Only 22 units or 1.52 percent of the occupied units have more than 1 person per room. These factors are utilized in determining housing deficiency. The majority of the units have less than 0.50 persons per room. There were 3 units which had 1.01 to 1.50 persons per room and 9 units which had over 1.50. The Township housing deficiency is lower when compared to the County.

Table 11

### INDICATORS OF HOUSING CONDITIONS - 1990 Township of Stillwater and Sussex County

Number of Units:	Township of Stillwater		Sussex County	
	Number	Percent	Number	Percent
Total	1,762	100.0	51,574	100.0
Lacking complete plumbing facilities	22	1.3	210	0.4
Lacking complete kitchen facilities	40	2.3	223	0.4
<u>Occupied Units by Persons Per Room:</u>				
0.50 or less	924	63.9	30,099	67.7
0.51 to 1.00	500	34.6	13,804	31.1
1.01 to 1.50	13	0.9	445	1.0
1.51 to 2.00	9	0.6	91	0.2
2.01 or more	0	0.0	17	0.0
Total:	1,446	100.0	44,456	100.0

Source: U.S. Bureau of the Census, 1990



## Housing Values

Housing values for both Stillwater and Sussex County in 1990 are indicated on Table 12. As shown, the largest percentage of homes in the Township and County are valued between \$150,000 and \$174,999. Housing values over \$250,000 in both the Township and County represent 7.6 and 11.2 percent, respectively. Housing values in the Township valued less than \$150,000 comprise over 50 percent which is higher when compared to the 44.6 percent in the County in 1990. The median housing value in the Township in 1990 was \$149,900 and is \$6,400 or 4.1 percent less than the median value of \$156,300 for Sussex County as a whole..

Table 12  
HOUSING VALUES - 1990  
Township of Stillwater and Sussex County

Value	Township of Stillwater		Sussex County	
	Number	Percent	Number	Percent
Less than \$75,000	35	3.3	873	2.7
\$75,000-\$99,999	98	9.1	1,848	5.8
\$100,000-\$124,999	197	18.4	4,432	13.8
\$125,000-\$149,999	207	19.3	7,150	22.3
\$150,000-\$174,999	214	19.9	6,870	21.4
\$175,000-\$199,999	140	13.1	3,915	12.20
\$200,000-\$249,999	101	9.4	3,412	10.6
\$250,000-\$299,999	46	4.3	1,700	5.30
\$300,000-\$399,999	27	2.5	1,185	3.7
\$400,000-\$499,999	2	0.2	384	1.20
\$500,000 or more	6	0.6	321	1.00
Total:	1,073	100.00	32,090	100.00
Median Value:	\$149,900		\$156,300	

Source: U.S. Bureau of the Census, 1990

## Population To Job Ratio

Table 17 indicates that in 1990, Stillwater had a 24.03 to 1 job ratio. This ratio indicates that the Township is very rural and residential in character and not job intensive. Compared to Sussex County as a whole and the other counties located in the North East Housing Region, Stillwater clearly stands out as a rural residential and agricultural community.

Table 17

### POPULATION TO JOB RATIO North East Housing Region

Area	1990 Population	1990 Employment	Population to Jobs Ratio
Township of Stillwater	4,253	177	24.03 to 1
Sussex County	130,943	24,344	5.38 to 1
Bergen County	825,380	396,230	2.08 to 1
Passaic County	453,060	164,622	2.75 to 1
Hudson County	553,099	198,120	2.79 to 1

Source: NJ Department of Labor, Covered Employment Trends, 1980-1992

## Comparative Employment Data

How the residents of the Township of Stillwater and Sussex County earn their living and their place of employment is shown in Table 18. The largest occupational category in Stillwater Township was Professional Specialty which represented 18.2 percent of the residential work force. The largest group in Sussex County as a whole was Administrative Support and Clerical which accounted for 16.93 percent of resident employment. The second largest occupation in the Township was Administrative Support and Clerical, representing 16.8 percent of the workers while in Sussex County, Executive, Administrative and Managerial represented 15.26 percent.

### **Class Of Worker**

Table 18 also identifies the class of workers found in the Township of Stillwater and Sussex County. As expected, the largest sector of workers for both the Township and County are in the private sector, representing 70.9 and 79.2 percent respectively. Local government is the second highest employee class for both the Township and County.

### **Commuting To Work**

Approximately 80.2 percent of the workers from Stillwater drove alone to work in 1990, as shown in Table 18. This is slightly lower than the 80.7 percent reported by the County as a whole. Of the remaining workers in the Township, 12.5 percent carpooled while 5.3 percent either walked or worked at home. In the County, 12.8 percent carpooled and approximately 4.4 percent walked or worked at home. A significant proportion of the labor force working outside the Township is evidenced by a mean travel time to work of almost 34 minutes, which is only slightly higher, however, than the average 33.3 minutes for all Sussex County workers.

Table 18

EMPLOYMENT DATA - 1990  
OCCUPATION CHARACTERISTICS

Township of Stillwater, Sussex County and New Jersey

Occupation Group	Township of Stillwater		Sussex County	
	Number	Percent	Number	Percent
Executive, administrative and managerial	219	10.4	10,311	15.3
Professional specialty	383	18.2	10,296	15.2
Technicians and related support	87	4.1	2,877	4.3
Sales	257	12.2	8,549	12.7
Administrative, support, clerical	353	16.8	11,440	16.9
Private households	0	0.0	112	0.2
Protective services	33	1.6	1,375	2.0
Service	161	7.6	5,280	7.8
Farming, forestry & fishing	49	2.3	1,134	1.7
Precision production, craft & repair	328	15.6	8,504	12.6
Machine operators, assemblers & inspectors	64	3	2,736	4.1
Transportation & material moving	89	4.2	2,891	4.3
Handlers, equipment cleaners, helpers and laborers	83	3.9	2,073	3.1
Total:	2,106	100.0	67,578	100.0
<u>Class of Worker:</u>				
Private wage & salary	1,493	70.9	53,513	79.2
Local Government	239	11.4	5,954	8.8
State Government	60	2.9	1,436	2.1
Federal Government	78	3.70	1,969	2.9
Self-employed	236	11.2	4,397	6.5
Unpaid family	0	0	309	0.5
<u>Commuting to Work:</u>				
Drove alone	1,676	80.2	53,721	80.7
Carpool	261	12.5	8,497	12.8
Public transportation	34	1.6	1,006	1.5
Other means	7	0.3	413	0.6
Walked or work at home	111	5.3	2,957	4.4
Mean travel time (minutes)	34	---	33.3	---
Total:	2,089	100.0	66,594	100.0

Source: U.S. Bureau of the Census, STF-3 Data, 1990

## **Relationship Of Stillwater Township To Sussex County**

The following three tables indicate the relationship of Stillwater Township to the other municipalities of Sussex County. Characteristics such as total population, land area and population density rank are examined.

As indicated in Table A, Stillwater Township ranked 12th in total population of the 24 Sussex County municipalities. Vernon Township had the largest 1990 population with 21,211 persons. The adjacent Sussex County municipalities of Hampton Township, Fredon Township and Walpack Township ranked 11th, 15th and 24th respectively.

Table B indicates the total land area, ranked low to high, for Sussex County municipalities. Stillwater Township with an area of 28.5 square miles ranked 8th out of the 24 municipalities. The smallest municipality in the County is Branchville Borough and the largest is Vernon Township. The adjacent municipalities of Hampton Township, Fredon Township and Walpack Township ranked 9th, 10th and 14th respectively.

Stillwater Township ranks 17th in population density in the County based on the population density of 149.2 persons per square mile. Walpack Township ranks 24th with the lowest population density because of the extensive public lands found in the Township and Sussex Borough ranks the highest in density with 3,550 persons per square mile. The adjacent municipalities of Hampton Township, Fredon Township and Walpack Township ranked 13th, 16th and 24th respectively. Table C indicates the population density by rank for all Sussex County municipalities.

Table A  
Relationship of Stillwater Township to  
Other Sussex County Municipalities

**Population Rank - High to Low**

<u>Municipality</u>	<u>Population</u>	<u>County Rank</u>
Vernon Township	21,211	1
Hopatcong Borough	15,586	2
Sparta Township	15,157	3
Wantage Township	9,487	4
Byram Township	8,048	5
Newton Town	7,521	6
Andover Township	5,438	7
Hardyston Township	5,275	8
Frankford Township	5,144	9
Franklin Borough	4,977	10
Hampton Township*	4,438	11
<b>STILLWATER TOWNSHIP</b>	<b>4,253</b>	<b>12</b>
Stanhope Borough	3,393	13
Montague Township	2,832	14
Fredon Township*	2,763	15
Ogdensburg Borough	2,722	16
Green Township	2,709	17
Hamburg Borough	2,566	18
Sussex Borough	2,201	19
Lafayette Township	1,902	20
Sandyston Township	1,732	21
Branchville Borough	851	22
Andover Borough	700	23
Walpack Township*	67	24

\* Indicates Sussex County Adjacent Municipality



Table B  
Relationship of Stillwater Township to  
Other Sussex County Municipalities

**Land Area Rank - High to Low**

Municipality	Land Area	County Rank
Vernon Township	70.5	1
Wantage Township	67.6	2
Montague Township	45.3	3
Sandyston Township	43.30	4
Sparta Township	39.2	5
Frankford Township	35.4	6
Hardyston Township	32.7	7
<b>STILLWATER TOWNSHIP</b>	<b>28.5</b>	<b>8</b>
Hampton Township*	25.3	9
Walpack Township*	24.7	10
Byram Township	21.9	11
Andover Township	20.7	12
Lafayette Township	18.1	13
Fredon Township*	17.8	14
Green Township	16.3	15
Hopatcong Borough	12.3	16
Franklin Borough	4.6	17
Newton Town	3.1	18
Ogdensburg Borough	2.3	19
Stanhope Borough	2.2	20
Andover Borough	1.8	21
Hamburg Borough	1.2	22
Sussex Borough	0.6	23
Branchville Borough	0.6	24

\* Indicates Sussex County Adjacent Municipality

Table C  
Relationship of Stillwater Township to  
Other Sussex County Municipalities

**Population Density Rank - High to Low**

<u>Municipality</u>	<u>Population Density (Persons/Sq.Ml.)</u>	<u>County Rank</u>
Sussex Borough	3,550.0	1
Newton Town	2,418.3	2
Hamburg Borough	2,193.2	3
Stanhope Borough	1,535.3	4
Branchville Borough	1,442.4	5
Hopatcong Borough	1,268.2	6
Ogdensburg Borough	1,183.5	7
Franklin Borough	1,093.8	8
Andover Borough	393.3	9
Sparta Township	386.3	10
Byram Township	367.3	11
Vernon Township	301.1	12
Hampton Township*	175.2	13
Green Township	166.5	14
Hardyston Township	161.3	15
Fredon Township*	154.9	16
<b>STILLWATER TOWNSHIP</b>	<b>149.2</b>	<b>17</b>
Frankford Township	145.2	18
Wantage Township	140.4	19
Lafayette Township	105.4	20
Andover Township	70.5	21
Montague Township	62.5	22
Sandyston Township	40.0	23
Walpack Township*	2.7	24

\* Indicates Sussex County Adjacent Municipality

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SUSSEX COUNTY  
RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN  
THE NEW JERSEY NATURAL HERITAGE DATABASE

NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK
CALCAREOUS RIVERSIDE OUTCROP COMMUNITY	CALCAREOUS RIVERSIDE OUTCROP COMMUNITY				G37	S1S2
CALCAREOUS RIVERSIDE SEEP COMMUNITY	CALCAREOUS RIVERSIDE SEEP COMMUNITY				G37	S1
CALCAREOUS SEEPAGE SWAMP	CALCAREOUS SEEPAGE SWAMP				G47	S2S3
CAVE AQUATIC COMMUNITY	CAVE AQUATIC COMMUNITY				G47	S2
CAVE TERRESTRIAL COMMUNITY	CAVE TERRESTRIAL COMMUNITY				G47	S3
DRY-MESIC CALCAREOUS FOREST	DRY-MESIC CALCAREOUS FOREST				G3G47	S27
GLACIAL BOG	GLACIAL BOG				G47	S1
HARDWOOD-CONIFER SWAMP	HARDWOOD-CONIFER SWAMP				G47	S2S3
INLAND ACIDIC SEEP COMMUNITY	INLAND ACIDIC SEEP COMMUNITY				G37	S1
INLAND ATLANTIC WHITE CEDAR SWAMP	INLAND ATLANTIC WHITE CEDAR SWAMP				G37	S1
LIMESTONE GLADE	LIMESTONE GLADE				G2Q	S1
TALUS SLOPE COMMUNITY	TALUS SLOPE COMMUNITY				G47	S2S3
ALASHIDONTA UNDULATA	TRIANGLE FLOATER				G4	S3S4
CALEPHELIS BOREALIS	NORTHERN METALMARK				G3G4	S2S3
CALOPTERYX AMATA	SUPERB JEWELWING				G3G4	S17
CARTEROCEPHALUS PALAEMON	ARCTIC SKIPPER				G5	S1
CICINDELA MARGINIPENNIS	COBBLESTONE TIGER BEETLE		C2		G2G3	S1S2
ENALLAGHA LATERALE	NEW ENGLAND BLUET				G3	S1
GOMPHUS BOREALIS	BEAVERPOND CLUBTAIL				G4	S17
GOMPHUS ROGERSI	SABLE CLUBTAIL				G4	S17
HEMILEUCA SP 2	A FEW BUCK MOTHS				G1Q	S1
LANTHUS VERNALIS	SINGLE-STRIPED CLUBTAIL				G4	S17
NITROPHORUS AMERICANUS	AMERICAN BURYING BEETLE		LE	E	G1	SH

\*\*\* Invertebrates

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SUSSEX COUNTY  
RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN  
THE NEW JERSEY NATURAL HERITAGE DATABASE

NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK
ASTER TRADESCANTII	TRADESCANT'S ASTER				G4	S2
ATHYRIUM PYCNOCARPON	GLADE FERN		E		G5	S1
BETULA PAPIRIFERA	PAPER BIRCH				G5	S2
BETULA PUMILA	SWAMP BIRCH				G5	S2
BIDENS BECKII	WATER-MARIGOLD		E		G4G5TU	S1
BOLTONIA ASTEROIDES	ASTER-LIKE BOLTONIA				G5	S2
BOTRYCHIUM MULTIFIDUM	LEATHERY GRAPE-FERN		E		G5	S1
BOTRYCHIUM ONEIDENSE	BLUNT-LOBED GRAPE-FERN				G37	S2
BOUTELOUA CURTIPENDULA	SIDE-OATS GRAMA GRASS		E		G5	S1
BROMUS KALMII	KALM'S BROMEGRASS				G5	S2
CALLITRICHE VERNA	SPRING WATER STARWORT				G5	S2
CALYSTEGIA SPITHAMEA	ERECT BINDWEED		E		G4G5	S1
CARDAMINE MAXIMA	LARGE-LEAVED TOOTHWORT				G5q	S1.1
CARDAMINE PRATENSIS VAR PALUSTRIS	CUCKOO FLOWER				G5T4T5	S2
CAREX AQUATILIS	WATER SEDGE		E		G5	S1
CAREX BACKII	BACK'S SEDGE		E		G4	SH.1
CAREX BICKNELLII	BICKNELL'S SEDGE				G5	S2
CAREX BRUNNESCENS	BROWNISH SEDGE		E		G5	S1
CAREX BUSHII	BUSH'S SEDGE		E		G4	S1
CAREX BUXBAUMII	BROWN SEDGE				G5	S2
CAREX CONOIDEA	FIELD SEDGE				G4	S2
CAREX CRAMEI	CRANE'S SEDGE		E		G5	S1
CAREX CRAWFORDII	CRAWFORD'S SEDGE				G5	S2
CAREX DEWEYANA	DEWEY'S SEDGE		E		G5	S1
CAREX EBURNEA	EBONY SEDGE				G5	S2
CAREX FOENEAE	DRY-SPIKED SEDGE		E		G5	S1
CAREX FORMOSA	HANDSOME SEDGE			C2	G3	S1.1

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NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK
CAREX HAYDENII	CLOUD SEDGE		E		G5	S1
CAREX HITCHCOCKIANA	HITCHCOCK'S SEDGE				G5	S2
CAREX LEPTONERVIA	FINELY-NERVED SEDGE		E		G4	S1
CAREX LINOSA	MUD SEDGE		E		G5	S1
CAREX LUPULIFORMIS	HOP-LIKE SEDGE				G3G4Q	S1
CAREX OLIGOCARPA	FEW-FRUITED SEDGE		E		G4	S1
CAREX PECKII	WHITE-TINGED SEDGE				G4G5	SH
CAREX PSEUDOCYPERUS	CYPERUS-LIKE SEDGE		E		G5	S1
CAREX RETRORSA	RETROSE SEDGE				G5	S2
CAREX ROSTRATA	BEAKED SEDGE				G5	S2
CAREX STERILIS	ATLANTIC SEDGE				G4	S2
CAREX VIRIDULA	GREEN SEDGE				G5?	S2
CASTILLEJA COCCINEA	SCARLET INDIAN PAINTBRUSH				G5	S2
CELTIS TENUIFOLIA	GEORGIA HACKBERRY				G5	S2
CHAMAELIRIUM LUTEUM	DEVIL'S-BIT				G5	S3
CHEILANTHES LANOSA	HAIKY LIPFERN				G5	S2
CINNA LATIFOLIA	SLENDER WOOD REEDGRASS		E		G5	S1
CLAYTONIA VIRGINICA VAR HAMMONDIAE	HAMMOND'S YELLOW SPRING BEAUTY	C2	E		G5T1	S1.1
CLEMATIS OCCIDENTALIS	PURPLE CLEMATIS				G5	S2
COELOGLOSSUM VIRIDE	LONG-BRACTED GREEN ORCHID				G5	S2
CONTOSELINUM CHINENSE	HEMLOCK-PARSLEY		E		G5	S1
CORNUS CANADENSIS	BUNCHBERRY				G5	S2
CRATAEGUS CALPODENDRON	PEAR HAWTHORN		E		G5	S1
CRATAEGUS CHRYSOCARPA	FINEBERRY HAWTHORN				G5?	SH
CYNOGLOSSUM VIRGINIANUM VAR BOREALE	NORTHERN WILD COMFREY		E		G5T3?	SH.1
CYPERUS LANCASTRIENSIS	LANCASTER FLATSEGE		E		G5	S2

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CYPRIPEDIUM REGINAE	SHOWY LADY'S-SLIPPER		E		G4	S1
CYSTOPTERIS PROTRUSA	LOWLAND BRITTLE FERN				G5	S2
DICENTRA CANADENSIS	SQUIRREL-CORN		E		G5	S1
DIRCA PALUSTRIS	LEATHERWOOD				G4	S2
ELATINE MINIMA	SMALL WATERWORT				G5	S2
ELEOCHARIS COMPRESSA	FLAT-STEMMED SPIKERUSH		E		G4	S1
ELEOCHARIS PAUCIFLORA	FEW-FLOWERED SPIKERUSH		E		G5q	S1
ELYMUS TRACHYCAULUS	SLENDER WHEATGRASS		E		G5	S1
EPILOBIUM STRICTUM	DOWNY WILLOW-HERB				G5?	S2
EQUISETUM PRATENSE	MEADOW HORSETAIL		E		G5	S1
EQUISETUM VARIEGATUM	VARIEGATED HORSETAIL		E		G5	S1
ERAGROSTIS FRANKII	FRANK'S LOVEGRASS				G5	S2
ERIOPHORUM GRACILE	SLENDER COTTONGRASS		E		G5	SH
ERIOPHORUM VAGINATUM VAR SPISSUM	SHEATHED COTTONGRASS		E		G5T5	SH.1
GALIUM LABRADORICUM	LABRADOR MARSH BEDSTRAW		E		G5	S1
GALIUM TRIFIDUM	SMALL BEDSTRAW		E		G5	S1
GAULTHERIA HISPIDULA	CREeping SNOWBERRY		E		G5	S1
GENTIANELLA QUINQUEFOLIA	STIFF GENTIAN				G5	S2
GEUM VERNUM	SPRING AVENS		E		G5	S2
GLYCERIA BOREALIS	SMALL FLOATING MANNAGRASS		E		G5	SH.1
GLYCERIA GRANDIS	AMERICAN MANNAGRASS		E		G5	S1
GNAPHALIUM MACOUNII	CLAMMY EVERLASTING		E		G5?q	SH
GYMNOCARPIUM DRYOPTERIS	OAK FERN				G5	S2
HIERACIUM KALMII	CANADA HAWKWEED		E		G5	SH
HYPERICUM MAJUS	LARGER CANADIAN ST.		E		G5	S1
	JOHN'S-WORT					
HYPERICUM PROLIFICUM	SHRUBBY ST. JOHN'S-WORT		E		G5	S1



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SUSSEX COUNTY  
RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN  
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NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK
ILEX MONTANA	MOUNTAIN HOLLY		E		G5	S1
ISOETES MACROSPORA	LAKE QUILLWORT		E		G5	S1.1
ISOTRIA MEDEOLOIDES	SMALL WHORLED POGONIA		E		G2G3	S1
JUNCUS BRACHYCEPHALUS	SMALL-HEADED RUSH		LEPT		G5	S2
JUNCUS FILIFORMIS	THREAD RUSH				G5	SU
JUSTICIA AMERICANA	WATER-WILLOW				G5	S3
KALMIA POLIFOLIA	PALE LAUREL		E		G5	S1
KUNNIA EUPATORIODES	FALSE BONESET		E		G5	S1
LATHYRUS OCHROLEUCUS	PALE VETCHLING PEAVINE		E		G4G5	SH
LATHYRUS VENOSUS	SMOOTH VEINY PEAVINE		E		G5	S2
LEMNA TRISULCA	STAR DUCKWEED				G5	S2
LILIUM PHILADELPHICUM	WOOD LILY				G5	S3
LINUM SULCATUM	GROOVED YELLOW FLAX		E		G5	S1
LISTERA CORDATA	HEART-LEAVED THAYBLADE		E		G5	S1
LISTERA SMALLII	KIDNEY-LEAVED THAYBLADE		E		G4	S1.1
LITHOSPERMUM CANESCENS	HOARY PUCCOON				G5	SX
LOBELIA DORTMANNA	WATER LOBELIA		E		G4	SH
LONICERA CANADENSIS	FLY HONEYSUCKLE		E		G5	S1
LYCOPODIUM ANNOTINUM	STIFF CLUBMOSS		E		G5	S1
MALAXIS MONOPHYLLOS	WHITE ADDER'S-MOUTH		E		G4?	SH
MELANTHIUM VIRGINICUM	VIRGINIA BUNCHFLOWER		E		G5	S1
MILIUM EFFUSUM	TALL MILLET GRASS		E		G5	SH
MIMULUS MOSCHATUS	MUSK FLOWER				G4G5	S2
MITELLA PROSTRATA	CREeping BISHOP'S-CAP				GUQ	SU.1
MONARDA DIDYMA	OSWEGO TEA				G5	S2
MUHLENBERGIA CAPILLARIS	LONG-AWNEED SHOKE GRASS		E		G5	S1
MYRIOPHYLLUM SIBIRICUM	COMMON WATER-MILFOIL				G5	SX
MYRIOPHYLLUM VERTICILLATUM	WHORLED WATER-MILFOIL		E		G5	SH

SUSSEX COUNTY  
RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN  
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NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK
HELUMBO LUTEA	AMERICAN LOTUS		E		G4	S1
NYMPHOIDES CORDATA	FLOATING HEART			LP	G5	S3
ONOSMODIUM VIRGINIANUM	VIRGINIA FALSE-GROSWELL		E		G4	S1
ORYZOPSIS ASPERIFOLIA	WHITE-GRAINED MOUNTAIN RICEGRASS		E		G5	S1
ORYZOPSIS PUNGENS	SLENDER MOUNTAIN RICEGRASS		E		G5	SH.1
PANAX QUINQUEFOLIUS	AMERICAN GINSENG	3C			G4	S2
PANICUM BOREALE	NORTHERN PANIC GRASS		E		G5	S1
PANICUM FLEXILE	WIRY PANIC GRASS		E		G3G5	S1
PANICUM XANTHOPHYSUM	SLENDER PANIC GRASS		E		G5	SH.1
PARIETARIA PENNSYLVANICA	PELLITORY				G5	S3
PHASEOLUS POLYSTACHIOS	WILD KIDNEY BEAN				G4	S2
PICEA RUBENS	RED SPRUCE				G5	S2
PINUS RESINOSA	RED PINE		E		G5	S1.1
PLATANATHERA FLAVA VAR HERBIOLA	TUBERCLED REIN ORCHID				G4T4	S2
PLATANATHERA HOOKERI	HOOKER'S ORCHID		E		G5	S1
PLATANATHERA ORBICULATA	LARGE ROUND-LEAVED ORCHID		E		G5?	S1
POA LANGUIDA	DROOPING BLUEGRASS				G3G4	S2
POA SALTUENSIS	BLUEGRASS		E		G5?	SH.1
POLEMONIUM REPTANS	GREEK VALERIAN		E		G5	S1
POLYMNIA UVEDALIA	BEARSFOOT		E		G4G5	S1
PORTERANTHUS TRIFOLIATUS	INDIAN PHYSIC				G4G5	S2
POTAMOGETON ILLINOENSIS	ILLINOIS PONDWEED		E		G5	S1
POTAMOGETON PRAE LONGUS	WHITE-STEMMED PONDWEED		E		G5	S1
POTAMOGETON ROBBINSII	ROBBIN'S PONDWEED		E		G5	S1
POTAMOGETON VAGINATUS	SHEATHED PONDWEED				G5	SH
POTAMOGETON ZOSTERIFORMIS	FLAT-STEMMED PONDWEED		E		G5	S1
POTENTILLA PALUSTRIS	MARSH CINQUEFOIL		E		G5	S1

01 FEB 1994

SUSSEX COUNTY  
RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN  
THE NEW JERSEY NATURAL HERITAGE DATABASE

NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK
POTENTILLA TRIDENTATA	THREE-TOOTHED CINQUEFOIL		E		G5	S1.1
PRUNUS PUMILA VAR DEPRESSA	LOW SAND CHERRY				G5T5	S2
PUCCINELLIA FERNALDII	FERNALD'S MEADOW GRASS				G7	SU
PYCNANTHEMUM CLINOPODIOIDES	BASIL MOUNTAIN MINT				G2	S1
PYROLA CHLORANTHA	GREENISH-FLOWERED WINTERGREEN				G5	S1
RANUNCULUS ALLEGHEIENSIS	ALLEGHENY MOUNTAIN CROWFOOT		E		G4G5	S1.1
RANUNCULUS FASCICULARIS	EARLY BUTTERCUP		E		G5	S1
RANUNCULUS FLABELLARIS	YELLOW WATER CROWFOOT				G5	S3
RANUNCULUS LONGIROSTRIS	EASTERN WHITE WATER CROWFOOT				G5	S2
RANUNCULUS TRICHOPHYLLUS	WHITE WATER BUTTERCUP				G5	S2
RHODODENDRON CANADENSE	RHODODA		E		G5	S1
RHYNCHOSPORA CAPILLACEA	CAPILLARY BEAKED RUSH		E		G5	S1
RHYNCHOSPORA SCIRPOIDES	LONGBEAKED BALDRUSH				G4	S2
RIBES GLANDULOSUM	SKUNK CURRANT		E		G5	S1.1
RUBUS CANADENSIS	SMOOTH BLACKBERRY		E		G5	S1
RUBUS SEMISETOSUS	NEW ENGLAND BLACKBERRY				G5	S3
RUDBECKIA FULGIDA	ORANGE CONEFLOWER		E		G5	S1
SAGITTARIA CUNEATA	ARUM-LEAVED ARROW HEAD		E		G5	S1
SALIX CANDIDA	HOARY WILLOW				G5	S2
SALIX LUCIDA	SHINING WILLOW				G5	S2
SALIX PEDICELLARIS	BOG WILLOW		E		G5	S1
SALIX PETIOLARIS	MEADOW WILLOW				G4	S3
SALIX SERISSIMA	AUTUMN WILLOW				G4	S2
SANICULA TRIFOLIATA	LARGE-FRUITED SANICLE		E		G4	S1
SCHUCHZERIA PALUSTRIS	ARROW-GRASS		E		G5	SH
SCHIZACHNE PURPURASCENS	SCHIZACHNE		E		G5	S1.1
SCIRPUS MICROCARPUS	BARBER POLE BULRUSH		E		G5	S1
SCIRPUS PEDICELLATUS	STALKED BULRUSH		E		G4	SH.1

SUSSEX COUNTY  
RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN  
THE NEW JERSEY NATURAL HERITAGE DATABASE

NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK
SCIRPUS TORREYI	TORREY'S BULRUSH		E		G57	S1
SCUTELLARIA LEONARDII	SMALL SKULLCAP		E		G4T4	S1
SELAGINELLA RUPESTRIS	LEDGE SPIKE-MOSS				G5	S2
SENECIO PAUPERCULUS	BALSAM RAGWORT				G5	S3
SILENE NIVEA	SNOWY CAMPION		E		G3G4	S1
SISYRINCHIUM MONTANUM	STRICT BLUE-EYED GRASS		E		G5	S1
SHILACINA TRIFOLIA	THREE-LEAVED SOLOMON'S-S-SEAL				G5	S1
SOLIDAGO RIGIDA	STIFF GOLDENROD		E		G5	S1
SPARGANIUM CHLOROCARPUM	GREEN-FRUITED BUR-REED				G5	S2
SPARGANIUM MINIMUM	SMALL BUR-REED		E		G5	S1
SPIRANTHES LUCIDA	SHINING LADIES'-TRESSES				G5	S2
SPIRANTHES OCHROLEUCA	YELLOWISH LADIES'-TRESSES				G4	S3
SPOROBOLUS ASPER	TALL DROPSEED				G5	S2
SPOROBOLUS NEGLECTUS	PUFF-SHEATHED DROPSEED		E		G5	S1
STACHYS PALUSTRIS VAR HOMOTRICHA	MARSH HEDGE-NETTLE		E		G5T7	SH
STELLARIA BOREALIS	NORTHERN STITCHWORT		E		G5	S1
STREPTOPIUS AMPLEXIFOLIUS	WHITE TWISTED-STALK		E		G5	S1
STREPTOPIUS ROSEUS	ROSY TWISTED-STALK		E		G5	S1
TAXUS CANADENSIS	AMERICAN YEW				G5	S2
THUJA OCCIDENTALIS	NORTHERN WHITE CEDAR		E		G5	S1
TIARELLA CORDIFOLIA	FOAMFLOWER		E		G5	S1
TRIADENUM FRASERI	FRASER'S ST. JOHN'S-WORT		E		G4G5	S2
TRIGLOCHIN MARITIMUM	SEA-SIDE ARROW-GRASS		E		G5	S1
TROLLIUS LAXUS SSP LAXUS	SPREADING GLOBE FLOWER	3C	E		G4T3Q	S1
UTRICULARIA GIBBA	HUMPED BLADDERWORT			LP	G5	S3
UTRICULARIA MINOR	LESSER BLADDERWORT		E		G5	S1
VERBENA SIMPLEX	NARROW-LEAVED VERVAIN		E		G5	SH

11 FEB 1994

SUSSEX COUNTY  
RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN  
THE NEW JERSEY NATURAL HERITAGE DATABASE

NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK
VIBURNUM ALNIFOLIUM	WITCH HOBBLE		E		G5	S1
VIBURNUM OPULUS VAR AMERICANUM	HIGHBUSH CRANBERRY				G5T5	S2
VICIA AMERICANA	AMERICAN PURPLE VETCH				G5	S2
VICIA CAROLINIANA	CAROLINA WOOD VETCH		E		G5	S1
VIOLA SEPTENTRIONALIS	NORTHERN BLUE VIOLET		E		G5	S1
VITIS NOVAE-ANGLIAE	NEW ENGLAND GRAPE		E		G4G5	S1
WALDSTEINIA FRAGARIOIDES	BARREN STRAWBERRY				G5	S2
XYRIS MONTANA	NORTHERN YELLOW-EYED GRASS		E		G4	S1

270 Records Processed

# Site Basic Record Code Explanations

## BIODIVERSITY SIGNIFICANCE

91/01/15

A rating that describes the significance of the site in terms of its biological diversity.

**B1** - Outstanding significance, generally of a "last of the least" type, such as only known occurrence of any element (species or natural community), the best or an excellent (A-ranked) occurrence of a G1 element, or a concentration (4+) of high-ranked (A or B ranked) occurrences of G1 or G2 elements. Site should be viable and defensible for elements and ecological processes contained.

**B2** - Very high significance, such as the most outstanding occurrence of any community element (regardless of its element rank). Also includes areas containing any other (B, C, D ranked) occurrence of a G1 element, a good (A or B ranked) occurrence of a G2 element, an excellent (A ranked) occurrence of a G3 element, or a concentration (4+) of B ranked G3 or C ranked G2 elements.

**B3** - High significance, such as any other (C or D ranked) occurrence of a G2 element, a B ranked occurrence of a G3 element, an A ranked occurrence of any community, or a concentration (4+) of A or B ranked occurrences of (G4 or G5) S1 elements.

**B4** - Moderate significance, such as a C-ranked occurrence of a G3 element, a B ranked occurrence of any community, an A or B ranked or only state (but at least C ranked) occurrence of a (G4 or G5) S1 element, an A ranked occurrence of an S2 element, or a concentration (4+) of good (B ranked) S2 or excellent (A ranked) S3 elements.

**B5** - Of general biodiversity interest or open space.

27 JUL 1994

Site Report  
ARCTIC MEADOWS

Identifiers:

SITECODE: S.USNJHP1 \* 88  
SITENAME: ARCTIC MEADOWS

Location:

COUNTYNAME: QUADNAME:  
Sussex CULVERS GAP  
NEWTON WEST

MUNICIPALITY: STILLWATER TWP.

Site Description/Design:

DESCRIPTION: Cool waters for this inland acidic seep emanate from the National Park Service property uphill to the northwest merge in a diffuse pattern on this and nearby properties. A hemlock-deciduous forest occurs around the graminoid/herb community.

BOUNDARY

JUSTIFICATION: Primary boundary corresponds to seepage area as mapped from aerial photo by Tom Breden.  
Secondary boundary follows ridgetop on upland edge and allows 350 ft. buffer on lowlands.

Site Significance:

BIODIVERSITY  
SIGNIFICANCE: B1

COMMENTS: Contains the only known example of a globally imperiled State Endangered plant species and a good example of a state imperiled wetland natural community.

Species and Natural Communities on Site:

NAME	COMMON NAME	FEDERAL STATUS:	STATE STATUS:	REGION. STATUS:	GRANK:	SRANK:	DATE OBSERVED
CLAYTONIA VIRGINICA VAR HAMMONDIAE	HAMMOND'S YELLOW SPRING B	C2	E		G5T1	S1.1	1988-05-26
INLAND ACIDIC SEEP COMMUNITY	INLAND ACIDIC SEEP COMMUN				G3?	S1	1985-06-13



27 JUL 1994

Site Report  
CRATER LAKE

Identifiers:

SITECODE: S.USNJHP1 \* 189  
SITENAME: CRATER LAKE

Location:

COUNTYNAME: QUADNAME:  
Sussex FLATBROOKVILLE

MUNICIPALITY: WALPACK TWP.  
STILLWATER TWP.

Site Description/Design:

DESCRIPTION: High elevation lake.

BOUNDARY

JUSTIFICATION: Extent of lake habitat and associated wetlands plus upland buffers.

Site Significance:

BIODIVERSITY  
SIGNIFICANCE: B5

COMMENTS: One special concern plant plus historical species.

Species and Natural Communities on Site:

NAME	COMMON NAME	FEDERAL STATUS:	STATE STATUS:	REGION. STATUS:	GRANK:	SRANK:	DATE OBSERVED
LOBELIA DORTMANNA	WATER LOBELIA		E		G4	SH	1936-08-26
NYMPHOIDES CORDATA	FLOATING HEART			LP	G5	S3	1985-08-21
RHODODENDRON CANADENSE	RHODORA		E		G5	S1	1920-05-29

27 JUL 1994

Site Report  
EMMENS STATION SITE

Identifiers:

SITECODE: S.USNJHP1 \* 222  
SITENAME: EMMENS STATION SITE

Location:

COUNTYNAME: QUADNAME:  
Sussex NEWTON WEST

MUNICIPALITY: STILLWATER TWP.  
FREDON TWP.

Site Description/Design:

DESCRIPTION: Wooded limestone hillside and meadow along stream.

BOUNDARY

JUSTIFICATION: Includes upland and wetland rare plant habitats.

Site Significance:

BIODIVERSITY  
SIGNIFICANCE: B4

COMMENTS: One state listed endangered plant and special concern plant species.

Species and Natural Communities on Site:

NAME	COMMON NAME	FEDERAL STATUS:	STATE STATUS:	REGION. STATUS:	GRANK:	SRANK:	DATE OBSERVED
HYPERICUM PROLIFICUM	SHRUBBY ST. JOHN'S-WORT		E		G5	S1	1988-06-30
WALDSTEINIA FRAGARIOIDES	BARREN STRAWBERRY				G5	S2	1988-06-30

27 JUL 1994

Site Report  
KITTATINNY CLIFFS AND TALUS

Identifiers:

SITECODE: S.USNJHP1 \* 306  
SITENAME: KITTATINNY CLIFFS AND TALUS

Location:

COUNTYNAME: QUADNAME:  
Sussex FLATBROOKVILLE

MUNICIPALITY: STILLWATER TWP.

Site Description/Design:

DESCRIPTION: Cliffs and talus slope of the Kittatinny Mountain, with a forested area of exceptionally cool microclimate at the base of the talus that can hold winter ice into the following summer.

BOUNDARY

JUSTIFICATION: Bounds drawn to include cliffs, talus slope and forests at the top of the cliff and bottom of the slope.

Site Significance:

BIODIVERSITY  
SIGNIFICANCE: B4

COMMENTS: The site contains a good example of a talus slope natural community, and several State Endangered and Threatened animal species, and State Endangered and Special Concern plant species.

Species and Natural Communities on Site:

NAME	COMMON NAME	FEDERAL STATUS:	STATE STATUS:	REGION. STATUS:	GRANK:	SRANK:	DATE OBSERVED
BETULA PAPYRIFERA	PAPER BIRCH				G5	S2	1985-05-13
CLEMATIS OCCIDENTALIS	PURPLE CLEMATIS				G5	S2	1964-06-15
CROTALUS HORRIDUS	TIMBER RATTLESNAKE		E		G5	S2	1988-08-02
NEOTOMA FLORIDANA MAGISTER	EASTERN WOODRAT	C2	E		G5T4Q	S1	1954-??-??
RIBES GLANDULOSUM	SKUNK CURRANT		E		G5	S1.1	1985-05-13
SOREX DISPAR	LONG-TAILED OR ROCK SHREW	3C	U		G5	S1	1954-??-??
TALUS SLOPE COMMUNITY	TALUS SLOPE COMMUNITY				G4?	S2S3	1985-05-13

27 JUL 1994

Site Report  
KITTATINNY MOUNTAIN MACROSITE

Identifiers:

SITECODE: S.USNJHP \* 46  
SITENAME: KITTATINNY MOUNTAIN MACROSITE

Location:

COUNTYNAME:	QUADNAME:
Sussex	FLATBROOKVILLE
Warren	BUSHKILL
	LAKE MASKENOZHA
	CULVERS GAP
	NEWTON WEST

MUNICIPALITY: WALPACK TWP.  
STILLWATER TWP.  
PAHAQUARRY TWP.  
BLAIRSTOWN TWP.  
HARDWICK TWP.

Site Description/Design:

DESCRIPTION: The site contains approximately ten miles of cliffs and talus slopes and extensive hardwood forests, hemlock ravines, and hardwood and conifer swamps. Several small camps and private residential developments are included.

BOUNDARY

JUSTIFICATION: Boundaries are drawn to include extensive patches of undeveloped forests and fields within the home range of three endangered snake denning areas.

Site Significance:

BIODIVERSITY  
SIGNIFICANCE: B5

COMMENTS: The site contains extensive forested habitat within the home range of three populations of a state endangered snake species. Several higher-ranked standard sites are found within the macrosite.

Species and Natural Communities on Site:

NAME	COMMON NAME	FEDERAL STATUS:	STATE STATUS:	REGION. STATUS:	GRANK:	SRANK:	DATE OBSERVED
CLEMMYS INSCULPTA	WOOD TURTLE		T		G4	S3	1990-07-26
CLEMMYS MUHLENBERGII	BOG TURTLE	C2	E		G3	S2	1978-05-11
CROTALUS HORRIDUS	TIMBER RATTLESNAKE		E		G5	S2	1982-06-18
CROTALUS HORRIDUS	TIMBER RATTLESNAKE		E		G5	S2	1990-04-??
CROTALUS HORRIDUS	TIMBER RATTLESNAKE		E		G5	S2	1990-06-26
EURYCEA LONGICAUDA LONGICAUDA	LONGTAIL SALAMANDER		T		G5T5	S2	1991-08-26
EURYCEA LONGICAUDA LONGICAUDA	LONGTAIL SALAMANDER		T		G5T5	S2	1991-09-10
EURYCEA LONGICAUDA LONGICAUDA	LONGTAIL SALAMANDER		T		G5T5	S2	1991-09-10
LILIUM PHILADELPHICUM	WOOD LILY				G5	S3	1985-07-07
SPIRANTHES OCHROLEUCA	YELLOWISH LADIES'-TRESSES				G4	S3	1985-09-19
SPIRANTHES OCHROLEUCA	YELLOWISH LADIES'-TRESSES				G4	S3	1985-10-03

STRIX VARIA  
STRIX VARIA

BARRED OWL  
BARRED OWL

T/T  
T/T

G5  
G5

S3  
S3

1989-04-11  
1990-05-01

27 JUL 1994

Site Report  
EMMENS STATION SITE

Identifiers:

SITECODE: S.USNJHP1 \* 222  
SITENAME: EMMENS STATION SITE

Location:

COUNTYNAME: QUADNAME:  
Sussex NEWTON WEST

MUNICIPALITY: STILLWATER TWP.  
FREDON TWP.

Site Description/Design:

DESCRIPTION: Wooded limestone hillside and meadow along stream.

BOUNDARY

JUSTIFICATION: Includes upland and wetland rare plant habitats.

Site Significance:

BIODIVERSITY  
SIGNIFICANCE: B4

COMMENTS: One state listed endangered plant and special concern plant species.

Species and Natural Communities on Site:

NAME	COMMON NAME	FEDERAL STATUS:	STATE STATUS:	REGION. STATUS:	GRANK:	SRANK:	DATE OBSERVED
HYPERICUM PROLIFICUM	SHRUBBY ST. JOHN'S-WORT		E		G5	S1	1988-06-30
WALDSTEINIA FRAGARIOIDES	BARREN STRAWBERRY				G5	S2	1988-06-30

27 JUL 1994

Site Report  
KITTATINNY CLIFFS AND TALUS

Identifiers:

SITECODE: S.USNJHP1 \* 306  
SITENAME: KITTATINNY CLIFFS AND TALUS

Location:

COUNTYNAME: QUADNAME:  
Sussex FLATBROOKVILLE

MUNICIPALITY: STILLWATER TWP.

Site Description/Design:

DESCRIPTION: Cliffs and talus slope of the Kittatinny Mountain, with a forested area of exceptionally cool microclimate at the base of the talus that can hold winter ice into the following summer.

BOUNDARY

JUSTIFICATION: Bounds drawn to include cliffs, talus slope and forests at the top of the cliff and bottom of the slope.

Site Significance:

BIODIVERSITY  
SIGNIFICANCE: B4

COMMENTS: The site contains a good example of a talus slope natural community, and several State Endangered and Threatened animal species, and State Endangered and Special Concern plant species.

Species and Natural Communities on Site:

NAME	COMMON NAME	FEDERAL STATUS:	STATE STATUS:	REGION. STATUS:	GRANK:	SRANK:	DATE OBSERVED
BETULA PAPYRIFERA	PAPER BIRCH				G5	S2	1985-05-13
CLEMATIS OCCIDENTALIS	PURPLE CLEMATIS				G5	S2	1964-06-15
CROTALUS HORRIDUS	TIMBER RATTLESNAKE		E		G5	S2	1988-08-02
NEOTOMA FLORIDANA MAGISTER	EASTERN WOODRAT	C2	E		G5T4Q	S1	1954-??-??
RIBES GLANDULOSUM	SKUNK CURRANT		E		G5	S1.1	1985-05-13
SOREX DISPAR	LONG-TAILED OR ROCK SHREW	3C	U		G5	S1	1954-??-??
TALUS SLOPE COMMUNITY	TALUS SLOPE COMMUNITY				G4?	S2S3	1985-05-13



27 JUL 1994

Site Report  
KITTATINNY MOUNTAIN MACROSITE

Identifiers:

SITECODE: S.USNJHP \* 46  
SITENAME: KITTATINNY MOUNTAIN MACROSITE

Location:

COUNTYNAME:	QUADNAME:
Sussex	FLATBROOKVILLE
Warren	BUSHKILL
	LAKE MASKENOZHA
	CULVERS GAP
	NEWTON WEST

MUNICIPALITY: WALPACK TWP.  
STILLWATER TWP.  
PAHAQUARRY TWP.  
BLAIRSTOWN TWP.  
HARDWICK TWP.

Site Description/Design:

DESCRIPTION: The site contains approximately ten miles of cliffs and talus slopes and extensive hardwood forests, hemlock ravines, and hardwood and conifer swamps. Several small camps and private residential developments are included.

BOUNDARY

JUSTIFICATION: Boundaries are drawn to include extensive patches of undeveloped forests and fields within the home range of three endangered snake denning areas.

Site Significance:

BIODIVERSITY  
SIGNIFICANCE: B5

COMMENTS: The site contains extensive forested habitat within the home range of three populations of a state endangered snake species. Several higher-ranked standard sites are found within the macrosite.

Species and Natural Communities on Site:

NAME	COMMON NAME	FEDERAL STATUS:	STATE STATUS:	REGION. STATUS:	GRANK:	SRANK:	DATE OBSERVED
CLEMMYS INSCULPTA	WOOD TURTLE		T		G4	S3	1990-07-26
CLEMMYS MUHLENBERGII	BOG TURTLE	C2	E		G3	S2	1978-05-11
CROTALUS HORRIDUS	TIMBER RATTLESNAKE		E		G5	S2	1982-06-18
CROTALUS HORRIDUS	TIMBER RATTLESNAKE		E		G5	S2	1990-04-??
CROTALUS HORRIDUS	TIMBER RATTLESNAKE		E		G5	S2	1990-06-26
EURYCEA LONGICAUDA LONGICAUDA	LONGTAIL SALAMANDER		T		G5T5	S2	1991-08-26
EURYCEA LONGICAUDA LONGICAUDA	LONGTAIL SALAMANDER		T		G5T5	S2	1991-09-10
EURYCEA LONGICAUDA LONGICAUDA	LONGTAIL SALAMANDER		T		G5T5	S2	1991-09-10
LILIUM PHILADELPHICUM	WOOD LILY				G5	S3	1985-07-07
SPIRANTHES OCHROLEUCA	YELLOWISH LADIES'-TRESSES				G4	S3	1985-09-19
SPIRANTHES OCHROLEUCA	YELLOWISH LADIES'-TRESSES				G4	S3	1985-10-03

STRIX VARIA  
STRIX VARIA

BARRED OWL  
BARRED OWL

T/T  
T/T

G5  
G5

S3  
S3

1989-04-11  
1990-05-01

27 JUL 1994

Site Report  
SHUSTER POND

Identifiers:

SITECODE: S.USNJHP1 \* 499  
SITENAME: SHUSTER POND

Location:

COUNTYNAME: QUADNAME:  
Sussex FLATBROOKVILLE  
Warren

MUNICIPALITY: STILLWATER TWP.  
HARDWICK TWP.

Site Description/Design:

DESCRIPTION: A large contiguous mature limestone forest ecosystem containing a concentration of limestone sinkholes and ponds.

BOUNDARY

JUSTIFICATION: Primary bounds include extensive mature forest area including a number of limestone sinks. Secondary bounds include additional forested and agricultural buffer. Secondary bounds generally follow roads surrounding the large contiguous forested area, and departs from the roads to avoid residential developments.

Site Significance:

BIODIVERSITY  
SIGNIFICANCE: B4

COMMENTS: The site contains good/poor quality example of a limestone forest. The forest and ponds and limestone sinks provide habitat for a number of rare and endangered plants.

Species and Natural Communities on Site:

NAME	COMMON NAME	FEDERAL STATUS:	STATE STATUS:	REGION. STATUS:	GRANK:	SRANK:	DATE OBSERVED
APLECTRUM HYEMALE	PUTTYROOT		E		G5	S1	1964-05-??
CAREX EBURNEA	EBONY SEDGE				G5	S2	1943-05-23
CAREX EBURNEA	EBONY SEDGE				G5	S2	1991-09-12
CAREX HAYDENII	CLOUD SEDGE		E		G5	S1	1986-??-??
DRY-MESIC CALCAREOUS FOREST	DRY-MESIC CALCAREOUS FORE				G3G4?	S2?	1986-??-??
SCUTELLARIA NERVOSA	VEINED SKULLCAP				G5	S2	1986-07-??

ALASMIDONTA UNDULATA	TRIANGLE FLOATER			G4	S3	????-??-??
ARMORACIA LACUSTRIS	LAKE CRESS	3C	E	G4?	SH	1884-08-19
ASTER TRADESCANTII	TRADESCANT'S ASTER			G4	S2	1988-08-11
BIDENS BECKII	WATER-MARIGOLD		E	G4G5TU	S1	1921-08-14
BOLTONIA ASTEROIDES	ASTER-LIKE BOLTONIA			G5	S2	1988-08-31
BOLTONIA ASTEROIDES	ASTER-LIKE BOLTONIA			G5	S2	1992-09-16
CAREX EBURNEA	EBONY SEDGE			G5	S2	1920-05-30
CAREX VIRIDULA	GREEN SEDGE			G5?	S2	1988-08-31
CAREX VIRIDULA	GREEN SEDGE			G5?	S2	1992-09-16
ERAGROSTIS FRANKII	FRANK'S LOVEGRASS			G5	S2	1988-08-31
EURYCEA LONGICAUDA LONGICAUDA	LONGTAIL SALAMANDER		T	G5T5	S2	1991-08-13
HYPERICUM MAJUS	LARGER CANADIAN ST. JOHN'		E	G5	S1	1992-09-16
MYRIOPHYLLUM SIBIRICUM	COMMON WATER-MILFOIL			G5	SX	1920-07-25
NELUMBO LUTEA	AMERICAN LOTUS		E	G4	S1	1988-08-11
PANICUM FLEXILE	WIRY PANIC GRASS		E	G3G5	S1	1988-09-??
POTAMOGETON ILLINOENSIS	ILLINOIS PONDWEED		E	G5	S1	1987-??-??
POTAMOGETON PRAELONGUS	WHITE-STEMMED PONDWEED		E	G5	S1	1988-08-11
POTAMOGETON ROBBINSII	ROBBIN'S PONDWEED		E	G5	S1	1920-07-25
POTAMOGETON ZOSTERIFORMIS	FLAT-STEMMED PONDWEED		E	G5	S1	1988-08-11
RANUNCULUS LONGIROSTRIS	EASTERN WHITE WATER CROWF			G5	S2	1907-07-05
RANUNCULUS TRICHOPHYLLUS	WHITE WATER BUTTERCUP			G5	S2	1921-08-14