

*township*

BYRAM

MASTER PLAN





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**BYRAM**

**Master Plan December 16, 2004**

**RAM**  
Plan



Prepared by

Heyer, Gruel and Associates  
Community Planning Consultants

63 Church Street, 2<sup>nd</sup> Floor

New Brunswick, NJ 08901

The original of this report was signed and sealed in accordance with N.J.S.A.

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Paul Gleitz P.P. #5802

Adopted by the Byram Township Land Use Board on  
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# ACKNOWLEDGEMENTS

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Lou Esposito, Jr.

Michael Walsh

Scott Olson

Tina Bologna

Chris Reiner

Donna Griff, Alternate

Margaret McGarrity, Secretary/Administrator





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### Staff Credits

Fred Heyer, Principal  
Susan Gruel, Principal  
Paul Gleitz, Project Manager  
Colleen Fitzgerald, Associate Planner  
Kyra Quinn, Associate Planner  
Michael Weitsen, Graphic Designer

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# INTRODUCTION





# BYRAM

## INTRODUCTION

### Overview of the Township

Byram Township, known as the 'Township of Lakes,' is located in northwestern New Jersey in the southeast corner of Sussex County, nestled in the heart of the New Jersey Highlands. Bordering Warren County to the southwest and Morris County to the south, the Township maintains the flavor of a rural community. Byram's easternmost boundary is Lubbers Run, which separates the Township from Hopatcong Borough. The southernmost boundary borders Stanhope Borough (Sussex County) and Mount Olive Township (Morris County). On the southwest is Allamuchy Township (Warren County); on the west and north are Green Township, Andover Borough and Andover Township; and on the north, Sparta Township.

Byram lies about 55 miles west of New York City and boasts excellent access to the regional road network. The major thoroughfares traversing the community are Interstate 80,

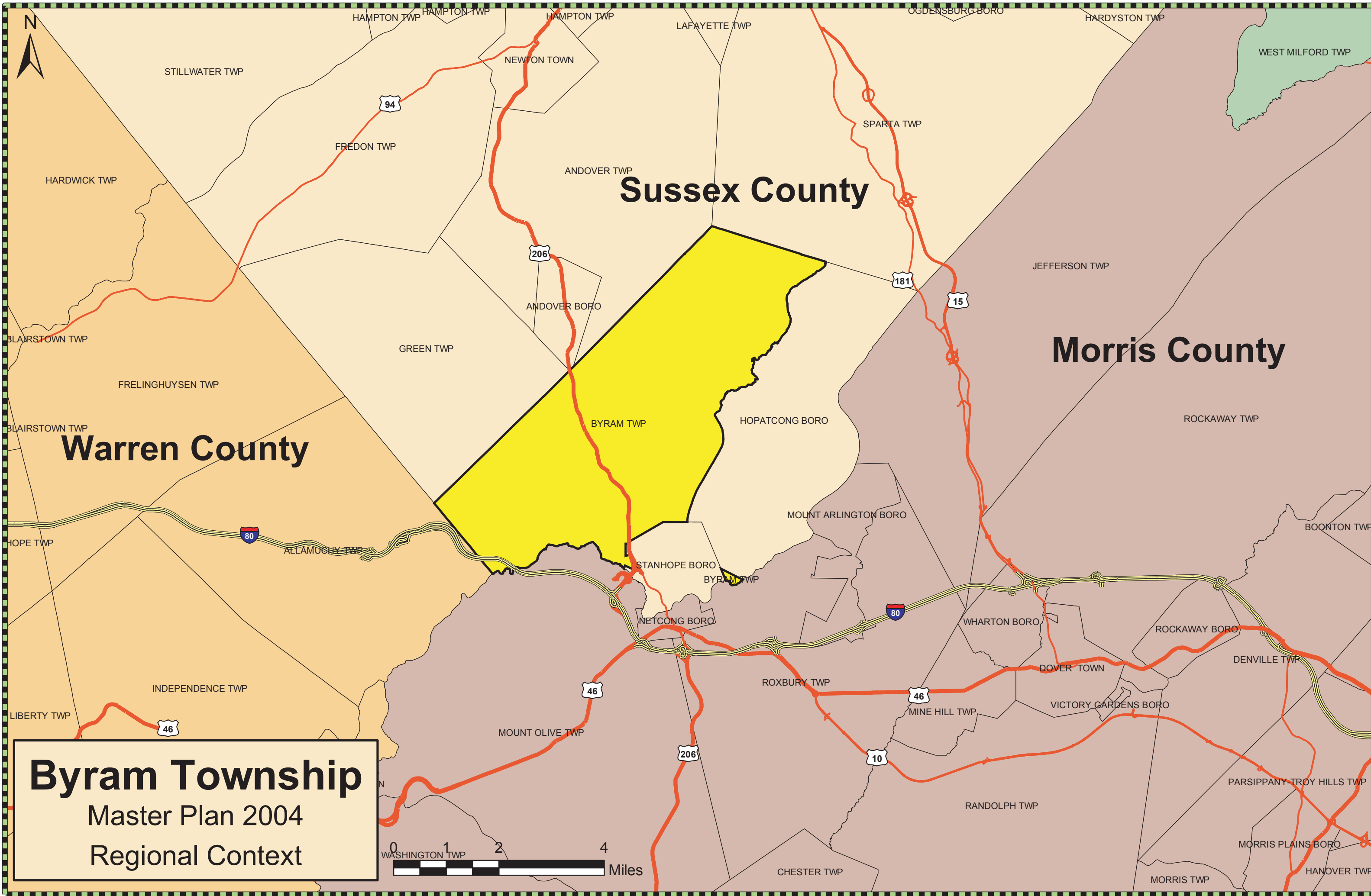


which crosses the southwestern corner of the Township, and Route 206, which bisects the Township into east and west. Route 15 runs north/south in close proximity to Byram, providing access to the eastern part of the Township near Lake Mohawk. Byram is one of the 'Gateways to Sussex County' and the New Jersey Highlands.

Containing more than two-dozen lakes and ponds, this 'Township of Lakes' finds the majority of its settlements around the larger lakes. The Township is composed of three watersheds, feeding three major regional rivers: Lake Mohawk is in the headwaters of the Wallkill River; Forest and Panther Lakes are in the headwaters of the Pequest River; and the Musconetcong River watershed comprises about 90% of the Township and, with its tributary Lubbers Run, forms the Township's southern border.







**Byram Township**  
Master Plan 2004  
Regional Context



## About the Master Plan

The overall intent of this Master Plan is to protect Byram's natural resources, preserve and enhance its natural beauty and its tight-knit neighborhoods, and maintain reasonable limits on land use by providing a Smart Growth approach to future development in the Township. This plan represents the culmination of ten years of focused efforts and active public participation in multiple planning documents.

Smart Growth can be defined as "a proposed development pattern that makes efficient use of our limited land, fully utilizes existing services and infrastructure, promotes a wide variety of transportation and housing options, absorbs and effectively serves a significant portion of the future population growth in centers, protects and enhances the architectural and environmental character of the Township through compatible, high quality, and environmentally-sensitive development practices. Inherent to this definition is the need to implement Smart Growth through comprehensive, consistent and effective policies, regulations, capital projects and incentives."

The first step in Byram's Smart Growth initiative was the 2002 Smart Growth Plan, which described the Township's Smart Growth vision and introduced the concepts of Village Center, Lake Communities, and Environs, focusing on the Village Center as the magnet for the

next decade of growth. The second step was the 2003 Lakefront Development Plan, which formulated a plan for the Township's heavily developed lakes based on current and future potential land use as well as environmental constraints at each of the Lake Communities.

The Master Plan is the final step, combining the findings and policy recommendations of the previous planning documents and focusing on the remaining section of the Township, the Environs, while incorporating citizen input and the latest information on local conditions, County initiatives, and State policies to create a comprehensive plan for Byram's future.





## Smart Growth Plan

The Smart Growth Plan presented a strategy to correct current development trends toward residential and commercial sprawl by redirecting reasonable growth to population centers and protecting rural resources and environmentally sensitive areas. By focusing new development in the Village Center, the rural landscape will remain largely intact. Limited development in the environs will occur primarily in hamlet-scaled lake communities. The Smart Growth Plan is a strategic plan with an action agenda to implement its goals and recommendations. The Plan recognizes the interrelationships between the Environs, Lake Communities and Village Center. It also addresses connections between land use, open space, environmental protection, circulation, economics, utilities and community facilities.



## Lakefront Development Plan

The Lakefront Development Plan examined six of the twenty-five lakes and ponds in the Township, where there are major residential communities. The lake communities included in the study were Cranberry Lake, Lake Lackawanna, Forest Lake, Johnson Lake, Panther Lake and Lake Mohawk. The plan's goals were to maintain the current character of development in each of these communities and to help ensure water quality in these man-made lakes. These lake neighborhoods, surrounded by environmentally sensitive and largely undeveloped lands, have established Byram's distinct land-use pattern. The Lake Communities are very identifiable neighborhoods, engendering a sense of place and neighborhood cohesion, with each lake serving as a 'hamlet' or small 'village.' From a land-use planning perspective, this design reduces land consumption and infrastructure costs, such as for water systems and roads. These lake communities are typically set within a matrix of environmentally sensitive environs where little development has occurred.







SUSSEX COUNTY, NEW JERSEY 2005 Prepared by MEYER GRUEL ASSOCIATES COMMUNITY PLANNING CONSULTANTS

## Master Plan

The Master Plan includes fifteen elements:

Introduction, Vision Statement, Goals and Objectives, Community Profile, Land Use, Conservation, Housing, Circulation, Community Facilities, Open Space and Recreation, Historic Preservation, Utility Service, Recycling, Relationship to Other Plans, and Ordinance Revisions.

This is the first new Master Plan prepared for Byram Township since 1988. Master Plan Re-examination Reports were prepared in 1996 and 2002. The Goals and Objectives in this Master Plan have been updated and revised to reflect the current issues faced by the community.





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# VISION STATEMENT







# BYRAM

## VISION STATEMENT

Byram Township is composed of three identifiable areas, the Village Center, the Lake Communities, and the Environs. The Village Center melds the natural landscape with new work places and homes, community greens, recreational amenities, and shops. The Center encourages social interaction, multiple activities, and is the focal point of the community for all of Byram's citizens to share. The Lake Communities are neighborhoods of single-family homes around lakes that provide a source of recreation, community focus, and scenic beauty. Each of these neighborhoods has a distinct identity. Surrounding these Lake Communities, in a vigorously varying topography, are the Environs—residential neighborhoods and single-family homes nestled among substantial forested areas, numerous streams, wetlands and floodplains, and extensive, contiguous wildlife habitat.





## Looking Forward: Imagine

It is the year 2025, and Byram has proven to be a model for developing rural municipalities. The Village Center is pedestrian friendly; residents and visitors enjoy the mixture of residential, retail, office, and community facilities. Restaurants and taverns provide evening entertainment and vitality. Residents of the Center enjoy essential services without having to drive. Residents of surrounding neighborhoods have pedestrian access to the Center by way of the Township's extensive trail network. All this takes place within a 'green' environment, characterized by ample open space and natural landscapes. Byram's unique system of trails links the Village Center with the Township's other neighborhoods and with schools, the municipal complex, recreation facilities, and the town-wide open space network.

The Lake Communities have remained consolidated and stable neighborhoods, surrounded by permanently preserved open space. Residents of these neighborhoods enjoy the conveniences of the Village Center, as well as the rural, quiet life of the lakes and their natural surroundings. Threats to water quality and quantity threats in the lakes and their sources have been controlled and diminished. The health of the lakes has stabilized, and the managed development

around the lakeshores has helped improve water quality. The community has retained and enhanced its rural charm and village scale, while maintaining a stable tax rate.

The Environs have been rationally developed at very low densities, preserving much of the area in a natural state and retaining large areas of contiguous woodlands. Substantial open space has been preserved, consistent with the Township's Open Space and Recreation Plan. By restricting development and fragmentation of the landscape in the environs, the impact on wildlife and the natural environment has been minimized. This retention of forestlands has proven effective at making Byram a leader in enacting the Highlands Water Protection and Planning Act, helping provide clean





and plentiful drinking water for one-half of the State's population. Byram's residents enjoy clean air, contiguous forestlands, wetlands, pristine watersheds, and local sites of historic significance, while providing recreational opportunities for people throughout the region.

Byram continues to assert reasonable controls on development within critical, environmentally sensitive areas such as surface waters, wetlands, steep slopes, and floodplains in order to minimize the adverse impact caused by the development of such areas. These controls have helped prevent or minimize erosion, siltation, flooding, surface slippage and subsidence, surface water runoff, habitat destruction and pollution of potable water supplies from point and non-point sources.

The Context Sensitive Design (CSD) process sponsored by the New Jersey Department of Transportation (NJ DOT) has proven to be a success, helping the Township achieve a 'Main Street' concept along Route 206. This collaborative, interdisciplinary approach to identifying and solving transportation problems has maximized the integration of roads into their surrounding environments and communities. Particular attention has been placed on traffic calming, pedestrian friendliness, and trail connections across Route 206 and through the Village Center. The Township has partnered with NJ DOT Capital Programming on a Route 206 access management plan that limits roadway openings and facilitates traffic flow.

Byram thrives as a community with civic areas, public services, quality education, and recreational



opportunities, and is a positive environment in which to live, work, and raise a family. The Village Center is a clearly defined residential neighborhood; and its parks, trails, and shopping streets also serve as a community hub for the entire Township. The Center's core is surrounded by a green edge, where preserved open space prevents outward sprawl. This feature enhances the Center's visual character.





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# GOALS AND OBJECTIVES





# BYRAM

## GOALS AND OBJECTIVES

### General Goals

The goals of a Township represent the long-term vision and the values held collectively by the residents of the Township. These goals are intended to address current issues in a broad perspective and set forth principles for the development of Byram.

- Retain the natural features and environmental resources that give the Township its rural character and that provide open space and recreation, protect water quality, and maintain wildlife habitat.
- Develop a Village Center that combines residential, commercial and civic spaces, creating a viable focus for carefully controlled growth and a community hub for planned activities and casual gatherings.
- Maintain the traditional character of each lake community, including preserving the environmentally sensitive and undeveloped forests surrounding these communities, which together establish Byram's distinct land use pattern.
- Establish transportation infrastructure that provides safe and easy travel through and around Byram for residents of all ages, emphasizing bike and pedestrian paths, forested rural roadways, and county and regional routes adequate for the needs of the community.
- Support and promote economic development in the Township by creating balanced opportunities for retail and service businesses, clean industries, eco-tourism, and commercial enterprises that provide jobs and maintain a viable taxable base.
- Use Smart Growth to provide a mix of housing opportunities and control the property tax burden, keeping the Township an affordable place to live for Byram's families to grow and stay, now and in the future.







## General Objectives

- Provide municipal services that meet the needs of residents.
- Minimize the impact of development on Byram's extensive forestlands, waterways, and wildlife.
- Encourage the preservation of the Township's historic and cultural resources, including scenic views, forests, ridges, waterways, and rural roadways.
- Promote recreation and eco-tourism as a means of economic development.
- Coordinate investments for roads, water and sewerage facilities, schools, transportation, and other public facilities to properly serve the Township's growth and low-growth areas.
- Enhance the visual character and beauty of Byram through the preservation of important visual corridors (including rural forested roadways), natural or native landscaping, and perpetuation of consistent architectural themes.
- Develop a Capital Improvement Plan for major projects that ensures the consistency of those projects with the Master Plan.
- Support the State Development and Redevelopment Plan and the Highlands Act, which direct carefully planned growth to Byram's Designated Village Center and call for very limited development in the remaining Environs and the Highlands Preservation Core.





## Specific Goals and Objectives

These specific goals and objectives seek to guide the development of the Township in greater detail and help develop strategies for implementing the general goals and objectives

### Land Use Goals

- Provide a balanced variety of land uses, including residential, commercial, and service uses, to promote adequate housing and economic opportunities, within the natural abilities of Byram's lands to support development.
- Ensure that development does not conflict with the orderly growth and general welfare of the county and neighboring municipalities.
- Guide land development and the location of community facilities to meet the community's needs while also preserving the natural environment.
- Create a mixed-use, pedestrian-friendly Village Center, easily accessible from neighboring residential areas, that is developed using enhanced social, environmental, economic, and aesthetic design standards to fulfill the Township's vision and meet the State Plan's goal of creating a 'Community of Place.'
- Maintain the current character of development in each lake community, surrounded by environmentally sensitive and largely undeveloped lands that establish the distinct land use pattern for the Township and ensure the basic water quality of the lakes.

### Land Use Objectives

- Locate and promote commercial development to minimize conflicts with other land uses.
- Locate and promote community support services

and commercial uses in designated areas to ensure high serviceability.

- Provide adequate land area for regional and neighborhood recreation, community services and facilities to meet future housing and population growth.
- Promote land use patterns to enhance the ratable base with a minimal or manageable burden upon local services.
- Promote land use practices and subsequent development regulations to allow for manageable and controlled growth while protecting the rural ambiance and environmental resources of the Township.
- Promote and develop neighborhood convenience and commercial centers and limit major commercial development to hub areas with regional access.
- Avoid highway 'strip' development, while redesigning existing highway 'strip' areas to meet the Township's improved design standards.
- Promote the design theme established for the Village Center as a design theme for private development and public buildings in the Township, consistent with the Township's rural character.

### Conservation Goals

- Maintain the essential rural character of the Township by guarding against degradation and destruction of woodlands, steep slopes, lakes and waterways, areas of natural beauty, critical areas, productive agricultural areas, and important historic places.
- Integrate on-site environmental features into the Village Center and maintain existing natural features in the lake communities.





- Protect environmentally sensitive lands and direct growth toward areas with existing infrastructure, designated for controlled growth, thus deterring both residential and commercial sprawl.

## Conservation Objectives

- Continue to discourage sprawl through the use of specific development regulation techniques.
- Continue to minimize site disturbance.
- Limit or prohibit the development and expansion of roads and utilities into environmentally sensitive areas.
- Protect stream corridors, wetlands, woodlands, steep slopes, groundwater recharge areas, lakes, ponds and other critical areas through the enforcement of local ordinances.
- Preserve and maintain major areas of open space. Byram's lakes and ponds and groundwater through enhanced land use controls, open space acquisitions, better stormwater management, and septic-management programs.
- Minimize the visual impact of residential, commercial, and public development projects on the natural environment.

## Housing Goals

- Provide for a mix of housing types to meet existing and future population needs.

## Housing Objectives

- Implement Byram's Fair Share Plan and Housing Element pursuant to the Fair Housing Act, to meet indigenous housing needs.

- Provide housing opportunities for senior citizens and low-moderate income families.
- Provide a balance between housing and job opportunities.

## Circulation Goals

- Establish a circulation system that supports the regional and county network and facilitates movement between various parts of the Township.
- Create pedestrian walkways, bikeways, and other pathways to enhance both the ability and desirability of walking and bicycling.
- Establish trails and greenways linking neighborhoods, schools, recreational facilities, and community facilities with the lake communities and the Village Center.
- Retain rural roadways, with forested roadside shoulders, wherever possible.
- Participate in the planning and design of all County and State transportation projects to achieve Context Sensitive Design.



## Circulation Objective

Continue to incorporate Context Sensitive Design principles into Route 206 improvements to insure adequate traffic flow, limitations on speed, pedestrian and automobile safety, access, as well as attractive roadway design and traffic calming.

- Encourage appropriate mass transportation, namely buses and shuttles, for internal and external movement that will not unduly promote development in and around Byram.
- Clearly state the Township's opposition to the Lackawanna Cut-off re-activation and ensure communication with County and State transportation officials and neighboring affected communities.
- Clearly state the Township's opposition to the County Route 605/Acorn Street extension and ensure communication with County and State transportation officials and neighboring affected communities.
- Recommend additional local road connections where



necessary for safety but not to promote development in the limited-growth areas of the Township that lie outside the Designated Village Center.

- Create open space trail linkages between all neighborhoods and destinations in Byram while connecting with regional trails and Allamuchy Mountain State Park.
- Update the official map by classifying roads according to function and by identifying all major existing and proposed rights-of-way
- Provide safe vehicular, pedestrian, and bicycle circulation by improving traffic signals at key intersections, utilizing traffic calming measures, providing adequate on and off street parking and sidewalks in appropriate locations.
- Enhance the appearance of the Township's transportation corridors and improve signage on roads and at gateway locations to facilitate circulation and identify key destinations in the Township.
- Take measures to mitigate the effects of increased regional traffic, including actively participating in municipal, County, and State planning initiatives to







control growth and sprawl in New Jersey and re-examine municipal, County, and State transportation policies.

## Community Facilities Goals

- Provide necessary public services and facilities and assure their availability to all areas of the community.

## Community Facilities Objectives

- Maintain and enhance the level of community facilities consistent with the pace of development in the Township.
- Provide for the proper placement of community and public services by concentrating them in or near denser population centers.
- Create a civic center with municipal services in the Village Center.
- Plan for the acquisition of parcels needed for future community facilities and services.



## Open Space and Recreation Goals

- Provide open space and recreation amenities to all residents throughout the Township.
- Implement the recommendations of the Open Space and Recreation Plan, the Byram Trails Plan, and the Lubbers Run Greenway Project.

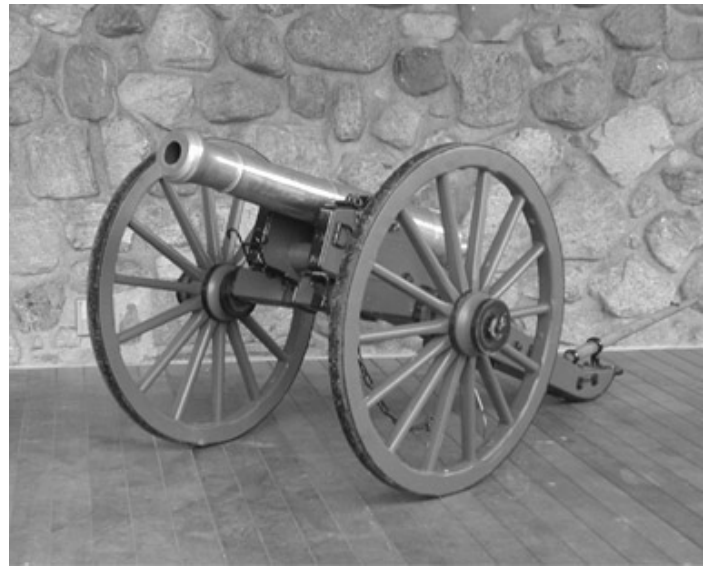
## Open Space and Recreation Objectives

- Preserve the Lubbers Run Greenway.
- Develop a town-wide trail system, as illustrated by the Byram Trails Map, the Open Space and Recreation Plan, and the Lubbers Run Greenway Project.
- Acquire, enlarge and connect protected State, municipal, and non-profit lands in the Township.
- Establish a green boundary that helps delineate the growth zone but continues to allow important connections between the Village Center and the outlying Environs.
- Use open space acquisition to protect the sources of the Township's drinking water.
- Acquire land for additional active recreation field space.
- Promote recreational opportunities for all residents, especially teenagers and senior citizens.
- Enhance the recreational opportunities through better use of current facilities.



## Historic Preservation Goals

- Encourage awareness and protection of Byram's cultural, social, and historic heritage to provide a tangible link to the past, foster a sense of place and continuity by maintaining the character of neighborhoods.
- Promote historic heritage based economic development.
- Further develop and promote the Township's identity and unity without undermining its established character.



## Historic Preservation Objectives

- Conduct a survey to identify additional properties for nomination to the State and National Registers of Historic Places.
- Create gateways to neighborhoods and recreation areas by encouraging historic facades, intensive natural or native landscaping, and redevelopment with historic designs.
- Preserve the character and special sense of place of the lake communities.





## Utility Goals

- Direct higher density development to areas currently served by utilities as a means to shape development patterns and optimally use the existing systems.

## Utility Objectives

- Preserve and maintain the existing utility infrastructure, including its sewer and storm water facilities.
- Focus development in those areas served by adequate utility systems.
- Ensure that stormwater and wastewater management is addressed in all future plans.
- Complete the revisions to the Township's wastewater management plan to reflect the actual extent of the intended sewer service area, encompassing the Designated Village Center and the existing municipal and school complexes.
- Implement the Township's stormwater management plan, as required under new NJDEP stormwater regulations.
- Maintain contact and service are information for the 11 water companies with service in the Township.

## Recycling Goals

- Continue to be a leader in the use of recycled materials throughout the community, including in parks and Township offices.
- Continue to promote recycling throughout the Township by residences and businesses.
- Incorporate energy conservation, solid waste management and recycling techniques in the Township's land development and other related ordinances and regulations.
- Incorporate 'Green Building' principles such as appropriate building siting, insulating landscaping techniques, and energy conserving heating and cooling systems in the Township's land development and other related ordinances and regulations.







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# COMMUNITY PROFILE





# BYRAM



## COMMUNITY PROFILE

### HISTORY

The ancestors of the Lenape Indians were the first inhabitants of this area, arriving in post-glacial times, perhaps as long as 11,500 years ago.

'Lenape' is generally used to refer to Native American groups who lived in and around what is now New Jersey and is most often translated as 'male,' 'our men,' or 'the ordinary people.' The Lenape are generally divided into Unami speakers, who lived in the more southern parts of New Jersey, and Munsee-speakers (both Algonquian dialects) who lived in the northern parts of New Jersey between the Raritan River and the Delaware Water Gap. 'Munsee' or 'Minsi' may be a corruption of the earlier 'Minisink' or 'Minising' and is usually translated as 'people of the stony country.'

These Native Americans have also been called the Delaware, the name given the river by the early 17<sup>th</sup> century English, after Lord De La

Warre, governor of the Virginia colony. They are also referred to as the Lenni Lenape, an unnecessary duplication of terms, translating as 'the common, ordinary people.'

By the early 1700s few Native Americans were left in this area; and, following some hostilities during the French and Indian War (1754-63), most of the remaining Lenape moved west under the terms of the Treaty of Easton (1758).

Many accounts name two Indian sites in Byram, one about a mile south of Johnson Lake on Old Indian Spring Road and a larger one just southwest of Frenche's Pond, near the current Boy Scout camp. Whether these were actually villages is in question. The Frenche's Pond site was apparently used from about 1000-1500 AD., and many arrow points have been found there. There are also said to be Indian burial grounds near Lake Lackawanna and Waterloo, although the latter is probably 18<sup>th</sup> century European and was probably







Byram's burial ground before the Lockwood Cemetery came into use. Wolf Den, a large cliff, boulder, and cave formation northwest of Cranberry Lake, is generally thought not to have been an occupied Indian site, although it may have been used as a shelter.

## Establishment of Byram Township

Sussex County was first explored by the Dutch in the 17<sup>th</sup> century; but by 1753, when the County was officially formed, there were only about 600 inhabitants.

Byram Township was established on February 5<sup>th</sup>, 1798, having been separated from the vast area that was then Newton. The name was chosen as a mark of honor to the Byram family, surveyors who had settled in the area before the Revolution. In 1798, the head of the family was Jephthah Byram, who is buried in Sparta cemetery. The Byram family homestead was located on Lackawanna Drive near Lubbers Run, now the location of the entrance to Columbia Valley Campgrounds. A brick chimney, restored by campground owner and former Township Mayor Carl O. Johnson, still marks the spot.

Between 1798 and 1957, Byram's borders changed six times, including the secession of Hopatcong in 1898 and Stanhope in 1904.

The earliest non-Indian settlements in Byram centered on iron mines and forges, particularly in the areas of town known as Roseville, Columbia, Lockwood, Waterloo (originally called Andover Forge), and Brooklyn (now Hopatcong). Most of these sites are said to have been operating before the Revolution, and many continued well into the 19<sup>th</sup> century.

## Iron Works and Mines

Most mines were open pit excavations, although some tunneling did occur. In Byram, two types of ore were removed – magnetite, a strongly magnetic, black iron oxide; and hematite, a non-magnetic, reddish-brown to black, ferric-oxide.





## The Morris Canal and Waterloo

Waterloo's most prosperous period began with the opening of the Morris Canal in 1831. The Canal was built to supply coal to the iron forges and furnaces of northwestern New Jersey and to carry iron and other products to market. Dug by hand from Phillipsburg on the Delaware River to Newark on the Passaic River, in 1836 the canal was extended to Jersey City on the Hudson. Seventy-five ton barges were pulled by mules at speeds of about two miles per hour.

Of the Canal's 102 miles, Waterloo is distinguished by having most of the canal's major features within a single mile. These include one of the Canal's 34 locks, one of its 23 inclined planes --an innovation used to raise or lower canal boats on rails (now a historical engineering site), a level section, a dammed area on the river, and a mule bridge.

After 50 years of being the main stopover on the canal and then on the railroad, a 1901 change in rail routes brought about the decline of Waterloo. The Morris

Canal, after losing traffic to the rail lines, was closed in 1924 and dismantled in 1929.

## The Waterloo Foundation For the Arts

Waterloo Village opened to the public in 1964 after being restored by the Waterloo Foundation for the Arts. Located within Allamuchy Mountain State Park, Waterloo is now one of the only true restored villages in the United States, with many buildings on original foundations.

## Railroads

While there are no railroads in Byram today, the Township was once traversed by two lines, the Lackawanna Cut-off or Mainline from New York City to Buffalo and the Sussex Branch of the Lackawanna Railroad from Port Morris in Morris County to Branchville in Sussex County.

The Cut-off was built by the Delaware, Lackawanna and Western Railroad and is still very visible, running north-south along the eastern side of Lake Lackawanna and Wolf Lake and along the western side of Roseville Pond.

The older and more local rail line was the Sussex Branch, which began in 1848 as the Sussex Mine Railroad, the first railroad in Sussex County.

## Lake Communities

The Township is known as the 'Township of Lakes.' Of its more than two dozen lakes and ponds, the largest are Cranberry, Lackawanna, Mohawk (partly in Byram,





mostly in Sparta Township), Waterloo, Kofferl, Wolf, Panther, Forest, Roseville, Jefferson, Johnson, Tomahawk, Frenche's, and Stag. During the early 1900's, three of these lakes --Cranberry, Lackawanna, and Mohawk-- became prominent seasonal resorts. Today, most lake homes have been converted to year-round residences. Many of the less-settled lakes are privately owned— Roseville, Cub, Kofferls, Wolf, Johnson, Stag, and Dallis. Two have privately-run camping or amusement facilities (Tomahawk and Panther); and Frenche's and Chemical ponds are the site of a Boy Scout camp.

## Cranberry Lake

Cranberry Lake was created in the 1830s to help supply water to the Morris Canal.

In the late 1920's, the level of Cranberry was raised three feet to its current 190 acres to provide better recreational use. The Cranberry Lake Development Company then built roads and sold lots for vacation homes. The Cranberry Lake Community Club (CLCC) was formed in 1924 and has approximately two-thirds of the lake's homeowners as its members. By 1994, about three-quarters of the 525 homes were being used year-round.

From 1902 until 1911, Cranberry Lake was the site of a popular amusement park developed by the Lackawanna Railroad, which sometimes brought a thousand people or more a weekend to the Cranberry Lake station. A 30-acre picnicking ground stood in what is now Frenche's Grove; and rowboat rentals were a popular recreation, along with fishing, sailing and regattas, dancing, and bowling.

## Lake Lackawanna

Lake Lackawanna covers 117 acres. The lake community was originally a private community on 657 acres of land surrounding the lake. There are now 306 homes in the community, and only 10 remain summer vacation homes. The Lake Lackawanna Investment Company owns about 280 acres of land surrounding the lake, including the beach and boat launch.

## Forest Lake

Created in the 1950s by the Casperson family, Forest Lake covers about 44 acres and was constructed as the center of a 300-acre year-round residential development. The number of houses has grown from approximately 50 in 1960 to approximately 400 today. Aware of the problems created by lakefront development at Cranberry Lake and Lake Hopatcong, the Casperson family reserved a green belt around the lake, unusual at the time; and this greenbelt remains today.





## Lake Mohawk

The Arthur D. Crane Company created Lake Mohawk in 1926 with developer and designer Herbert L. Cross, resulting in the largest, private artificial lake in New Jersey on 2,300 acres of what is now known as the Lake Mohawk Reservation. Lake Mohawk was one of the first planned communities in the United States, pre-dating Radburn in Fair Lawn by two years, with the first house being built in 1927 and the road around the lake being completed in 1936. Many of its buildings and attractions were placed on the National Register of Historic Places in 1988 because of their unique architecture, known as 'Lake Mohawk Tudor.' Most of the lake is in Sparta, but the neighborhoods at the west end and on part of the south shore are in Byram.

## Johnson Lake

This property was originally owned by the Colby family and developed in the 1960s. Residential development is on the eastern shore, with the rest of the shore remaining wooded in its natural state, serving as open space and a buffer to protect water quality in the lake.



## Panther Lake

Panther Lake is the least developed of the lakes. There are homes along the western shore, most of which began as cottages in the 1950s and 1960s. A campground occupies 114 acres on the eastern and southern shores. The north shore has remained naturally vegetated with a few scattered home sites.

## Streams

Of the Township's several steady and intermittent streams, the Musconetcong River and Lubbers Run are the largest and together form the Township's eastern border. Lubbers Run is Byram's longest stream and is a priority project area within the Township's Open Space Plan. An extensive system of wetlands and large and small tributaries associated with Lubbers Run traverses large portions of the Township, all along the western edge of Route 206 and including Jefferson, Cranberry, and Johnson Lakes, along Lackawanna Drive, and also including the many tributaries to Lake Lackawanna that extend to Roseville, Stag, Kofferls, and Wolf lakes. Tomahawk, Dallis, and Lackawanna are dammed portions of Lubbers Run; Lake Waterloo is a dammed portion of the Musconetcong.





## East and West Brookwoods

These two neighborhoods lie on either side of Route 206, with the East Brookwoods along the southern bank of Lubbers Run and the West Brookwoods along the Musconetcong River. A small section of homes in the same general area as the West Brookwoods but north of Waterloo Road is known as 'Lockwood' and is along the southern bank of Lubbers Run.

When first developed in the early 1950s, the West Brookwoods were known as 'Brookwood-Musconetcong River Estates.' Building lots were sold, and applications to build homes had to be approved by the Brookwood Musconetcong River Property Owners Association, established by the developer. There are now about 430 homes. In the mid-1960s, the Property Owners Association got court approval to take over the water company, when the developer went bankrupt.

The original East Brookwoods neighborhood, consisting of most of the current Brookwood Road as well as Brookwood Drive and the small streets off it, was also subdivided in the early 1950s. The East Brookwood appellation now commonly refers also to the several homes built on the more mountainous terrain above Brookwood Road, but these homes were built later by two or three successive developers. There are now about 400 homes in the original and the more recent sections of the East Brookwoods.

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*township*

**BYRAM**  
Master Plan



# DEMOGRAPHICS





# BYRAM

## DEMOGRAPHICS

### Introduction

The landmark 2000 United States Census represented the most comprehensive survey of national population and housing characteristics undertaken to date. The information gathered during the 2000 Census provides an increasingly clear picture of the population of Byram Township and how that population compares with the rest of Sussex County and New Jersey as a whole.





## Population

Byram Township's population in 1990 stood at 8,048 persons and increased by 206 persons or 2.5% to 8,254 in 2000. This is not entirely consistent with the population trends of the county and state. While the Township experienced a modest gain in its population during the decade, the county's population increased by more than 9% and the state's population increased by 8%. There is an ongoing debate at the moment regarding the accuracy of the census data counts throughout the Township for the year 2000. This has yet to be settled and may affect some of the populations totals in the area. The Lake Communities house a population of approximately 4,000 or nearly half of the Township's total. These lakes are Cranberry Lake, Forest Lake, Johnson Lake, Lake Mohawk and Lake Lackawanna.

Table I

Population Trends, 1960 to 2000									
Year	Byram Township			Sussex County			New Jersey		
	Population	Change		Population	Change		Population	Change	
		Number	Percent		Number	Percent		Number	Percent
1960	1,616	-	-	49,255	-	-	6,066,782	-	-
1970	4,592	2976	64.8	77,528	28,273	36.5	7,168,164	1,101,382	15.4
1980	7,502	2910	38.8	116,119	38,591	33.2	7,364,823	196,659	2.7
1990	8,048	546	6.8	130,943	14,824	11.3	7,730,188	365,365	4.7
2000	8,254	206	2.5	144,166	13,223	9.2	8,414,350	684,162	8.1





Table II

The municipalities adjacent to Byram Township experienced various levels population growth. Table II indicates the various population changes experienced by the adjacent municipalities from 1970 to 2000. Some of the adjacent municipalities, such as Sparta, Andover and Green Township, experienced population increases greater than Byram, Sussex County and the State over the past decade. Stanhope Borough experienced a population increase rate almost identical to Byram's in the period from 1990 to 2000. Only Hopatcong Borough experienced a population increase less than Byram, at 0.6% the population increase was nearly non-existent.

Population Change of Adjacent Municipalities			
Sparta Township			
Year	Population	Change-number	Change-%
1970	10,819	-	-
1980	13,333	2,514	23.2
1990	15,157	1,824	13.7
2000	18,080	2,923	19.3
Hopatcong Borough			
Year	Population	Change-number	Change-%
1970	9,052	-	-
1980	15,531	6,479	41.7
1990	15,796	265	1.7
2000	15,888	92	0.6
Andover Township			
Year	Population	Change-number	Change-%
1970	3,040	-	-
1980	4,506	1,466	32.5
1990	5,438	932	17.1
2000	6,178	740	12.0
Green Township			
Year	Population	Change-number	Change-%
1970	1,343	-	-
1980	2,450	1,107	45.2
1990	2,709	259	9.6
2000	3,220	511	15.9
Stanhope Borough			
Year	Population	Change-number	Change-%
1970	3,040	-	-
1980	3,638	598	16.4
1990	3,393	-245	-7.2
2000	3,484	91	2.6





## Population Composition by Age and Sex

Analysis of age group characteristics provides insight into the actual changes in the population. This comparison may be helpful when assessing the impacts these changes may have on community facilities and services.

Tables III, IV & V show the population composition by age and sex for the Borough, the County and the State for the years 1990 and 2000. Byram Township experienced some interesting shifts in age group characteristics. Pre-school numbers did not change appreciably, while grammar school numbers increase 4.6 % and high school and college age numbers dropped 16%. The number of young adults aged (25-34) and (35-44) dropped 21% and 9%, respectively. Adults (45-54) and (55-64) experienced the greatest increase in numbers in the community with 34% and 66% respectively. Seniors (65+) also increase by 21%. The County and the State also experienced the same dip in high school and college age and young adults and the same increase in grammar school numbers.

**Table III**

Population by Age and Sex, 1990 & 2000, Byram Township						
	1990		2000		Change 1990-2000	
Population	Number	Percent	Number	Percent	Number	Percent
Under 5	642	8.0	644	7.8	2	0.3
5 to 14	1,285	16.0	1,344	16.3	59	4.6
15 to 24	1,036	12.9	867	10.5	-169	-16.3
25 to 34	1,353	16.8	1,060	12.8	-293	-21.7
35 to 44	1,772	22.0	1,614	19.6	-158	-8.9
45 to 54	1,079	13.4	1,447	17.5	368	34.1
55 to 64	467	5.8	777	9.4	310	66.4
65 and over	414	5.1	501	6.1	87	21.0
<b>Total</b>	<b>8,048</b>	<b>100.0</b>	<b>8,254</b>	<b>100.0</b>	<b>206</b>	<b>2.6</b>
Male	4,057	50.4	4,098	49.6	41	1.0
Female	3,991	49.6	4,156	50.4	165	4.1



Table IV

Population by Age and Sex, 1990 & 2000, Sussex County						
	1990		2000		Change 1990-2000	
Population	Number	Percent	Number	Percent	Number	Percent
Under 5	10,894	8.3	9,815	6.8	-1,079	-9.9
5 to 14	19,925	15.2	23,876	16.6	3,951	19.8
15 to 24	16,542	12.6	15,517	10.8	-1,025	-6.2
25 to 34	23,503	17.9	17,501	12.1	-6,002	-25.5
35 to 44	24,385	18.6	27,881	19.3	3,496	14.3
45 to 54	15,206	11.6	23,384	16.2	8,178	53.8
55 to 64	8,804	6.7	13,040	9.0	4,236	48.1
65 and over	11,684	8.9	13,152	9.1	1,468	12.6
<b>Total</b>	<b>130,943</b>	<b>100.0</b>	<b>144,166</b>	<b>100.0</b>	<b>13,223</b>	<b>10.1</b>
Male	64,967	49.6	71,338	49.5	6,371	9.8
Female	65,976	50.4	72,828	50.5	6,852	10.4

Table V

Population by Age and Sex, 1990 & 2000, New Jersey						
	1990		2000		Change 1990-2000	
Population	Number	Percent	Number	Percent	Number	Percent
Under 5	532,637	6.9	563,758	6.7	31,121	5.8
5 to 14	974,027	12.6	1,195,106	14.2	221,079	22.7
15 to 24	1,071,982	13.9	1,005,295	11.9	-66,687	-6.2
25 to 34	1,360,651	17.6	1,189,040	14.1	-171,611	-12.6
35 to 44	1,196,659	15.5	1,435,106	17.1	238,447	19.9
45 to 54	843,009	10.9	1,158,898	13.8	315,889	37.5
55 to 64	719,798	9.3	753,984	9.0	34,186	4.7
65 and over	1,032,025	13.4	1,113,136	13.2	81,111	7.9
<b>Total</b>	<b>7,730,188</b>	<b>100.0</b>	<b>8,414,350</b>	<b>100.0</b>	<b>684,162</b>	<b>8.9</b>
Male	3,735,685	48.3	4,082,813	48.5	347,128	9.3
Female	3,994,503	51.7	4,331,537	51.5	337,034	8.4







## Race and Nativity

Tables VI & VII show the breakdown of population by race for the Township, the County and the State. The overwhelming majority of both the Township and the County population are identified as white. Both the Township and County list white as 95% of the total population, in contrast to 73% as the percentage of white in the state as a whole. Byram has the same mix of races as that of the County. The largest difference between the Township and the State population is that the State population is 13% African American and 13% Latino, versus 1% and 3% respectively in Byram.

Table VI

Population By Race, 2000						
Population	Byram Township		Sussex County		New Jersey	
	Number	Percent	Number	Percent	Number	Percent
Total Population	8,254	100.0	144,166	100.0	8,414,350	100.0
One Race - Total	8,164	98.9	142,516	98.9	8,200,595	97.5
White	7,905	95.8	138,015	95.7	6,104,705	72.6
African American	80	1.0	1,502	1.0	1,141,821	13.6
American Indian and Alaska Native	5	0.1	161	0.1	19,492	0.2
Asian	116	1.4	1,738	1.2	480,276	5.7
Hawaiian and pacific Islander	5	0.1	28	0.0	3,329	0.0
Other Race	53	0.6	1,072	0.7	450,972	5.4
Two or more races	90	1.1	1,650	1.1	213,755	2.5
Hispanic or Latino (of any race)	243	2.9	4,822	3.3	1,117,191	13.3



The racial composition of the Township did not change significantly from 1990 to 2000. The relative numbers of the different racial classifications did not change.

**Table VII**

Population By Race, 1990 and 2000, Byram Township						
Population	1990		2000		Change, 1990 to 2000	
	Number	Percent	Number	Percent	Number	Percent
Total Population	8,048	100.0	8,254	100.0	206	100.0
One Race - Total	8,048	100.0	8,164	98.9	116	56.3
White	7,829	97.3	7,905	95.8	76	36.9
African American	65	0.8	80	1.0	15	7.3
American Indian and Alaska Native	16	0.2	5	0.1	-11	-5.3
Asian or Pacific Islander	106	1.3	121	1.5	15	7.3
Other Race	32	0.4	53	0.6	21	10.2
Two or more races	0	0.0	90	1.1	90	43.7
Hispanic or Latino (of any race)	195	2.4	243	2.9	48	23.3



## Geographic Demographics by Block Group

The Census data is collected and processed at varying levels of refinement. The census results we have examined thus far are totaled at the Township, County and State level. The data can be divided into a geographic area known as a census tract and further divided into a block group. There are nine block groups in Byram. It should be noted that Tract 4800, Block 5 is Byram Island, a noncontiguous portion of the Township, which is surrounded by Stanhope, Hopatcong and Roxbury. The 36-acre Tract was reportedly kept by the Township to retain a foothold on Lake Musconetcong after the succession of Hopatcong Borough. Table VIII shows the breakdown of population and household information for each of the block groups in the Township. The Byram Township Block Group map shows the census tracts and block groups described in the table.

The majority of the Township's population is located near Route 206. While block groups adjacent to Route 206 contain more people than surrounding block groups, the densest areas of the Township are located in Tract 4400, Block 2 and Block 3 and Tract 4300, Block 1. Tract 4400, Blocks 2 and 3 are located adjacent to Lake Mohawk. This area of the Township is currently zoned for development on 10,000 square foot and 40,000 square foot lots. Table IX indicates housing densities as classified by Census block groups.

Table VIII

Tract	Block		Average	# of Families	Average Family Size	# of Housing Units	Vacant Housing Units	Owner Occupied Units	Renter Occupied Units	# of Acres
3742	1	923	2.54	248	3.09	501	138	324	39	3,829
3742	2	1,521	3.15	421	3.39	490	7	459	24	1,193
3743	1	1,324	2.92	386	3.18	466	13	424	29	995
3743	2	698	2.98	186	3.35	238	4	196	38	1,895
3743	3	1,663	2.96	453	3.31	586	24	528	34	1,369
3744	1	560	2.84	165	3.11	219	22	180	17	3,902
3744	2	414	2.41	125	2.81	193	21	160	12	234
3744	3	1,151	3.12	333	3.31	385	16	361	8	773
Total		8,254	2.87	2,317	3.19	3,078	245	2,632	201	14,226





Table IX

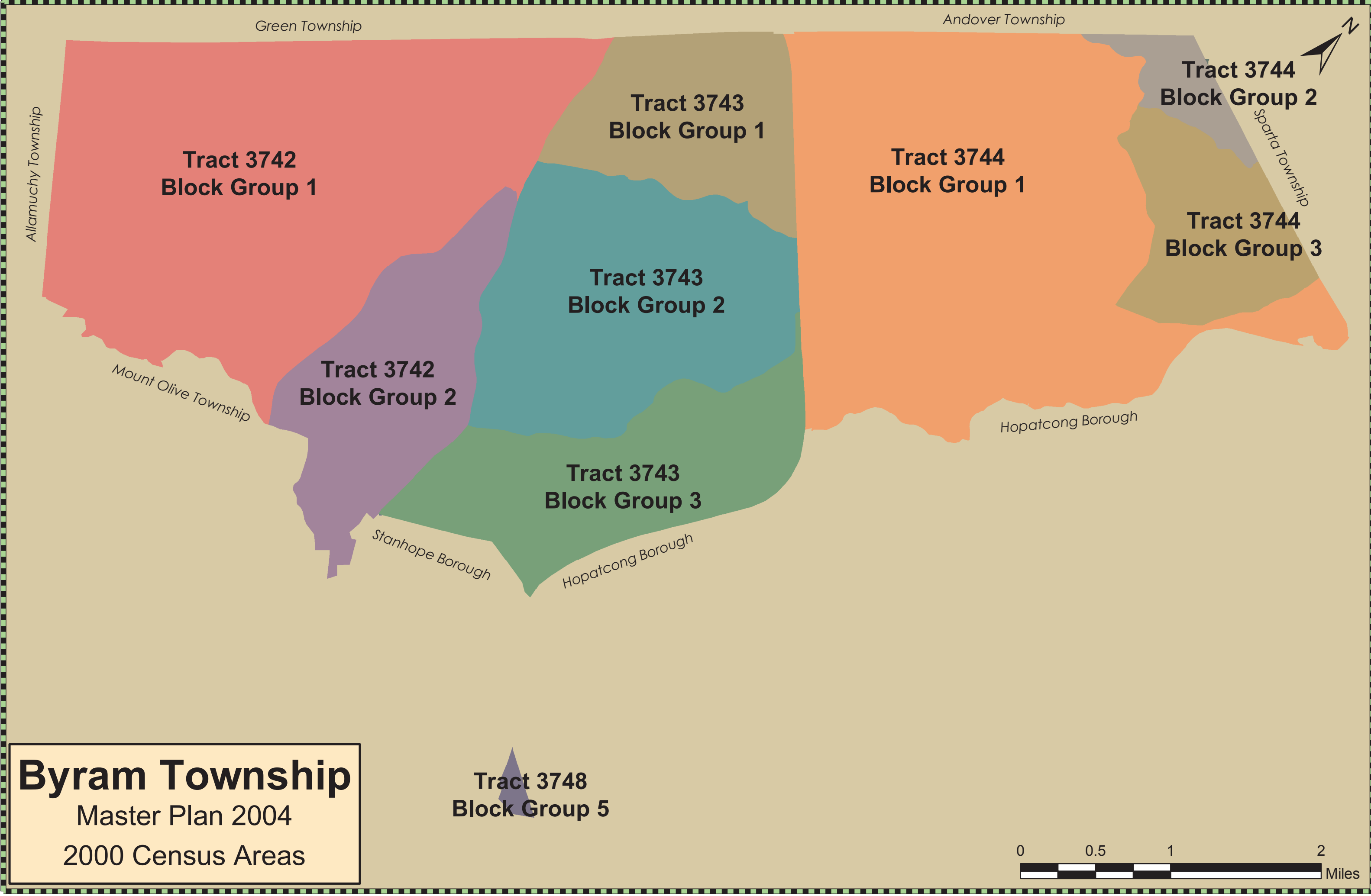
Tract	Block	Density Units per Acre
3742	1	0.13
3742	2	0.41
3743	1	0.47
3743	2	0.13
3743	3	0.43
3744	1	0.06
3744	2	0.83
3744	3	0.50

## Households

The Census uses the “household” as the basic unit for measuring housing characteristics

A household is defined as one or more persons, whether related or not, living together in a dwelling unit. In 2000, there were 2,852 households in Byram Township. The average size of a household in Byram in 2000 was 2.91 persons, slightly lower than the 1990 average size of 3.06. The average household size in Byram is slightly larger than that of Sussex County as a whole, at 2.80. The distribution of household size is relatively the same in Byram as it is in Sussex County. The greatest number of households in the Township and the County is the 2-person household. There are relatively fewer 1-person households in Byram than in the County as a whole, but the relative numbers of 3 and 4-person households are essentially the same. The least representative household type is of 6 persons or more.





**Byram Township**  
 Master Plan 2004  
 2000 Census Areas

Table X

Household Characteristics Byram Township & Sussex County 2000				
	Byram Township		Sussex County	
Household Size	Number	Percent	Number	Percent
1 person	402	14.1%	9,614	18.9%
2 person	891	31.2%	15,734	31%
3 person	613	21.5%	9,362	18.4%
4 person	605	21.2%	9,871	19.4%
5 person	284	10%	4,465	8.8%
6 or more persons	57	2%	1,785	3.5%
Total	2,852	100%	50,831	100%
Average Household Size				
1990	3.06			
2000	2.91		2.80	
Average Family Size				
1990	3.33		3.28	
2000	3.24		3.24	





As is apparent from Table XI, the distribution of types of households has also remained stable between the 1990 and 2000 census. The largest divergence in the types of households is the increase in non-family households from 1990 to 2000. There was an increase of 427 non-family households over the decade.

**Table XI**

Types of Households 1990 & 2000 Byram Township				
Type of Household	1990		2000	
	Number	Percent	Number	Percent
1-person household:	295	11.22	395	13.94
2 or more person household:	2,335	88.78	2,438	86.06
Family households:	2,246	85.40	2,317	81.79
Married-couple family:	1,993	75.78	2,064	72.86
Other family:	253	9.62	253	8.93
Non-family households:	89	3.38	121	4.27
Total:	2,630	100.00	2,833	100.00

## Income

Byram demonstrates a higher median income and per capita income compared to the state, county and surrounding communities. Table XII also illustrates that incomes have also increased in Byram and the surrounding areas between 1990 and 2000. Table XIII illustrates that Byram has a lower percentage of households earning less than \$10,000 than the County. This trend continues through households earning \$50,000 to \$74,999, with Byram having a lower percentage than the County. It is for the income brackets of \$75,000 to \$99,999 and above that Byram has a higher percentage than Sussex County.

**Table XII**

Per Capita Income, Median Household Income Byram Township, Sussex County & New Jersey 1990 & 2000				
	1990 Per Capita Income	2000 Per Capita Income	1990 Median Household Income	2000 Median Household I ncome
Township	\$19,909	\$30,710	\$56,701	\$81,532
County	\$18,566	\$26,992	\$48,823	\$65,266
State	\$18,714	\$27,006	\$40,927	\$55,146



Table XIII

Household Income Distribution 2000 Byram Township & Sussex County				
	Byram Township		Sussex County	
Income	Number of Households	Percent	Number of Households	Percent
Less than \$10,000	82	2.9%	1,967	3.9%
\$10,000 - \$14,999	16	.5%	1,589	3.1%
\$15,000 - \$24,999	111	3.9%	3,450	6.8%
\$25,000 - \$34,999	161	5.6%	3,956	7.8%
\$35,000 - \$49,000	268	9.4%	7,088	14%
\$50,000 - \$74,999	632	22.2%	11,734	23.1%
\$75,000 - \$99,999	631	22.1%	9,053	17.8%
\$100,000 - \$149,999	653	22.9%	8,014	15.8%
\$150,000 or more	298	10.4%	3,938	7.8%
Total	2,852	100%	50,789	100%

## Employment

Covered employment (jobs in the Township that are covered by unemployment insurance) in Byram has been steadily increasing in the past few years that data are available for. Over the three year period from 1997 to 1999 there was a 99% increase in covered employment. The Byram population to jobs ratio at the end of that period stood at 12.2:1.

Table XIV

Average Covered Employment 1997-1999, Byram Township			
Year	Average Number of Jobs	Annual Change	Change Percent
1997	319	**	**
1998	368	49	15.4%
1999	675	307	83.4%
Total Change 1997-1999		356	111.6%
Population to Jobs Ratio 1999-2000			
Area	2000 Population	1999 Jobs	Ratio
Byram	8,254	675	12.2

Source: NJ Department of Labor



Table XV provides comparative employment data. This is the breakdown of employment type for laborers in Byram, both inside and outside of the Township. The relative mix of employment types in Byram do not differ significantly from the mix of employment types in Sussex County. Manufacturing, as well as educational, health and social services are the largest sector of employment both locally and at the county level. Each type has around 15% and 18% respectively of the total employment of the Township and County. Byram has fewer retail trade jobs per total employment than the County, by 3 percentage points. Most other employment types differ by no more than 1% of the total.

**Table XV**

Comparative Employment Data, 2000 Byram Township and Sussex County Types of Employment held by Byram Residents inside and outside Byram Township compared to the Types of Employment held by Sussex County Residents inside and outside Sussex County				
	Byram Township		Sussex County	
	Number	Percent	Number	Percent
Employment by Occupation				
Agriculture, Forestry, Fishing, Hunting, & Mining	55	1.2%	631	0.9%
Construction	324	7.2%	6,118	8.3%
Manufacturing	753	16.8%	9,840	13.3%
Transportation, Communications, and Utilities	213	4.8%	4,077	5.5%
Information	234	5.2%	2,856	3.9%
Wholesale Trade	225	5%	3,094	4.2%
Retail Trade	442	9.9%	9,682	13.1%
Finance, Insurance, and Real Estate	300	6.7%	5,543	7.5%
Professional, scientific, management, administrative, and waste management services	493	11%	7,600	10.3%
Educational, health and social services	830	18.5%	13,819	18.7%
Arts, entertainment, recreation, accommodation and food services	186	4.2%	4,298	5.8%
Other services	156	3.5%	2,984	4%
Public administration	267	5.9%	3,362	4.5%
Total	4,478	100%	73,913	100%

Source: 2000 United States Census



*township*

**BYRAM**  
Master Plan



# LAND USE





# BYRAM

## LAND USE

The Land Use element is one of the three Master Plan elements required under the N.J. Municipal Land Use Law, in addition to Goals/Objectives and Housing. The Land Use element examines current development and sets a vision for future development.

Byram has spent years diligently working on a vision of what the Township will be like in the next 25 years. A grass-roots effort a decade ago to re-examine Byram's future led to the Smart Growth Plan of 2002, the Lakefront Development Plan of 2003, and this Master Plan. The Master Plan is designed to conclude this decade-long effort with a Land Use Plan that embraces Smart Growth, in the form of a carefully controlled Village Center growth area, improved planning in the established Lake Communities, and reduced development densities in the remaining Environs to protect the forested lands and environmentally sensitive areas.

Byram determined at the beginning of the Smart Growth planning process that achieving Village Center status for a neo-traditional, mixed-use, higher-density development built in partnership with a landowner and developer was a vital part of its Smart Growth strategy. By developing a Village Center, Byram would accomplish many different goals. The Village Center would accommodate the Township's next ten years of growth, fulfill Byram's affordable housing obligation, create a neo-traditional village-like



center unique to the Township, and provide low-cost housing so families could afford to stay in Byram for generations.

On May 19, 2004, the State Planning Commission officially recognized a Designated Village Center (Designated VC) in Byram, which includes the Village Center Zone (VC Zone) at the corner of Route 206 and Lackawanna Drive, as well as the existing commercial areas along Route 206, the ShopRite Plaza, and the lower quarry parcel on Lackawanna Drive. The State now recognizes Byram's commitment to focusing development in a higher-density center in order to accommodate the preservation of the remaining rural Environs, including the Township's forested lands and critical areas.

Under the Highlands Water Protection and Planning Act, Designated Centers are excluded from the Highlands Core Preservation Area. Except for Byram's Designated Village Center (which includes its Village Center Zone), where carefully-controlled growth will be allowed, the remainder of Byram is entirely within the Highlands Preservation Area and is subject to the land use controls and growth limitations instituted by the legislation and pursuant regulations.



## Current Land Use and Land Cover

Byram Township has a land area of approximately 22 square miles, or approximately 14,080 acres.

The 2002 tax records used to inventory land use for the Township's Smart Growth Plan puts the figure 22.24 square miles, or 14,235 acres. The GIS data used to inventory land cover for this Master Plan puts the total at 22.84 square miles, or 14,618 acres. The following chart is a summary of land uses in the Township.

Byram Land Use Summary						
Based on August 2002 Township of Byram MOD IV Electronic Tax File						
Tax Classification	# of Parcels	% of Total	Total Acreage	% of Total	Net Taxable Value	% of Total
Residential	3,112	73.2%	2,125	14.9%	\$443,381,800	87.5%
Misc. Tax Exempt	16	0.4%	822	5.8%	Exempt	N/A
Commercial	101	2.4%	334	2.3%	\$40,954,500	8.1%
Schools	3	0.1%	108	0.8%	Exempt	N/A
Unimproved Vacant Land	655	15.4%	1,325	9.3%	\$14,246,800	2.8%
Apartments	3	0.1%	1.4	0.01%	\$643,600	0.1%
Farm (regular and qualified)	155	3.6%	5,337	37.5%	\$5,480,230	1.1%
Industrial	9	0.2%	178	1.3%	\$1,877,900	0.4%
Public Property	195	4.6%	3,997	28.1%	Exempt	N/A
Churches & Charitable	3	0.1%	7.1	0.05%	Exempt	N/A
Total	4,252	100%	14,235	100%	\$506,584,830	100%





As is clear from the summary, the largest land use category within the Township in terms of acreage is 'regular' and 'qualified' farmland, which represents approximately 5,337 acres or 37.5% of total land area. The majority of these lands are managed forests, regulated by NJDEP and constrained by the presence of steep slopes, wetlands, lakes and streams, floodplains, and limestone areas. These 5,337 acres represent \$5,480,230 of total assessment or 1.1% of the total net taxable value. This percentage is low because most of these lands are enrolled in the State's farmland/woodland assessment program ('qualified farmland'), which assesses properties that remain in woodland/farmland at a small percentage of market value. 'Regular farmland' refers to farmhouses or other buildings that might accompany 'qualified' acres but that are assessed at values comparable to other properties in town; however, many of Byram's 'qualified' acres are not accompanied by any farm houses or other buildings.

Residential parcels constitute the majority in the Township. They represent 73.2% of the total number of parcels, but only 14.9% of the total land area. Apartments are an insignificant land use classification in the Township, representing only three parcels and 0.1% of net taxable value. Almost 86% of the municipal tax base is generated from residential properties.

Public property is the second largest property classification in the Township, comprising 28.1% of the Township's land area or 3,997 acres. Allamuchy Mountain State Park, at more than 3,000 acres, comprises over 20% of the Township. Another 850 acres, adjacent to the Park, are owned by the Boy

Scouts of Sussex and Morris County, placing nearly the entire southern quarter of the Township in open space protection. Approximately 3.1% of the Township's area is dedicated to commercial recreation uses, such as campgrounds, picnic grounds, recreation vehicle parks, golf courses, and amusements.

Unimproved vacant land comprises 1,325 total acres, or over 9% of the total land area. When vacant lands and farmland are combined, they total more than 6,600 acres or 47% of the Township. Under current zoning regulations, the majority of this land is zoned R-1, R-1A, or R-2 Residential, which permit development on 5-acre, 3.5-acre, and just under 1-acre lots respectively.

Industrial and commercial properties combined represent 3.6% of the total land area and 8.5% of the net taxable value of property. These commercial and industrial areas exist primarily along a small part of Route 206.

Land cover classification is an examination of the land cover classifications and their relative numbers and sizes determined by NJDEP using the 1995/1996 statewide multi-spectral digital aerial photos. The following chart is a summary of land cover types in Byram.





Allamuchy Township

Green Township

Andover Township

Sparta Township



Mount Olive Township

Hopatcong Borough

Stanhope Borough

Hopatcong Borough

# Byram Township

Master Plan 2004

2002 Aerial Photo







Byram Land Cover Summary		
Based on 1995/96 NJDEP Land Use/Land Cover		
	Acres	Percent
Residential (Single & Multi Family)	1,568	10.7%
Commercial (Retail)	90	0.6%
Industrial & Transportation & Utilities	171	1.2%
Agriculture (Crops & Plantations)	131	0.9%
Recreational Land (Public & Private)	199	1.4%
Subtotal - Developed Lands	2,159	14.8%
Mixed Forest	10,046	68.7%
Shrub & Scrub	252	1.7%
Mixed Wetlands	1,226	8.4%
Barren Lands	87	0.6%
Surface Waters (Lakes, Ponds, & Tributaries)	848	5.8%
Subtotal – Natural Lands (Inc. Open Space)	12,459	85.2%
TOTAL	14,618	100%

In contrast to the land use study, agricultural areas are not the largest land cover designation. The overwhelming majority of the Township, at 68.7%, is forest covered. Residential is the next largest designation; at 10.7% of total land cover or at 1,568 acres, this is the largest developed land classification. The discrepancy between 1,568 acres of residential land cover and 2,125 acres of residential land use is explained by the fact that many of the residential parcels in the land use study have other types of land cover on them, including forests and surface water. Industrial and commercial land cover designations total 1.8% and reflect the same minority ranking as seen in the land use study. The subtotal of developed land coverage is 2,159

acres or 14.8% of total land cover for the Township, in contrast to the 12,259 acres, or 85.2%, of natural land cover. This reinforces the assertion that the majority of development in the Township is clustered in high-density neighborhoods surrounded by largely undeveloped tracts of forestland. Key areas of undeveloped lands include the mountainous regions southeast of Lake Mohawk, areas surrounding the Lake Lackawanna and Cranberry Lake communities, and the parcels surrounding the quarry on the mountain east of Route 206.

Surface waters comprise 848 acres of the Township, or 5.8% of the total.



Green Township

Andover Township

Allamuchy Township

Sparta Township

Mount Olive Township

Hopatcong Borough

Stanhope Borough

Hopatcong Borough



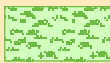



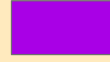
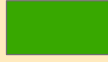

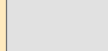
0 0.5 1 2 Miles

# Byram Township

Master Plan 2004

Land Cover 1995

## Land Cover

 Residential	 Agriculture	 Wetlands
 Commercial	 Forest	 Water
 Industr.&Other	 Shrub	
 Recreation	 Barren	



## Surface Water and Watersheds

Byram has more than 24 lakes, ponds and streams, of which 15 are major water bodies. These include Frenche's Pond, Jefferson Lake, Cranberry Lake, Lake Lackawanna, Wolf Lake, Roseville Pond, Panther Lake, Forest Lake, Kofferls Pond, Stag Pond (or Lake), Lake Mohawk, Lake Waterloo, Johnson Lake, Dallis Pond and Tomahawk Lake. These lakes and ponds occupy a total of 734 acres, or 5.6% of the total area of the Township, while total surface waters occupy 848 acres or 5.8%. These lakes and ponds are linked in three main hydrologic systems, the Musconetcong, the Pequest, and the Wallkill watersheds.

Lake Lackawanna is the only heavily settled Lake Community in the larger Lubbers Run (below Dallis Pond) watershed, which also includes Stag Pond, Kofferls Pond, Roseville Pond, and Wolf Lake. This sub-watershed encompasses nearly a third of the Township and drains into Lubbers Run, the largest tributary of

the Musconetcong River. The hydrological sub-system comprised of Stag Pond, Kofferls Pond, Roseville Pond, and Wolf Lake is a headwater of Lake Lackawanna, which is a dammed portion of Lubbers Run.

The Cranberry Lake/Jefferson Lake sub-watershed is composed of the feeder streams for Cranberry Lake, whose outlet stream joins with the outlet stream of Johnson Lake to form Dragon Brook, the tributary that fills Jefferson Lake. Jefferson Lake drains mostly to Lubbers Run and then into the Musconetcong River, although outlets on the other side of the Lake drain directly to the River.

Forest Lake and Panther Lake form the headwaters of the New Wawayanda Lake/Andover Pond sub-watershed that flows north and is part of the larger Pequest River watershed, which follows the western border of Byram Township.

Lake Mohawk, along with Hughes Pond and the surrounding uplands, are contained within the Wallkill River/Lake Mohawk (above Sparta Station) watershed. This area drains north and eventually feeds into the Wallkill River..

## Build-out Analysis

In the past few years, there have been several build-out analyses done for Byram, including those by Sussex County, the Rutgers Center for Urban Policy Research, the NJ Office of State Planning, the Musconetcong Watershed Association, as well as in-house studies for the Township's Smart Growth Plan and this Master Plan.



Green Township

Andover Township

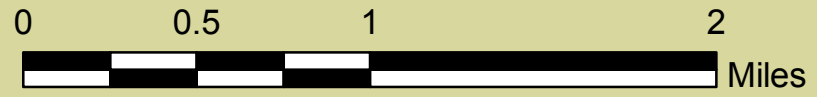
Allamuchy Township



# Byram Township

Master Plan 2004

Surface Hydrology

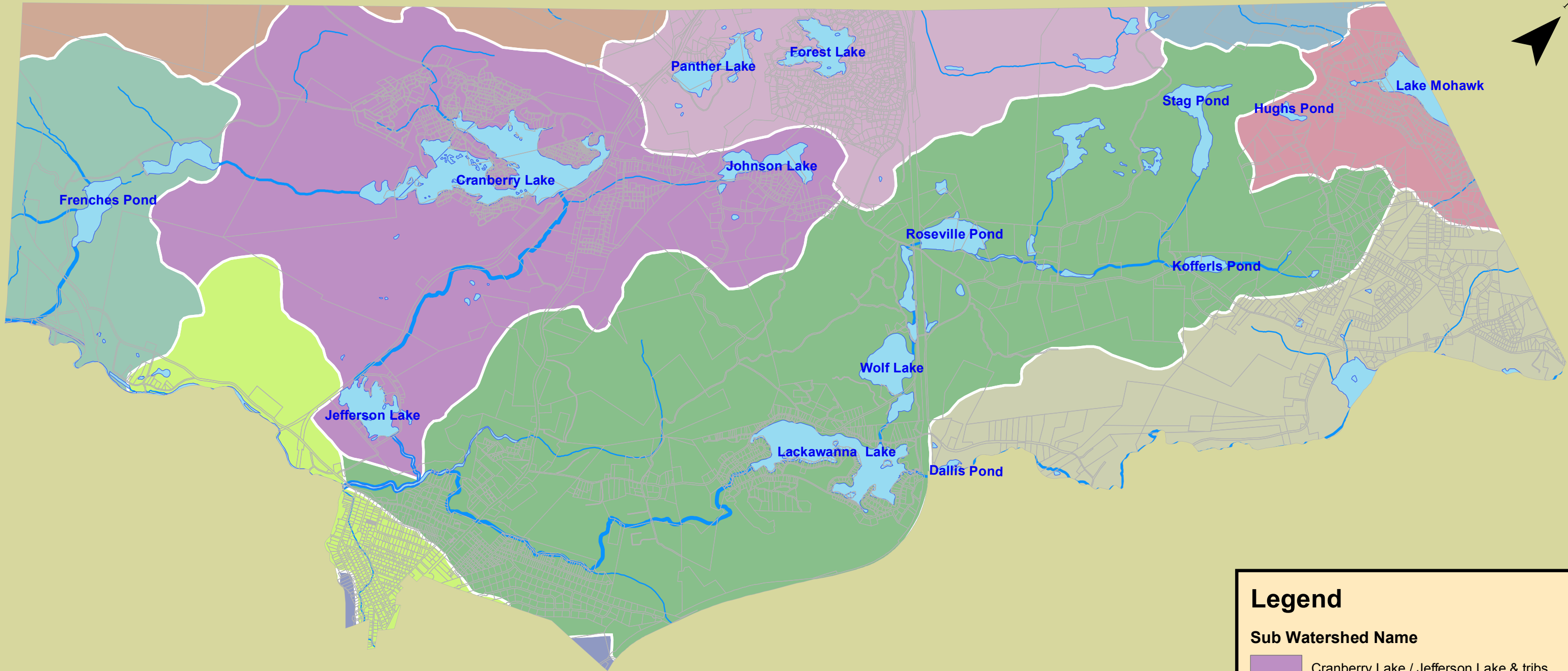


### Hydrology

**Stream Order**

- 1
- 2
- 3
- 4
- 5















# Byram Township

Master Plan 2004

Watershed Areas

## Legend

### Sub Watershed Name

-  Cranberry Lake / Jefferson Lake & tribs
-  Lake Lenape trib
-  Lubbers Run (above/incl Dallis Pond)
-  Lubbers Run (below Dallis Pond)
-  Musconetcong R (Saxton Falls to Waterloo)
-  Musconetcong R (Wills Bk to LkHopatcong)
-  Musconetcong R (Waterloo to/incl Wills Bk)
-  New Wawayanda Lake/Andover Pond trib
-  Trout Brook/Lake Tranquility
-  Wallkill R/Lake Mohawk (above Sparta Sta)



Rutgers CUPR				
Year	2000	2020	Change	%Change
Population	8254	11,109	2,855	35%
NJ Office of State Planning				
Year	2000	2,020	Change	%Change
Population	8254	27,885	19,631	238%
Sussex County				
Year	2000	Build-Out w/out DEP	Change	%Change
Population	8254	12,186	3,932	48%
		Build-Out w/ DEP	Change	%Change
		10,759	2,505	30%
Musconetcong Watershed				
Year	2000	Build-Out	Change	%Change
Population	8254	15,483	7,229	88%
Projection Based on Built Housing from 1990 to 2000				
Year	2000	2020	Change	%Change
Population	8254	9,133	879	11%
Byram 2002 Smart Growth Plan				
Year	2000	Build-Out	Change	%Change
Population	8254	21,134	12,880	156%
Byram 2004 Master Plan - Current Zoning				
Year	2000	Build-Out	Change	%Change
Population	8254	14,353	6,099	74%
Byram 2004 Master Plan - Current Proposed Zoning				
Year	2000	Build-Out	Change	%Change
Population	8254	11,618	3,364	41%

There are many techniques used to create build out analyses, and the assumptions and methodologies can lead to varying conclusions, as evidenced in these Byram analyses. The methodology used for the Smart Growth Plan in 2002 is typical and is explained below.

### 2002 Smart Growth Plan Methodology

According to the 2002 Tax District Summary, a total of 6,662 acres, or 47% of all land within Byram, is classified as either farmland or vacant. These two uses represent lands with the greatest potential for development. Since such a large portion of Byram is undeveloped, it is important to determine the Township's development potential to determine anticipated services and the sustainability of the Township at build-out. To determine the approximate number of residential units that could be constructed in the Township under existing zoning, the following methodology was used:

- All parcels with a tax classification of vacant land and farmland were evaluated for residential development potential.
- All parcels not located within residential zoning districts were removed.
- Using a Geographic Information System (GIS), data layers containing information regarding tax parcels, zoning, wetlands, floodplains, preserved open space, and water bodies, were overlain on aerial photographs.
- Using GIS, the area of land without environmental constraints was recorded for each parcel.
- The permitted residential density in each zoning district was multiplied by the net developable land to determine the number of residential units in each zoning district.
- The totals of residential units in each district were added to determine the potential residential build-out.
- The total of residential units was multiplied by 2.93 (average household size according to 2000 census) to determine the projected build-out population.



## Residential Build-out Analysis (Under Existing Zoning)

Zoning District	Total Acres	Constrained Acres	Net Developable Land (Acres)	Residential Units Per Acre	Additional Residential Units
R-1	5,642	3,440	2,202	0.20	440
R-1A	484	116	368	0.28	103
R-2	3,827	1,566	2,261	1.08	2,442
R-3	1,067	519	548	2.17	1,189
R-4	1,411	1,360	51	4.35	222
Total	12,431	7,001	5,430		4,396

- Constrained Acres include developed lands, wetlands, floodplains, preserved open space, and water bodies.
- Byram Township Persons Per Household (2000 Census) = 2.93.
- 4,396 Additional Housing Units x 2.93 = 12,880 Additional Persons.
- Total Build Out = 21,134.

According to this analysis, approximately 4,396 additional homes with a population of 12,880 additional persons is Byram's theoretical build-out under existing zoning.



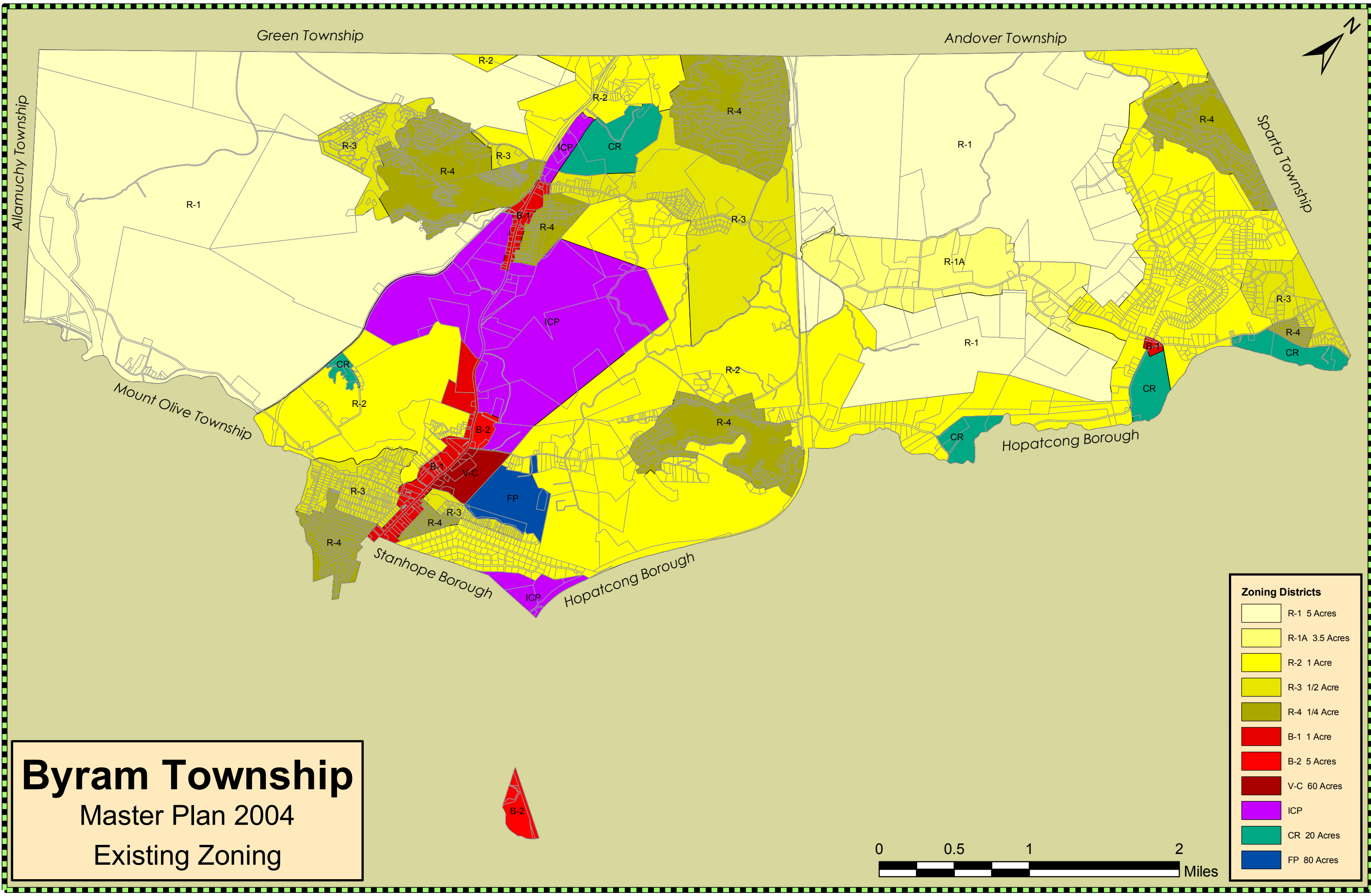


## 2004 Master Plan Build-out












The latest build-out analysis was based on different assumptions, namely an average number of housing units per acre that might be built on different lot-sizes. – This analysis assumed there would be one unit of housing per 10 acres in 10-acre density zoning, one unit per 7.5 acres in 5-acre zoning, one unit per two acres in 1-acre and 1/2-acre zones, and one unit per three acres in 1/4-acre zones. The same population multiplier of 2.93 per household was used, based on the 2000 census data for Byram. The number of schoolchildren generated by this build-out is based on the latest American Housing Survey, which recommends a multiplier of 0.8738 for four- bedroom homes in 5-acre and 10-acre zones and a multiplier of 0.7792 for three-bedroom homes in 1-acre, 1/2-acre, and 1/4-acre zones.

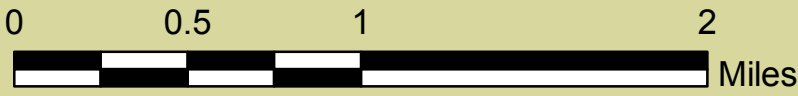
Build Out per Current Zoning						
Zoning	Zoning Density	Parcels in Zoning	Acres	Units	Population	Schoolchildren
R-1	5 acres	158	2,424.1575	303	879	265
R-1A	3.5 acres	58	391.5023	78	227	68
R-2	1 acre	491	2,282.7052	1141	3310	1465
R-3	1/2 acre	309	656.5771	328	952	421
R-4	1/4 acre	853	246.1925	82	238	105
VC	Mixed use	8	60.0000	170	493	218
			Totals	2103	6099	2543





**Byram Township**  
Master Plan 2004  
Existing Zoning

Zoning Districts	
	R-1 5 Acres
	R-1A 3.5 Acres
	R-2 1 Acre
	R-3 1/2 Acre
	R-4 1/4 Acre
	B-1 1 Acre
	B-2 5 Acres
	V-C 60 Acres
	ICP
	CR 20 Acres
	FP 80 Acres



Build Out per Current Proposed Zoning						
Zoning	Zoning Density	Parcels in Zoning	Acres	Units	Population	Schoolchildren
R-1	10 acres	234	3,607.4836	361	1046	315
R-2	5 acres	378	2,069.30	276	800	241
R-3	1 acre	301	532.2322	266	772	342
R-4	1/2 acre	433	50.4565	25	73	94
R-5	1/4 acre	541	186.3741	62	180	231
VC	Mixed use	8	60.0000	170	493	218
			Totals	1160	3364	1441
			Difference	- 943	- 2735	-1102

The build-out tables clearly illustrate the impact of changing the density of residential development in the Township. The proposed Land Use plan will create approximately 943 fewer housing units. That translates to approximately 2,735 fewer people in the Township and 1,100 fewer school children. By reducing residential density in forested areas of the Township, the need for one, if not two, additional schools is removed, lessening the burden on local taxpayers.

If current zoning remains, 2,100 new housing units could be built with more than 6,000 new people and 2,500 new schoolchildren. This type of growth will impact the Township's character, the Township's fiscal health, and critical natural resources. The effects would be substantial and not sustainable in Byram Township. Making changes to the Land Use plan now can reduce build-out by 950 homes, 2,700 new people, and 1,100 new school children and protect Byram's forestlands, water supplies, and other critical resources from damage or depletion.

The total population number for the Land Use plan contained in this Master Plan stands at 11,600, well within the range of most of the other build out analyses completed in the last few years. Rutgers CUPR produced a nearly identical build-out number of 11,000 for the year 2020. The Sussex County build-out produced two population estimates, with the build-out performed using new NJDEP septic system requirements showing a population of 10,800. The NJOSP figure of 27,900 was much higher than any other estimate and is certainly not in line with what the residents of Byram have envisioned for their community.





## LAND USE AND ZONING PLAN

Byram has decided to reduce density in its Environs, which are large areas of mostly undeveloped forestlands, characterized by steep slopes, marginal soils, wetlands, and surface water. Nearly 4,000 acres of forestlands in Byram are in public or non-profit ownership, either as Allamuchy Mountain State Park, the Sussex/Morris Allamuchy Boy Scout Camp, or Township-owned property. By placing another 5,600 acres of the Township in 5-acre and 10-acre zoning, with the application of Byram's Tract Disturbance Ordinance and clustering or lot averaging, it will be possible to preserve large areas of forestlands. This should keep development out of critical environmental areas, while allowing residential housing to develop according to the principles of Smart Growth.

This Land Use plan for Byram applies 'land density zoning' to forestlands, which allows clustered



development, concentrating housing units on smaller areas and retaining the rest of the site in its natural state. 'Land density zoning' defines the overall density of development in a zone but not minimum lot size. Thus, 10-acre 'density zoning' on a 300-acre tract would permit 30 housing units.



## Land Use Goals

- Provide a balanced variety of land uses, including residential, commercial, and service uses, to promote adequate housing and economic opportunities, within the natural abilities of Byram's lands to support development.
- Ensure that development does not conflict with the orderly growth and general welfare of the county and neighboring municipalities.
- Guide land development and the location of community facilities to meet the community's needs while also preserving the natural environment.
- Create a mixed-use, pedestrian-friendly Village Center, easily accessible from neighboring residential areas, that is developed using enhanced social, environmental, economic, and aesthetic design standards to fulfill the Township's vision and meet the State Plan's goal of creating a 'Community of Place.'
- Maintain the current character of development in each lake community, surrounded by environmentally sensitive and largely undeveloped lands that establish the distinct land use pattern for the Township and ensure the basic water quality of the lakes.





## Land Use Objectives

- Locate and promote commercial development to minimize conflicts with other land uses.
- Locate and promote community support services and commercial uses in designated areas to ensure high serviceability.
- Provide adequate land area for regional and neighborhood recreation, community services and facilities to meet future housing and population growth.
- Promote land use patterns to enhance the ratable base with a minimal or manageable burden upon local services.
- Promote land use practices and subsequent development regulations to allow for manageable and controlled growth while protecting the rural ambiance and environmental resources of the Township.
- Promote and develop neighborhood convenience and commercial centers and limit major commercial development to hub areas with regional access.
- Avoid highway 'strip' development, while redesigning existing highway 'strip' areas to meet the Township's improved design standards.
- Promote the design theme established for the Village Center as a design theme for private development and public buildings in the Township, consistent with the Township's rural character.

However, the parcel would not have to be divided into thirty 10-acre lots. Instead, the development could be built on thirty one-acre lots, preserving large undeveloped areas while allowing a reasonable number of units to the landowner/developer, saving the Township money on infrastructure and services, and preventing the kind of suburban large-lot sprawl that carves up the landscape. A traditional 10-acre lot size zoning regime would not guarantee that the 300 acre lot owner would be able to create thirty 10-acre lots, given the slopes, geology, wetlands, floodplains, and surface waters throughout the Township. But a landowner could more reasonably find 30 one-acre building sites clustered on a portion of the property.

The remaining residential areas of Byram can develop at existing or higher densities. The Lake Communities will develop at existing densities, providing that the utility infrastructure exists to accommodate that growth, or at lower densities if on-site septic systems and wells are to be used. Linking minimum lot size to the utility services available ensures public health and safety in Byram. The septic suitability of soils in Byram is 'restricted' to 'unsuitable' in most areas; but requiring adequate room for septic systems and wells, especially on lakeside lots, will help protect groundwater and surface water.

In addition to reducing residential densities in the Environs and maintaining higher densities—where reasonable—in established neighborhoods and Lake Communities, Byram also wants to create commercial land use opportunities. The Village Center (VC) Mixed Use zone (VC Zone) replaces the B-2 Shopping Center Commercial Zone and contains clearly stated goals and



objectives intended to make this VC Zone the primary focal point of new development in the form of a 'neo-traditional' community hub for the Township. The VC Zone was designated to take advantage of its central location and proximity to infrastructure to provide for carefully planned and carefully designed development, through mixed-uses and specific commercial and residential components. The intent of this district is to encourage a reasonable amount of new commercial and residential development, while still providing for open space, common greens, and civic centers that are custom-designed to accommodate the natural characteristics of the land.

The Village Business (VB) Mixed-Use zone that replaces portions of the existing B-1 Highway Commercial zone is intended to complement and be architecturally influenced by the Village Center Zone (VC Zone). The VB Zone is to take advantage of its location along the regional highway corridor and proximity to infrastructure to provide for complementary development adjacent to the Village Center, through mixed-uses, including specific commercial development and a limited number of apartment style residential units above the first floor. The VB Zone is intended to provide both vehicle and pedestrian access to commercial services from planned and existing residential neighborhoods. The bulk and design standards endeavor to transform a highway-strip commercial district into a 'neo-traditional' 'Main Street' mix of retail, office, and a limited number of upper floor apartments. The intent of this district is to encourage suitable new development and to revitalize existing commercial development along sections of the Route 206 corridor. This zone is not intended for

single-family, townhouse, or condominium residential development.

The Neighborhood Commercial Zone (NC Zone) that replaces the other portions of the existing B-1 Highway Commercial Zone is intended to maintain existing commercial enterprises and to encourage, small scale neighborhood retail and service establishments for residential neighborhoods and Lake Communities. The NC Zone is to take advantage of its location along highway corridors or its proximity to residential neighborhoods to provide controlled economic development throughout the Township and provide convenient shopping within walking or biking distance.

The Industrial Professional Recreational Zone (IPR Zone) that replaces the Industrial Commercial Professional Zone (ICP Zone) is intended to allow for the continued operation of the existing, legally non-conforming conditional use as a quarry and to encourage the development of clean industrial, professional office parks, learning enterprises, or commercial recreation/entertainment businesses with the over-riding purpose of generating a broader base of good local jobs for Byram. The quarry utilizes a large parcel with frontage on Route 206 as an active excavating and rock-crushing operation, subject to a conditional use permit granted by the Township. The quarry has retired mining operations on another parcel along Lackawanna Drive behind the Byram Plaza, and uses this area as a sale and distribution facility.

This Land Use plan advocates adjusting the boundary of the existing ICP Zone to a smaller IPR Zone that





Allamuchy Township

Green Township

Andover Township

Sparta Township



Mount Olive Township

Hopatcong Borough

Stanhope Borough

Hopatcong Borough

# Byram Township

## Master Plan 2004

### Land Use Plan



#### Zoning Districts

- R-1 10 Acres
- R-2 5 Acres
- R-3 1 Acre
- R-4 1/2 Acre
- R-5 1/4 Acre
- N-C
- V-C 60 Acres
- V-B
- IPR
- G-C
- C-R 20 Acres
- F-P 80 Acres
- OSWV



removes wetlands and a tributary to Lubbers Run from the Zone and limits future mining operations to the new IPR Zone. The remaining properties held by the quarry in the IPR Zone, not impacted by critical areas, are designated for clean industrial, professional offices, and commercial recreation. The remainder of the properties formerly within the ICP zone are rezoned R-1, 10-Acre Density Residential.

The commercial component of the original ICP has been removed to lessen competition with the proposed VC, VB, and NC Zones. The Township wants a strong commercial/retail sector as part of its local economy to maintain a stable ratable base. It also wants to function well within the regional economy, but it is imperative that the proper balance be struck between retail and other commercial uses, such as clean industrial, professional offices, and commercial recreation, and to establish a Land Use plan that promotes sustainable healthy businesses in these respective zones.

## Land Use Recommendations: Zoning Changes\*

This Land Use plan recommends several changes to the zoning map, bulk standards, and land development ordinance of the Township. The recommended zoning changes take into account the current development patterns, existing undeveloped tracts, and environmental constraints throughout Byram.

\*A note on the naming of the Residential zones. The zones have been renamed to remove the R-1A subset that was imposed by court order. There are five zones, and the names recommended in this Master Plan run from R-1 to R-5.

The existing zoning regime of the Township is:

R-1	5-acre Lot
R-1A	3.5-acre Lot
R-2	1-acre Lot (40,000 square feet)
R-3	½ -acre Lot (20,000 square feet)
R-4	¼-acre Lot (10,000 square feet)

The proposed zoning regime in the Land Use Element of this Master Plan renames the zones:

R-1	10-acre Density
R-2	5-acre Density
R-3	1-acre Lot (40,000 square feet)
R-4	½-acre Lot (20,000 square feet)
R-5	¼-acre Lot (10,000 square feet)





## NEW ZONES

### Open Space/ Waterloo Village (OS/WV)

The Township does not currently have a special zone for areas in public ownership that are not planned for any development except improvements needed for open space, historic preservation or recreation. The Township should create an Open Space/Waterloo Village Zone (OS/WV Zone) to recognize these areas, including parcels currently in permanent open space protection or those that are part of historic Waterloo Village and managed by the Waterloo Foundation for the Arts. Only areas actually in public ownership should be included in this zone, because of the highly restrictive nature of the requirements that will ensure their continued use as open space or historic village.

### Golf Course (GC)

The Township should create a Golf Course Zone (GC Zone) for those areas already developed as golf courses. This zone would recognize these areas as golf courses and limit their development potential if the current use



ceases. At this time, the GC Zone would pertain only to the Lake Lackawanna Golf Course.

### Low-Density Residential

The recommendations in this Land Use plan also include the creation of Low-Density Residential Zones. Such zoning is intended to preserve constrained lands and protect natural resources by promoting limited development. The zones proposed as Low-Density Residential will require the creation of new 10-acre Density Residential and 5-acre Density Residential districts. The new ordinance for low-density zoning will be directly based on the goals of this Master Plan.

The creation of these districts will enable the Township to eliminate inappropriate development and to protect Byram's natural resources and its built environment. The new zones will allow flexibility through 'Clustering' and 'Lot Averaging' techniques. Such techniques provide the opportunity to locate development on a site in ways that maximize the preservation of environmental features, respond to site conditions or constraints, and maintain the Township's rural character. Parts of the







Township to be included within such zones are upland areas in the Environs and lake bottoms.

### R-1 10-acre Density Residential

The new 10-Acre Density Residential Zone (R-1) is intended to preserve much of the constrained and undeveloped lands in the Township. Most of the areas currently zoned R-1 are proposed for this new designation. Several areas that now fall under the R-1A zone are also proposed to be rezoned as 10-acre low density. The new R-1 10-Acre Density Residential Zone will occur in three large areas and several smaller areas. The first large area is bounded by the Andover Township border to the west, the Lackawanna Cut-off to the south, Andover-Mohawk Road, and properties fronting on Lee Hill Road to the north, and properties fronting on Amity Road to the east. This area includes Stag Pond, several smaller ponds, and significant steep slope areas.

The second large area is bounded by properties fronting on Amity Road to the west, the Lackawanna Cut-off to the south, Sparta-Stanhope Road to the north, and the Hopatcong Borough border and properties fronting on Lackawanna Drive to the east. This area includes forested lands and significant steep slope areas.

The third large area is located south of the Lackawanna Cut-off and is surrounded by the residential areas of Lake Lackawanna to the east and Johnson Lake to the west. The zone is bounded by the Route 206 commercial corridor and the proposed IPR zone to the south. This includes Wolf Lake, forested lands, and significant steep slope areas.

## Definitions

- **Density Zoning:** Averaging residential density over an entire parcel without restriction as to lot sizes.
- **Lot Averaging:** Permitting a reduction in individual lot areas and bulk requirements, provided that the number of lots remains the same as would be permitted without lot averaging.

**Comment:** Lot averaging has proven to be an excellent and much simpler way of preserving open space than other techniques, such as transfer of development rights, which often requires the establishment of sending and receiving zones and the establishment of a transfer bank. Lot averaging is basically the same as cluster development, except that cluster development usually requires that the common open space be designated for the use and enjoyment of the residents and owners of the development and generally is owned by a homeowners association. Lot averaging also allows open space to be so designated, but also allows, for example, the open space to be permanently deed-restricted for agricultural purposes and sold to a farmer or retained by a single property owner.



The smaller areas include the lake bottoms of all privately held lakes, including Lake Lackawanna, Panther Lake, Forest Lake, Johnson Lake, Lake Mohawk, Roseville Pond, Kofferls Pond, and the privately held portions of the Cranberry Lake bottom. Their designation under the new R-1 Zone is based on the possibility that the lakes could either purposefully or catastrophically be drained by removal or failure of their dams. Numerous dams in New Jersey and the region have failed in recent years during extreme weather. The draining of these man-made lakes has created large meadow areas that are developable at their current zoning designations. This Land Use plan designates the beds of privately held lakes as the lowest density in the Township to encourage maintenance of the dams and to remove any economic incentive to drain the lakes in this 'Township of Lakes.' While this is not the only measure designed to protect the existing lakes, it is a useful land use control.

There are two remaining areas being designated within the new R-1 10-Acre Density Residential Zone. The first area is on the Stanhope Borough border and is bounded by the East Brookwoods neighborhood and the Lackawanna Cut-off, The second is on the Andover Township border and is bounded by Allamuchy Mountain State Forest and Route 206.

### R-2 5-acre Density Residential

The new R-2 5-acre Density Residential Zone is intended to provide low-density residential development opportunities in forested areas and



serve as a transition between 10-acre R-1 zones and higher density residential areas. Most of the areas proposed as R-2 5-acre Low Density Residential are currently zoned as R-1, R-2, and R-3. The new R-2 5-acre Density Residential Zone will occur in five large areas and several smaller areas. The basic extent of this new R-2 would include the lower density areas surrounding or between higher density zones in the Lake Communities.

The largest R-2 5-Acre Density Residential zone is on both sides of Amity Road from the Lackawanna Cut-off in the south to the smaller lots fronting on Lee Hill Road to the north. This area then proceeds west along Lee Hill Road and crosses the road and continues north until it reaches the higher density zoning around Lake Mohawk. The R-1 10-acre Density Residential Zone surrounds this area to the east and west. A nearby area in the R-2 5-acre Density Residential Zone is bounded by Sparta Township to the north, Andover Township to the west, Andover-Mohawk Road to the south, and the higher density zoning around Lake Mohawk to the east. The remaining portion of the of R-2 5-acre Density





Residential Zone north of the Lackawanna Cut-off is on either side of Lackawanna Drive from the Cut-off to the south and the CR Commercial Recreation Zone to the north. The area is flanked by R-1 to the west and the Hopatcong Borough border to the east.

The two largest areas south of the Lackawanna Cut-off surround Lake Communities. There is a large area of R-2 5-acre Density Residential Zone between the Cut-off and Lake Lackawanna that surrounds the large block of Township-owned open space north of Mansfield Drive. There are two smaller areas in the Lake Lackawanna vicinity. The other large area of R-2 5-acre Density Residential Zone surrounds and separates the higher density residential zoning around Johnson Lake, Panther Lake, and Forest Lake. There is a smaller, adjacent area of R-2 5-acre Density Residential Zone on the south side of Route 206 on the Andover Township border.

There are three smaller areas of R-2 5-acre Density Residential Zone surrounded by the State owned open space that lies between the Sussex Branch Trail and Route 206. These areas are on the Township's list of potential open space acquisitions, but remain in private ownership and will remain zoned for residential use until they can be acquired.

## Village Center (VC)

The Village Center Mixed-Use Zone (VC Zone) is intended to be the primary focal point of new development, in order to promote the implementation of the objectives and goals of the Township of Byram's Smart Growth Plan and to fulfill its certified COAH plan.

The VC Zone takes advantage of its central location and proximity to community amenities and infrastructure.

The primary purpose of the VC Zone is to provide for carefully planned development, through mixed-uses and specific commercial and residential components. The VC Zone is intended to provide pedestrian-oriented commercial services to future and existing residential neighborhoods, and to create a new, 'neo-traditional' 'Center' that serves as a community focus for the Township.

The intent of this zone is to encourage reasonable new development, while still providing for open space, common greens, and civic centers. The Village Center concept, through comprehensive project design, is to be the defining element for any new development. All new development proposals, as well as changes, alterations and rehabilitations to existing structures or







uses are to be subject to the standards and objectives listed in the Village Center Ordinance and the Design Guidelines developed by the Township's Architectural Review Committee, which is established under the Village Center Ordinance.

The Village Center Zone is approximately 60 acres in size and is located along Route 206. The area is bound by Route 206 to the west, Lackawanna Drive to the north, the Wild West City Theme Park to the east, and the East Brookwood neighborhood (under the current R-2, R-3, and R-4 Residential zones) to the south.

### Village Business (VB)

The Village Business (VB) Zone that replaces the southern portion of the B-1 Highway Commercial zone is intended to complement and be architecturally influenced by the primary focal point of new development in the Village Center Zone (VC Zone).

In contrast to the current B-1 Zone, the VB Zone would plan for new commercial development and promote the redesign or redevelopment of existing commercial

development to establish a more village-like downtown that invites pedestrians and bicyclists and promotes certain architectural and landscape elements. The intent is to transform the high-speed, auto-oriented thoroughfare typical of highway-strip development into a neo-traditional 'Main Street' to attract residents and visitors.

The primary purpose of the VB Zone is to provide for complementary development in proximity to the Village Center Zone, through specific commercial uses and a limited number of apartment-style residential units above the first floor. All new development, as well as any alterations to or rehabilitation of existing structures or uses shall be subject to the VC Zone Design Guidelines defined in the Village Center Ordinance and established by the Township's Architectural Review Committee. This zone is not intended for single-family, townhouse, or condominium residential development.

The VB Zone consists primarily of the parcels fronting on Route 206, starting at the Stanhope Borough border to the south, continuing north to the IPR Zone, and including the Byram Plaza.

### Neighborhood Commercial (NC)

The Neighborhood Commercial Zone (NC Zone) that replaces the other portions of the existing B-1 Highway Commercial Zone is intended to maintain existing commercial enterprises and to encourage small-scale neighborhood retail and service establishments for nearby neighborhoods. These small retail areas are aimed at allowing residents to





bike or walk for small shopping errands and avoid the inconvenience of having to drive longer distances for these quick errands.

The largest portion of the Neighborhood Commercial Zone consists of properties fronting on Route 206 from the IPR zone to the south, continuing north to the State Park-and-Ride lot at Cranberry Lake. There are four other small NC Zones proposed throughout the Township, on the Lake Lackawanna lakeshore, between Forest Lake and Johnson Lake on Roseville Road, at the intersection of Sparta-Stanhope Road and Amity Road, and in the Lake Mohawk area on Lee Hill Road.

## Industrial Professional Recreational (IPR)

The Industrial Professional Recreational Zone (IPR Zone) that replaces the Industrial Commercial Professional Zone (ICP Zone) is intended to accommodate the existing non-conforming quarry use in the less environmentally sensitive parts of the current ICP Zone area and to encourage the development of warehouses, light manufacturing, fabricating and assembly plants, printing and publishing businesses, research laboratories, and agricultural uses such as farms, horticultural uses, greenhouses and nurseries, as well as professional office parks, or commercial recreation businesses in the rest of what is now the ICP Zone, including the lower quarry site behind the Byram Plaza on Lackawanna Drive.

The bulk standards for this IPR Zone should include a very large setback requirement for industrial uses, up to 300 feet for extractive uses, to provide a forested buffer between the uses and Route 206 and Lackawanna Drive. This forested buffer area will provide a natural corridor extending from the VB Zone in the southern

portion of Route 206 to the NC Zone in the northern portion of Route 206 near Cranberry Lake. For the motorist, this natural area will create the impression of two distinct retail areas, each with its own sense of place, rather than a generic highway-strip corridor typical of sprawl development.

The IPR Zone is located on the north side on Route 206 between the VB Zone to the southeast and the NC Zone to the northwest. The zone is bounded to the north by the chain of mountain wetlands associated with the Lubbers Run tributary that flows down to and under Lackawanna Drive to join the Lubbers Run riparian corridor just north of the municipal complex



### 1-acre (40,000 square feet) Lot Zone (R-3)

The residential zone that was previously labeled R-2 is now labeled R-3 1-acre (40,000 square feet). This zone is intended to maintain existing patterns in those areas currently based on 1-acre lots. These proposed R-3 Zones are scattered throughout the Township, with four larger areas and several smaller ones.

The largest area proposed for the R-3 Zone is along the northern border with Sparta Township. The area is bound by the parcels fronting on Lee Hill Road to the south, the parcels fronting on Sparta-Stanhope Road to the east, and the proposed R-1 Zone surrounding Lake Mohawk to the west. The only other proposed R-3 Zone in this part of the Township is to the west of Lake Mohawk, north of Andover-Mohawk Road, and bounded by the proposed R-2 5-acre Density Residential Zone to the west and the R-5 ¼-acre Residential Zone surrounding Lake Mohawk to the east.

There are nine separate areas of proposed R-3 1-acre Lot Residential Zone that are in the other Lake Communities. Three surround Lake Lackawanna; one lies to the east of Johnson Lake; and five are in Cranberry Lake.

The remaining areas proposed as R-3 are in the eastern part of the Township. The largest of these is the East Brookwood neighborhood and is generally composed of the lots that front on Brookwood Road, Briar Lane, Joan Drive, Debbie Drive, and Ross Road. The second is the collection of lots that front on Lackawanna Drive, from the proposed Village Center to the south to the Neil Gylling Municipal Park north of Mansfield Drive. The final proposed R-3 Zone is a small area between Allamuchy Mountain State Park and the proposed Village Business Zone.







## 1/2-acre (20,000 square feet) Lot Zone (R-4)

The ½-acre Zone (20,000 square feet) that was previously labeled R-3 is now labeled R-4. This Zone is intended to maintain current development patterns in those areas based on ½-acre lots. The proposed R-4 Zones are scattered throughout the Township.

There are no R-4 Zones north of the Lackawanna Cut-off. There are five areas of R-4 Zone in the other Lake Communities—west of Panther Lake, west of Forest Lake, east of Johnson Lake, between Forest Lake and Johnson Lake, and in the Cranberry Lake community. In addition, there is a proposed R-4 Zone just north of the Neighborhood Commercial Zone proposed along Route 206 in the Cranberry Lake vicinity. This area can be generally described as the lots fronting on a southern portion of Tamarack Road, Little Paint Way, C.O. Johnson Drive, Maple Road, Birch Road, and Johnson Boulevard.

The remaining R-4 Zones are to be in the eastern part of the Township. The largest of these is the northern half of the West Brookwood neighborhood and is generally composed of the lots that front on Waterloo Road, Newton Avenue, Cascade Road, Sussex Street, Mayne

Avenue, Lauren Court, and Lockwood Avenue. The other R-4 Zone is in the East Brookwoods, consisting of the lots on Brookwood Drive.

## 1/4-acre (10,000 square feet) Lot Zone (R-5)

The ¼-acre (10,000 square feet) zone that was previously labeled R-4 is now labeled R-5. This Zone is intended to maintain current patterns in areas of the Township now based on ¼-acre lots. These proposed R-5 Zones are scattered throughout the Township.

There are four large R-5 concentrations in the Lake Communities, including most of the lots surrounding Lake Mohawk, Lake Lackawanna, and Forest Lake. The Cranberry Lake community also contains large areas of R-5. These Lake Community areas developed at this high density either as a legacy of seasonal cabins or as planned communities.

There are three remaining areas proposed for the R-5 Zone—north of Tomahawk Trail and east of Sparta-



Stanhope Road, not including parcels fronting on Carlson Lane; the southern half of the West Brookwood neighborhood, generally composed of lots on Broad Avenue, Robert Street, Acorn Street, Adair Street, Banker Drive, Ash Street, Beech Street, Chestnut Street, Union Street and Belton Road; and in the East Brookwoods, consisting primarily of parcels on Woods Edge Road, White Birch Road, Sand Hill Road, Wild Wood Road, Mountain Avenue, and Pleasant Hill Road.

### Commercial Recreation (CR)

There existing Commercial Recreation Zone will be kept in areas currently zoned CR and extended to all private campgrounds or recreational vehicle parks. The largest CR Zone is to be the Allamuchy Boy Scout Reservation, surrounded by Allamuchy Mountain State Park except on the southern side where it is bounded by Allamuchy Township. There are five other private campgrounds in the Township that are to be in this zone at Panther Lake, Tomahawk Lake, Columbia Valley, Jefferson Lake, and the area along Lubbers Run associated with the Hudson Farm).

### Family Theme Recreation Park (FP)

There are no proposed changes to the existing Family Theme Recreation Park. Only the Wild West City Theme Park is currently zoned FP, and there are no plans to change this use. The Wild West City FP Zone lies immediately northeast of the Village Center and is bounded by the parcels on Lackawanna Drive, Brookwood Drive, and Mansfield Drive.

## Conclusion

This Land Use Element is the culmination and implementation of 20 years of Smart Growth planning in Byram Township. The Township has decided to create a mixed-use Village Center, with complimentary commercial areas throughout Byram, and has crafted a residential land use pattern designed to strengthen existing neighborhoods and protect the forested, rural landscape that makes Byram a unique and special place to call home.

Byram is striving to define and manage the growth that will come to this 'Township of Lakes' that is a gateway to Sussex County and the New Jersey Highlands. This pro-active approach to providing affordable housing, vibrant retail areas, community amenities, and economic development will help ensure that the Township's vast open space areas will be an integral part of a growing and prosperous community.



## Revised Residential Bulk Standards

These revised residential bulk standards apply to all residential zones to the exclusion of the Village Center and should be considered universal.

Any new residential lot created by subdivision following the adoption of this Master Plan that is not serviced by central sewer must comply with the lot size requirements of the zone, except that no new lot shall be less than 40,000 square feet.

In the event that a lot fails to comply with the minimum lot size requirements of the various zone regulations of the Land Use Plan and it is contiguous with and in the same ownership as another lot, such lots shall be deemed merged and construed to be one lot for all purposes. Use thereof as other than one lot is prohibited except as may be authorized by subdivision approval.

Maximum building size is based on lot size, regardless of the zone and follows the following schedule.

Maximum Principal Building Coverage	
Lot Size	Max Coverage
< 10,000	15% (up to 1,500 sq.ft.)
Between 10,000 and 19,999	1,500 + 7% of square footage over 10,000 (up to 2,200 sq ft)
Between 20,000 and 39,999	2,200 + 5% of square footage over 20,000 (up to 3,200 sq ft)
> 40,000	3,200 + 3% of square footage over 40,000





### Proposed R-5 Zone Regulations:

- Minimum Lot Area: 10,000 square feet
- Front Yard: 35 feet
- Side Yard: 15 feet
- Rear Yard: 20 feet
- Minimum Lot Width (Frontage): 100 feet
- Maximum Lot Disturbance: 50% of lot or 10,000 square feet, whichever is more
- Maximum Height: 2.5 stories, with a 25 foot maximum building height
- Minimum Setback of Building from existing lakes, ponds, streams or wetlands: 50 feet, measured from 100-year flood line including a 10 foot wide vegetated buffer along at least 80% of water's edge

### Proposed R-3 Zone Regulations:

- Minimum Lot Area: 40,000 square feet
- Front Yard: 50 feet, 75 feet for lots in excess of 1.5 acres
- Side Yard: 20 feet
- Rear Yard: 50 feet
- Minimum Lot Width (Frontage): 150 feet
- Maximum Lot Disturbance: 50% of lot
- Maximum Height: 2.5 stories, with a 30 foot maximum building height
- Minimum Setback of Building from existing lakes, ponds, streams or wetlands: 50 feet, measured from 100-year flood line including a 10 foot wide vegetated buffer along at least 80% of water's edge

### Proposed R-4 Zone Regulations:

- Minimum Lot Area: 20,000 square feet
- Front Yard: 35 feet
- Side Yard: 15 feet
- Rear Yard: 40 feet
- Minimum Lot Width (Frontage): 100 feet
- Maximum Lot Disturbance: 50% or 20,000 square feet of lot, whichever is more
- Maximum Height: 2.5 stories, with a 25 foot maximum building height
  - Minimum Setback of Building from existing lakes, ponds, streams or wetlands: 50 feet, measured from 100-year flood line including a 10 foot wide vegetated buffer along at least 80% of water's edge

### Proposed R-2 Zone Regulations:

- Maximum Density: 1 Unit per 5 Acres
- Front Yard: 100 feet
- Side Yard: 50 feet
- Rear Yard: 75 feet
- Minimum Lot Width (Frontage): 200 feet
- Maximum Lot Disturbance: 50% of lot
- Maximum Height: 2.5 stories, with a 30 foot maximum building height
- Minimum Setback of Building from existing lakes, ponds, streams or wetlands: 75 feet, measured from 100-year flood line including a 10 foot wide vegetated buffer along at least 80% of water's edge



## Proposed R-1 Zone Regulations:

- Maximum Density: 1 Unit per 10 Acres
- Front Yard: 100 feet
- Side Yard: 50 feet
- Rear Yard: 100 feet
- Minimum Lot Width (Frontage): 200 feet
- Maximum Lot Disturbance: 50% of lot
- Maximum Height: 2.5 stories, with a 30 foot maximum building height
- Minimum Setback of Building from existing lakes, ponds, streams or wetlands: 100 feet, measured from 100-year flood line including a 10 foot wide vegetated buffer along at least 80% of water's edge

## Proposed Cluster/Lot Averaging Development Regulations in the R-1 and R-2 Zones:

- Minimum Lot Area: 40,000 square feet
- Front Yard: 50 feet, 75 feet for lots in excess of 1.5 acres
- Side Yard: 20 feet
- Rear Yard: 50 feet
- Minimum Lot Width (Frontage): 150 feet
- Maximum Lot Disturbance: 50% of lot
- Maximum Height: 2.5 stories, with a 30 foot maximum building height
- Minimum Setback of Building from existing lakes, ponds, streams or wetlands: 50 feet, measured from 100-year flood line including a 10 foot wide vegetated buffer along at least 80% of water's edge







*township*

**BYRAM**  
Master Plan



# CONSERVATION





# BYRAM

## CONSERVATION

### Environmental Constraints

The Byram Township Master Plan, Smart Growth Plan, and Natural Resources Inventory each note environmental characteristics that will influence the Township's future growth. Environmental features expected to constrain development significantly include soils, geology, steep slopes, wetlands, and flood plains.





## Soils

Byram has 23 different soils, divided into 11 major types. Data on soil depth, permeability, water table, and other physical properties are useful when determining the suitability of soils for foundation construction, location of septic fields, landscaping, and construction of roads, athletic fields and parks. Since Byram Township has a limited sanitary sewage system, the suitability of soils for septic systems is an important criterion in evaluating land use and density.

The most prevalent soils are the Rockaway series, located on Byram's ridges and steeper slopes. Most Rockaway soils are steeply sloped (15–35%). Hibernia is the second most common soil type in the Township, followed by Riverhead. Riverhead soils are sandy loams occurring in and near valleys and having slopes from 3–15%.

Approximately 70% of the Township is subject to severe limitations on septic suitability due to soils. Physical characteristics of these soils include poor percolation capacity and shallow depth to bedrock. Compounding these limitations are soils that are unsuitable because of their inclusion in wetlands and floodways, soils with high numbers of rock outcrops, and soils typified by steep slopes or a seasonal high water table. Another 15% of the Township is subject to moderate/severe limitations on septic suitability. The remainder of the Township is subject to moderate or slight limitations.





## Soil Types In Byram

Ar	Alluvial Land, Wet	Severe limitations for foundations for dwellings w/ or w/out basements, septic tank absorption fields, sewage lagoons, sanitary landfills, roads & trails, golf courses, etc. due to seasonal high water table at surface, subject to frequent flooding.
Ca	Carlisle Muck	Severe limitations for foundations for dwellings w/ or w/out basements, septic tank absorption fields, sewage lagoons, sanitary landfills, roads & trails, golf courses, etc. due to seasonal high water table at surface frequent flooding and severe subsidence.
HnB	Hibernia Very Stony Loam, 3-8% Slope.	Moderate limitations for foundations for dwellings w/out basements and trails. Severe limitations for foundations for dwellings w/ basements, septic tank absorption fields, sewage lagoons, sanitary landfills, golf courses and roads due to seasonal high water table at depth of 0.5 to 1.5 feet.
HnD	Hibernia Very Stony Loam, 8-25% Slope	Moderate limitations for foundations for dwellings w/out basements and trails. Severe limitations for foundations for dwellings w/ basements, septic tank absorption fields, sewage lagoons, sanitary landfills, roads, golf courses, etc. due to seasonal high water table perched at depth of 0.5 to 1.5 feet and excessive stone content.
Ma	Man Made Sanitary Landfill	Material too variable; onsite investigation required.
OtC	Otisville Gravelly Loamy Sand, 3-15% Slopes.	Slight limitations for foundations for dwellings w/ or w/out basements, septic tank absorption fields, trails and roads if slopes are 3-8%. Moderate limitations for foundations for dwellings w/ or w/out basements, septic tank absorption fields, trails and roads if slopes are 8-15%. Severe limitations for sewage lagoons, sanitary landfills, golf courses, etc. due to rapid permeability of soil and surface texture.
OtD	Otisville Gravelly Loamy Sand, 15-33% Slopes	Severe limitations for foundations for dwellings w/ or w/out basements, septic tank absorption fields, sewage lagoons, sanitary landfills, roads & trails, golf courses, etc. due to very steep slope.
Pt	Pits, Sand and Gravel	Material too variable; onsite investigation required.



PvA	Pompton Fine Sandy Loam, 0-3% Slopes	Moderate limitations for foundations for dwellings w/out basements, golf courses and trails. Severe limitations for foundations for dwellings w/ basements, septic tank absorption fields, sewage lagoons, sanitary landfills, and roads due to seasonal high water table at depth of 1 to 2 feet.
Pw	Preakness Sandy Loam	Severe limitations for foundations for dwellings w/ or w/out basements, septic tank absorption fields, sewage lagoons, sanitary landfills, roads & trails, golf courses, etc. due to seasonal high water table at surface, subject to occasional stream overflow.
RhB	Riverhead Sandy Loam, 3-8% Slope	Slight limitations for foundations for dwellings w/ or w/out basements, septic tank absorption fields, roads & trails, golf courses, etc. but groundwater pollution hazard is possible due to rapid permeability in substratum. Severe limitations for sewage lagoons and sanitary landfills due to rapid permeability in substratum and groundwater pollution hazard.
RhC	Riverhead Sandy Loam, 15-33% Slope	Moderate limitations for foundations for dwellings w/out basements, septic tank absorption fields, and roads golf courses and trails if slopes are 8-15%. Severe limitations for foundations for dwellings w/ basements, septic tank absorption fields, sewage lagoons, sanitary landfills if slopes are 15-33%..
RoB	Rockaway Gravelly Loam, 3-8% Slopes	Slight limitations for foundations for dwellings w/ or w/out basements, golf courses and trails. Moderate limitations for septic tank absorption fields, sewage lagoons and roads. Severe limitations for sanitary landfills due to effects of fragipan.
RoC	Rockaway Gravelly Loam, 8-15% Slopes	Moderate limitations for dwellings w/ or w/out basements, septic tank absorption fields, sewage lagoons. Severe limitations for sewage lagoons, sanitary landfills, golf courses and roads & trails due to effects of fragipan.
RoD	Rockaway Gravelly Loam, 15-25% Slopes	Severe limitations for foundations for dwellings w/ or w/out basements, septic tank absorption fields, sewage lagoons, sanitary landfills, roads & trails, golf courses, etc. due to very steep slopes.

RpD	Rockaway - Very Stony Loam, 5-25% Slope	Moderate limitations for foundations for dwellings w/ or w/out basements, septic tank absorption fields and roads & trails due to seasonal high water table perched over fragipan and high stone content. Severe limitations for sewage lagoons, sanitary landfills, golf courses, etc. and all uses (see above) in steep (15-20%) slope areas due to steep slopes and stony soil.
RpE	Rockaway very stony loam, 25-40% slopes	Severe limitations for foundations for dwellings w/ or w/out basements, septic tank absorption fields, sewage lagoons, sanitary landfills, roads & trails, golf courses, etc. due to very steep slopes.
RrD	Rockaway-Rock Outcrop Association, Sloping & Moderately Steep.	Consists of deep, moderately well-drained and well-drained soils on uplands. Very stony or extremely stony sandy loam surface layer 4 inches thick. Subsoil 4 to 22 inches gravelly sandy loam. Fragipan 22 to 38 inches gravelly sandy loam.
RvE	Rock Outcrop – Rockaway Association, Steep.	Severe limitations for foundations for dwellings w/ or w/out basements, septic tank absorption fields, sewage lagoons, sanitary landfills, roads & trails, golf courses, etc. due to bedrock outcrops and stony soil.
Sp	Swamp	Material too variable; onsite investigation required
WnD	Wassaic – Rock Outcrop Association, Moderately Steep	Severe limitations for foundations for dwellings w/ or w/out basements, septic tank absorption fields, sewage lagoons, sanitary landfills, roads & trails, golf courses, etc. due to bedrock outcrops and steep slopes.
Wo	Whitman Extremely Stony Sandy Loam.	Severe limitations for foundations for dwellings w/ or w/out basements, septic tank absorption fields, sewage lagoons, sanitary landfills, roads & trails, golf courses, etc. due to seasonal high water table at surface.
Wic	Washington Wassaic Complex, 3-15% slopes	Moderate limitations for foundations for dwellings w/ or w/out basements, septic tank absorption fields, golf courses and roads & trails due to steep slopes. Severe limitations for sewage lagoons, sanitary landfills due to steep slopes.





Green Township

Andover Township



Allamuchy Township

Sparta Township

Mount Olive Township

Hopatcong Borough

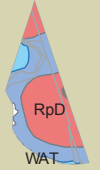
Stanhope Borough

Hopatcong Borough

# Byram Township

## Master Plan 2004

### Soils



#### Soil Types

	CcB		Pw
	Ck		RhB
	CsB		RhC
	EPD		RoB
	EeC		RoC
	HfC		RoD
	LzB		RpD
	RRE		RpE
	RcD		RrD
	Wat		RvE
	Ar		Sp
	Ca		WAT
	HmB		WIC
	HnB		WnD
	HnD		Wo
	Ma		
	OtC		
	OtD		
	Pt		
	PvA		



## Geology

The bedrock geology of Byram Township is varied, but crystalline gneissic and granitic rocks underlie most of the Township. With the exception of the Leithsville formation of dolomite and areas of deep glacial deposit, the Township's bedrock is relatively impervious and produces poor to moderate yields of underground drinking water. Available drinking water is found in infrequent fissures and fractures.

The surficial geology of Byram is predominantly glacial till, a result of the Wisconsin glacier's terminal moraine lying just south of Byram. Some valleys have stratified drift deposits, and moraine deposits can be found along the Musconetcong River. Swamp and stream deposits are found throughout the Township.

## Steep Slopes

For the purpose of this Master Plan, steep slopes are defined as ranging from 15 to 25% and critical slopes as more than 25%. The Steep Slope maps reveal that a considerable percentage of the township is covered by steep and critical slopes. Steep slopes cover 3,269 acres or approximately 22% of the Township and critical slopes cover another 2,231 acres of approximately 15% of the Township resulting in 5,500 acres and 37% of the Township with slopes in excess of 15%.

Disturbance to steep and critical slopes can affect plant life and drainage patterns, increase the amount and speed of runoff, and can cause erosion, soil creep, slumping (sections of soil shifting down and outward on the slope), and landslides.

Runoff carries eroded sediments to lowland areas and to wetlands, ponds, lakes and streams, where the resulting turbidity and siltation can damage or destroy aquatic life and disrupt the ability of wetlands to filter and purify water. This combination of increased runoff and siltation affects the ability of streams and wetlands to retain water, changing the pattern and rate of the water's rise and fall and causing increased flooding. Turbidity and siltation also contribute to the eutrophication process in lakes, speeding the natural aging process.

Dramatic runoff problems often result when slopes are covered with impervious surfaces, such as buildings, roads, driveways, and parking lots. Since water can't percolate into the soil, it runs off the site, picking up speed as it travels across these surfaces. This high velocity runoff erodes surrounding soils, carrying increased amounts of silt into nearby surface waters. Even altering the vegetation on slopes, removing trees and ground cover can significantly alter the runoff characteristics of an area. Any type of disturbance in steep slope areas creates increased runoff, erosion and siltation.





In addition to the obvious problems of runoff, erosion and landslides, altering the soils or vegetation on slopes may also reduce the percolation of water into the soil and disrupt the recharge of groundwater and aquifers. Aquifers in areas of steep bedrock, as in parts of northern New Jersey, do not contain much water. Poorly designed or excessive development that disrupts aquifer recharge, while increasing the demand for water for human consumption, can result in periodic or permanent water shortages. Aquifers can be damaged by the heavy road salting typical in hilly areas and from septic installation on slopes, where soils are thin or otherwise unsuitable for leach fields. In such areas, septic effluent may seep out on the face of the hillside.

Byram Township is mountainous, traversed by ridgelines and valleys, with its highest elevations distributed mostly in the southwest and northeast

regions. Portions of the Township's central and west central area are strewn with steep slopes. Five major ridgeline areas occur in the Township. The first ridge runs along the Lackawanna Cut-off and rises to three prominent peaks of 1,096 feet, 1,120 feet, and 1,165 feet above mean sea level (MSL). The second ridge runs between Amity and Sparta-Stanhope Road (Rt. 605), reaching a height of 1,220 feet above MSL. The third ridge runs east of Lackawanna Drive to just north of Tamarack Road, forming a plateau about 1,000 feet above MSL. The fourth and fifth ridges rise above the stream connecting Frenches Pond and Cranberry Lake in the western portion of the township, rising to 1,070 feet and 1,063 feet above MSL.

Byram Township has a Tract Disturbance Ordinance to provide for reasonable control of development within critical areas (surface waters, wetlands, steep slopes and floodplains) of the Township in order to

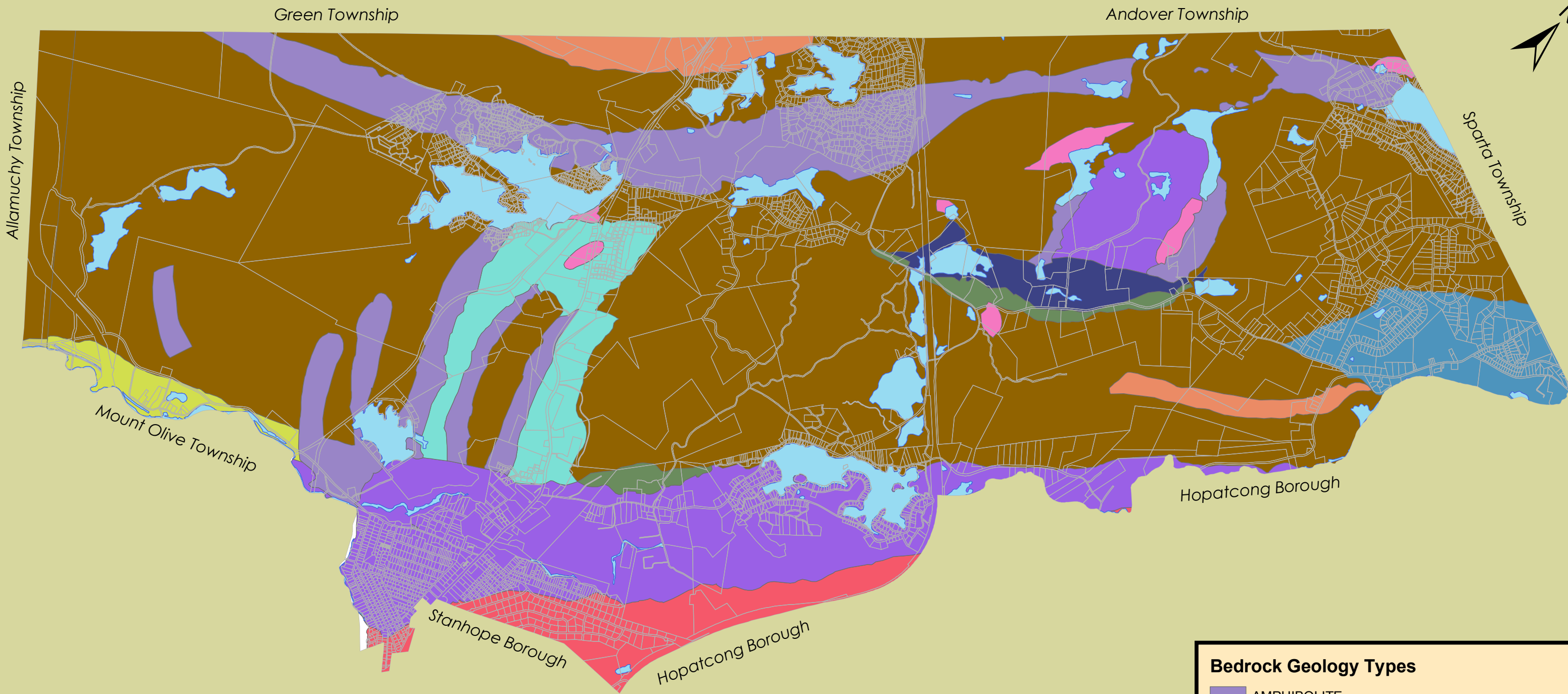


## Conservation Goals

- Maintain the essential rural character of the Township by guarding against degradation and destruction of woodlands, steep slopes, lakes and waterways, areas of natural beauty, critical areas, productive agricultural areas, and important historic places.
- Integrate on-site environmental features into the Village Center and maintain existing natural features in the lake communities.
- Protect environmentally sensitive lands and direct growth toward areas with existing infrastructure, designated for controlled growth, thus deterring both residential and commercial sprawl.







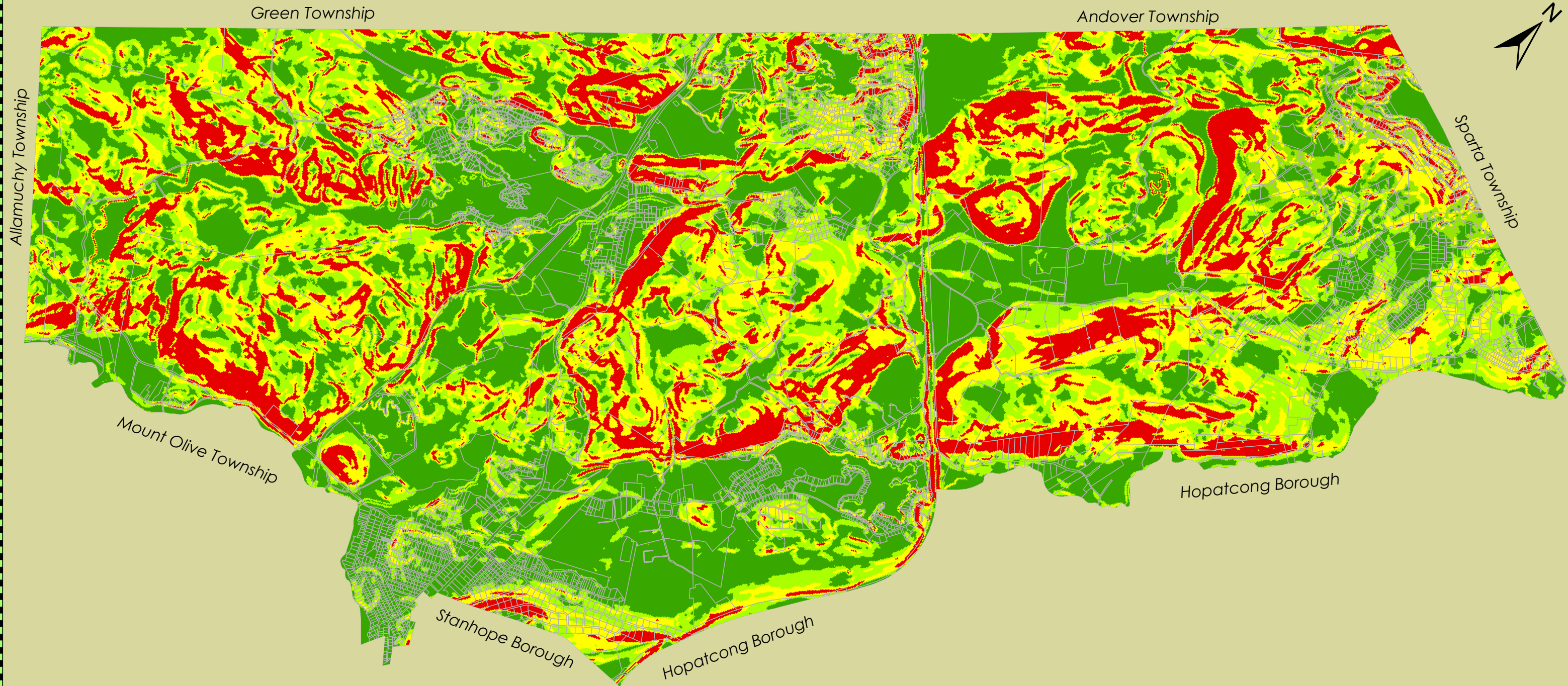
# Byram Township

## Master Plan 2004

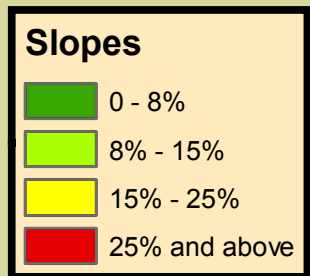
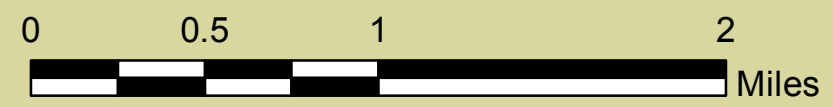
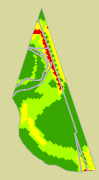
### Geology

Bedrock Geology Types	
	AMPHIBOLITE
	HARDYSTON FORMATION
	HORNBLende AND BIOTITE GNEISS
	HORBLende GRANITE & GNEISS
	INDICATES SYENITE
	KITTATINNY FORMATION (UNDIFFERENTIATED)
	LEITHSVILLE FORMATION
	MARBLE AND SKARN
	MIXED GNEISS
	PYROXENE GNEISS
	QUARTZ-OLIGOCLASE GNEISS
	QUARTZ-OLIGOCLASE-BIOTITE GNEISS
	WATER





**Byram Township**  
Master Plan 2004  
Slopes







## Conservation Objectives

- Continue to discourage sprawl through the use of specific development regulation techniques.
- Continue to minimize site disturbance.
- Limit or prohibit the development and expansion of roads and utilities into environmentally sensitive areas.
- Protect stream corridors, wetlands, woodlands, steep slopes, groundwater recharge areas, lakes, ponds and other critical areas through the enforcement of local ordinances.
- Preserve and maintain major areas of open space.  
Byram's lakes and ponds and groundwater through enhanced land use controls, open space acquisitions, better stormwater management, and septic-management programs.
- Minimize the visual impact of residential, commercial, and public development projects on the natural environment.

minimize adverse impacts of development. Such impacts include, but are not limited to, erosion, siltation, flooding, surface slippage and subsidence, surface water runoff, habitat destruction, and pollution of potable water supplies from point and non-point sources. The ordinance recognizes that there is a strong relationship between the integrity of the Township's and the region's water resources and development on critical areas, as well as the general use of land resources. Therefore, appropriate management of these resources is an important concern for the health, safety and general welfare of the community.

The Tract Disturbance Ordinance applies to all applications for development and approval, including subdivisions, site plans, and building permits. The only exceptions are for roadway or utility improvements undertaken by a government entity and for farming and forestry. The ordinance prohibits disturbance of critical areas, which are defined as surface water bodies, wetlands, slopes in excess of 25%, ridgelines and hillcrests, and floodplains and flood fringe areas.







## Wetlands

Wetlands cover 1,226 acres or approximately 8.6% of the Township.

Wetlands provide natural flood control by storing excess water and slowly releasing it to surface waters. Wetlands also serve as groundwater recharge areas and as filtration systems, removing pollutants from the water table and storing them in biomass. As the total area of wetlands and their natural functions decrease, the overall quality and quantity of surface water is altered. Often, expensive man-made utilities are required to make up for the loss of wetlands.

A community that incorporates growth while maintaining or improving wetlands and wetland functions can achieve lower flood peaks, fewer droughts, more wildlife and wildlife habitat, and better surface water quality. Wetlands also provide recreational opportunities for boating, hiking, and bird watching.

Freshwater wetlands occur in different parts of

Byram, typically in the swales and valleys that parallel the ridgelines. These wetlands occur mostly along stream channels and in low-lying areas. There are concentrations of wetlands in the central eastern edge of the Township around Lake Lackawanna and along Lubbers Run and in the southwestern and southernmost areas around and beyond Cranberry Lake. There is a large concentration north of Forest Lake and smaller, scattered pockets throughout the Township.

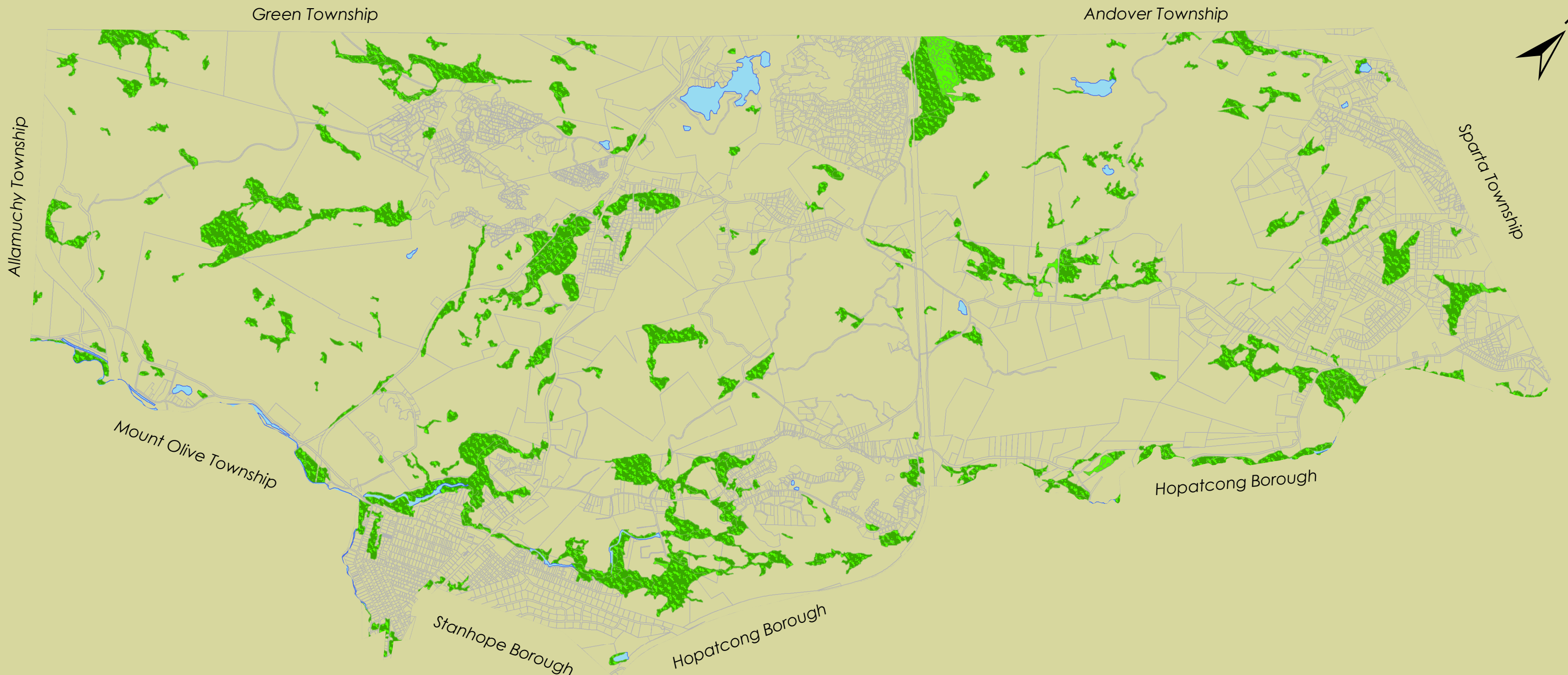
## Flood Plains

Floodplains represent 825 acres or approximately 5.8% of the Township.

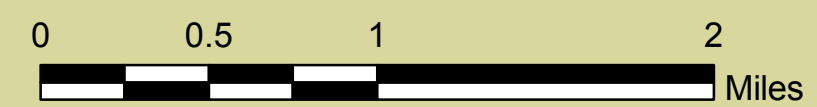
Floodplains are a vital part of any river ecosystem, acting as water filters and wildlife nurseries. They are important for the maintenance of water quality, providing fresh water to wetlands and backwaters while diluting salts and nutrients. Floodplains are major centers of biological life in the river ecosystem and improve the overall health of the habitat used by many species of birds, fish, and plants. They are important biologically, as they represent areas where many species reproduce and as such are important for breeding and regeneration cycles.

NJDEP-identified floodplains occur in relatively small portions of the northern and central portions of the Township, with a large area north of Forest Lake and in the Panther Lake vicinity. The southern area of the township contains a larger proportion of floodplains in the vicinity of Cranberry Lake, Lake Lackawanna, and Jefferson Lake, where large areas of residential








**Byram Township**  
Master Plan 2004  
Wetlands



**Wetland Types**

-  Modified Wetlands
-  Natural Wetlands
-  Water Bodies



Allamuchy Township

Green Township

Andover Township

Sparta Township



Mount Olive Township

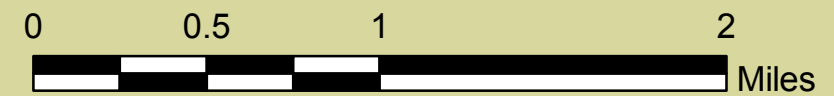
Hopatcong Borough

Stanhope Borough

Hopatcong Borough

# Byram Township

Master Plan 2004  
FEMA Flood Plains

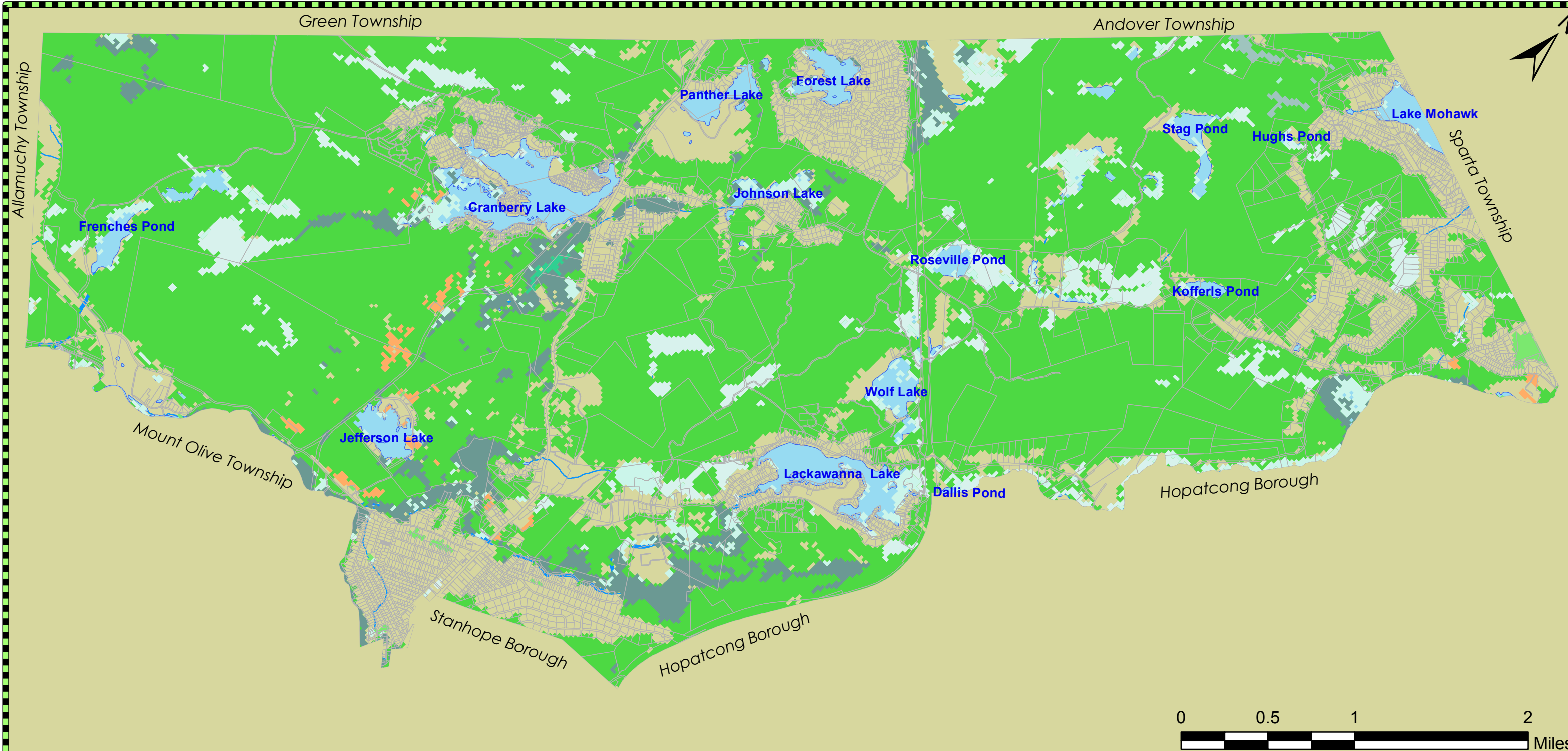


**Floodplain Areas**

 100 Year Flood Plain







**Byram Township**  
Master Plan 2004  
ENSP Landscape Habitats

Habitat Types									
Beach		Emergent		Forest		Grassland		Wetland Forest	
	Suitable Habitat		Suitable Habitat		Suitable Habitat		Suitable Habitat		Suitable Habitat
	Special Concern		Special Concern		Special Concern		Special Concern		Special Concern
	State Threatened		State Threatened		State Threatened		State Threatened		State Threatened
	State Endangered		State Endangered		State Endangered		State Endangered		State Endangered
	Federal T & E		Federal T & E		Federal T & E		Federal T & E		Federal T & E



development have already occurred on the boundaries of these floodplains.

## Conservation Recommendations

The Byram Lakefront Development Plan was an environmental planning effort that went beyond a natural resources inventory. It was a comprehensive examination of existing environmental studies and plans, State regulations, and best management practices. The Plan generated numerous recommendations for protecting water quality and lake health, as well as neighborhood character, in the Township. These recommendations are reiterated here as part of the conservation element of the Byram Master Plan and should be considered Township planning policy. For further details about the Byram Lakefront Development Plan, please refer to the original document.

## Land Use Changes

The Byram Lakefront Development Plan recommended creating Open Space and Golf Course zoning districts, reducing residential densities in Lake Communities, and revising bulk standards. Many of these changes are reflected in the Land Use element of the Master Plan, including 5- and 10-acre zoning, minimum one-acre zoning for lots with on-site septic systems and wells, and a 10-foot wide vegetated buffer along 80% of the frontage on any lakeshore parcel.

## Septic Management Ordinance

Cranberry Lake and Lake Mohawk presently participate in a septic management programs enforced by Township ordinance. These programs regulate septic

systems for the protection of public health and welfare and the environment and educate owners about proper design, operation and maintenance. The Township and the Lake Mohawk Country Club maintain data bases that are used to generate reminders to pump on the required three-year cycle and notices of violation, leading to summonses, for homeowners who fail to comply. The ordinances also require that owners map the location and components of their systems and pay a \$15 program fee, also on a three-year cycle. Violations can result in fines or community service

These are simple, yet extremely useful databases, which can be expanded to handle future areas of the Township that may be brought into the Septic Management Program.

The Lakefront Development Plan and the Sussex County Strategic Growth Plan recommend that all





lake communities participate in septic management programs,. Lake Lackawanna residents have expressed interest in septic management program, and in 2004 the Township obtained a Smart Growth Grant from the Association of New Jersey Environmental Commissions to extend the ordinance to that neighborhood. The Township should create a new ordinance that includes all lake communities and may want to extend the program to the entire Township, since most homes in Byram are on individual septic systems and virtually the entire Township is characterized by soils with severe limitations for septic suitability.

### Stormwater Management Plan

The Township lacks a cohesive stormwater management plan. While several different ordinances address stormwater from the standpoint of roads, right-of-way improvements, and tract disturbance, there is no single cohesive plan. Stormwater runoff can have significant impact on lake systems, increasing sedimentation and non-point source (NPS) pollution.

The Township engineer is currently drafting a stormwater management plan in accordance with the standards outlined in N.J.A.C 7:8. When it is complete, it should be adopted as part of this Master Plan. Once the ordinance is adopted and noticed to the County and State, no building permit can be issued in contradiction of this ordinance. Any such issuance would be a violation of the N.J. Municipal Land Use Law (MLUL). Stormwater management plans should be re-examined along with the Master Plan, in accordance with the schedule in the MLUL.

### Wastewater Management Plan (WMP) Update

The Township has an adopted wastewater management plan. It is recommended that the findings of the Lakefront Development Plan be incorporated into that plan, to better protect the water quality in the Lake Communities and throughout the Township. The WMP planning area consists of the entire Township, and the plan envisions central sewage service for a specific, limited portion of the Township with treatment







at the Musconetcong Utility Authority sewage treatment plant. The rest of the Township is to remain on septic systems.

Under a grant project funded by the Association of New Jersey Environmental Commissions in 2004, the central sewage service area will be reduced to include only the Township's Designated Village Center, plus the municipal and school complexes. This was recommended in the Center Designation report from the State Planning Commission.

## Dam Safety Management Program

All the lakes identified in the Lakefront Development Plan were created and are maintained by dams. With the exception of the State-owned dam at Cranberry Lake, these dams remain in private ownership and must be monitored and maintained, under the regulations of the N.J. Department of Environmental Protection Dam Safety Section. When a private dam owner applies to the NJDEP Dam Safety Section for repair funds from the

Renewable Loan Program or the Dam Restoration and Clean Water Trust Fund the Township is a co-signer to any loan. The Township needs to be cognizant of any local problem dams and be prepared to help the dam owner explore state funding sources for critical dam repairs.

## Water Quality Monitoring Program

The Sussex County Health Department conducts regular tests for fecal coliform at Township lake beaches throughout the summer. Individual lake community groups also engage in some limited water quality monitoring, such as at Lake Mohawk. These testing regimes should be expanded to more sites, and made more regular and diverse.

During the public meeting on the Lakefront Development Plan, residents asked for water quality testing downstream of the Columbia Valley Campground and North Jersey Auto Wreckers, which drain towards Lake Lackawanna. More resident input is necessary to create a comprehensive list of water testing sites. The results should be made available to the public.

A request was also made for testing at Wolf Lake, as was done in 1982 (results in the Environmental Commission files and summarized in the 1994 N.R.I.). Another lake study is recommended on an expanded list of lakes to obtain a better understanding of ongoing lake health issues.



## Lake Management Plans for Each Lake

Aside from Township land use controls and planning documents, each lake should adopt its own lake management plan. The lake management plan is a citizens' document, crafted by the Lake Community residents themselves, with some assistance from the municipality and experts. It is an examination of each lake's current condition, current and future recreational uses, and a list of steps necessary to maintain the quality of the lake for its continued recreational use. The lake management plans should include:

- Ecological inventories.
- Goals and objectives.
- Problems and issues.
- Water quality assessments.
- Action agendas based on current principles of watershed management.
- Implementation plan for the action agenda.
- Continued monitoring of water quality measurements.
- Reassessment of actions taken.

An excellent resource for any group beginning a lake management planning process is "Managing Lakes and Reservoirs," prepared by the North American Lake Management Society of Madison, Wisconsin and the Terrene Institute of Alexandria, Virginia, in cooperation with US EPA, Office of Water, Assessment and Watershed Protection Division. A free copy of this resource is available at <http://njedl.rutgers.edu/njdlib/index.cfm>.

The Lake Mohawk Country Club has an active lake management program and a Lake Master Plan. The Master Plan identified the primary cause of

the lake's continuing eutrophication to be excessive phosphorous loading from stormwater runoff, internal recycling of lake sediments, and loading from septic systems. Based on this planning effort, the Country Club made efforts to update the stormwater control system around the lake. They also installed an in-lake alum dosing system, invested in alum blanket applications, and installed a de-stratification system in the deepest parts of the lake. The Country Club also began public outreach and education programs and promoted voluntary restrictions on phosphorous products (later required by ordinance), and a septic management program. The Country Club has also initiated an annual Lake Mohawk Monitoring Program. The 2002 report showed that overall water quality conditions were generally acceptable.

## Woodland Management Plan

NJDEP Division of Parks and Forestry warns that New Jersey's 2.1 million forested acres (42% of the State) face many challenges, especially urban development, loss of habitat, invasive plant species, and exotic insect infestations.

The Center Designation Report prepared by the State Office of Smart Growth, recommends that Byram prepare a woodland management plan, "in accordance with the protocol established by the NJDEP Division of Parks and Forestry." The plan would help preserve the large forested tracts that characterize the Township's Environs. These forestlands provide extensive wildlife habitat, protect surface and ground waters, contribute to the recharge of aquifers, and preserve the community's scenic beauty. Large forested tracts also help reduce air, light, and noise pollution from developed areas.





A woodland management plan would address the 'community forest' (trees along streets and on Township parcels) and also forests on private lands. Forests on State lands, which occupy about a fifth of Byram's acreage, are already managed by NJDEP.

The Division of Parks and Forestry offers technical assistance, as well as small grants, to help the municipality and private owners improve and maintain tree and forest health. These programs can be found on the NJDEP Division of Parks and Forestry website, under 'Private Lands Management,' 'Community Forestry Program,' and 'Forest Health.' The Division of Parks and Forestry also oversees the forestry management plans required for parcels in the N.J. farmland/woodland assessment program. A substantial majority of Byram's large Environs landowners are enrolled in this program.

The Division of Parks and Forestry offers a \$2,000 grant, with a \$1,000 local match, to create a woodland management plan and certifies foresters authorized by the State to draft these plans.

## Protection of Groundwater and Well Water

Currently, all of Byram's residents and businesses depend on groundwater for their drinking water supply. Approximately half of the Township's homes draw from the 11 small water companies operating in Byram, and the other half draw from individual wells. Thus, protection of the quality and quantity of groundwater is critical.

In addition to supplying drinking water, groundwater also supplies 'base flow' to Byram's lakes and streams, which helps feed these water bodies and helps sustain

water levels in times of drought. This connection between groundwater and surface waters can move both ways, with contamination in lakes and streams entering surrounding groundwater and wells.

The October 2004 grant report, "Preliminary Assessment of Groundwater and Aquifers in Byram Township, New Jersey," prepared for the Environmental Commission, discusses the availability of groundwater in Byram, its susceptibility to contamination as well as specific episodes of contamination, and recommendations for managing and protecting Byram's drinking water supplies.

The report includes a map of wellhead protection areas in and around Byram. Each public well is surrounded by concentric circles showing where contamination could eventually reach the well over periods of time ranging from three to five years. NJDEP maps extend the circles to 12 years. Wellhead protection ordinances restrict uses







*township*

**BYRAM**  
Master Plan



# HOUSING





# BYRAM

## HOUSING (2000 HOUSING PLAN)

within these circles to those that do not pose unacceptable risks of contamination. Wellhead areas in the grant report cover extensive parts of Byram's southeastern tip, including substantial areas in neighboring Stanhope and Hopatcong.

The grant report also includes a model 'supply well evaluation' ordinance to help ensure that new wells have sufficient yield and quality and do not adversely impact existing, neighboring wells. The grant report also recommends various other land use strategies and recommends that homeowners near known contaminated sites regularly test their wells.

### INTRODUCTION

In response to the Mt. Laurel II decision, the Fair Housing Act was adopted by the New Jersey Legislature in 1985 (Chapter 222, Laws of New Jersey, 1985). The Act established a Council on Affordable Housing (COAH) to ensure that the mandate of Mt. Laurel II would be implemented



by all New Jersey municipalities. Each municipality is required to address its 'fair share' low- to moderate-income affordable housing obligation. The extent of that obligation depends upon a number of factors, including non-residential ratables, income of residents, vacant and environmentally constrained land, the extent of substandard housing and a municipality's designation in the New Jersey State Development and Redevelopment Plan (SDRP). The Fair Housing Act also requires that municipal master plans include a housing element and 'fair share' plan. The principal purpose of the housing element is to establish methods to provide the municipality's present and future affordable housing obligation under







## COAH.

COAH regulations define low-income households as those having incomes no greater than 50 percent of the median household income, adjusted for household size, of the housing region in which the municipality is located. Moderate-income households are those with incomes no greater than 80 percent and no less than 50 percent of that median household income. Under COAH, Byram is included in Housing Region One, along with the rest of Sussex County and Bergen, Hudson, and Passaic counties.

According to the requirements of the Municipal Land Use Law and its references to the Fair Housing Act, the Housing Element/ Fair Share Plan must include the following:

- a. An inventory of the municipality's housing stock by age, condition, purchase or rental value, occupancy characteristics, and type, including the number of units affordable for low- and moderate-income households and substandard housing capable of being rehabilitated. In conducting this inventory, the municipality shall have access, on a confidential basis for the sole purpose of conducting the inventory, to all necessary property tax assessment records and information in the assessor's office, including but not limited to the property record cards;
- b. A projection of the municipality's housing stock, including the probable future construction of low- and moderate-income housing, for the next ten years,

taking into account, but not necessarily limited to, construction permits issued, approvals of applications for development, and probable residential development of lands;

- c. An analysis of the municipality's demographic characteristics, including but not necessarily limited to, household size, income level, and age;
- d. An analysis of the existing and projected future employment characteristics of the municipality;
- e. A determination of the municipality's present and prospective 'fair share' for low- and moderate-income housing and its capacity to accommodate those needs; and
- f. A consideration of the lands most appropriate for construction of low- and moderate-income housing and of the existing structures most appropriate for conversion or rehabilitation for low- and moderate-income housing, including lands of developers who have expressed a commitment to provide affordable housing.

In 1998, the Township of Byram filed a Housing and Fair Share Plan with COAH. The Township petitioned for Substantive Certification in 1999 and received it on December 3, 2003. Certification ends on December 3, 2009. This Housing Element reflects the information in the final approved Plan.



## EXISTING HOUSING CONDITIONS

### Housing Characteristics

There were no significant changes in the housing stock of Byram over the last decade, from 1990 to 2000, when housing units increased by only 3.6%. This contrasts to the decade from 1980 to 1990, when housing units increased by 18.1%.

The 2000 Census shows 3,057 housing units in Byram, 2,825 or 92.4% of which were occupied. Only 7.6 percent were vacant, and of those units 90.9 percent were for seasonal, vacation or occasional use.



The Housing Data 2000 table shows that almost all of Byram's housing consists of single-family (one-unit) detached homes. In 2000, there were 2,961 single-family detached homes, representing 96.9% of all housing units. Multi-family units represented only 2.3%, and no structures contained more than nine units. Only 27 units lacked complete plumbing or kitchens.

Of the housing units in 2000, a little over one-half (55.4%) were built by 1969. Another 35.4% were built between 1970 and 1990. As the table shows, the decline in the amount of housing built did not start until after 1990.

The largest percent (44.4%) of Byram's homes have seven to eight rooms, with the median being seven. Only 10.2 percent of the housing units have four rooms or fewer.

Housing Data 2000		
Byram Township, Sussex County		
Characteristics	Number	Percent
Total Number of Units	3,057	100%
Total Occupied	2,825	92.4%
Total Vacant	232	7.6%
Owner Occupied	2,608	92.3%
Renter Occupied	217	7.7%
Units in Structure		
One-Unit Detached	2,961	96.9%
One-Unit Attached	20	0.7%
Two Units	37	1.2%
Three or Four Units	18	0.6%
Five to Nine Units	16	0.5%
Ten to Nineteen Units	0	0.0%
Twenty or More	0	0.0%
Other (mobile home, RV, etc.)	5	0.2%
Year Structure Built		
1999 to March 2000	45	1.5%
1995 to 1998	109	3.6%
1990 to 1994	130	4.3%
1980 to 1989	449	14.7%
1970 to 1979	633	20.7%
1960 to 1969	704	23.0%
1950 to 1959	378	12.4%
1940 to 1949	240	7.9%
1939 or earlier	369	12.1%
Number of Rooms		
One	14	0.8%
Two	10	0.3%
Three	60	2.0%
Four	218	7.1%
Five	390	12.8%
Six	541	17.7%
Seven	616	20.2%
Eight	739	24.2%
Nine or more	469	15.3%
Median number of rooms	7	
Lacking complete plumbing or		
Kitchen facilities	27	0.9%







## Values

Housing values are illustrated in the following Housing Value 2000 table. These values are according to the 2000 census and are based on the assessed value of homes in local tax collection records and do not reflect current market or sale value. At the time that this Master Plan was written, assessed values in Byram averaged 65% of true market value and the need for a revaluation was being discussed.

Approximately 13.2% of the owner-occupied units were assessed under \$125,000. The majority (72.7%) fell within the \$125,000 to \$250,000 range. Only 14% were assessed above \$250,000, and none was valued above \$750,000. The median value was \$175,700.

Rents in the year 2000 are also given in the table. Of renter occupied units, 53.1% rented at less than \$1,000 a month. The largest percentage (30.9%) rented at \$1,000 to \$1,250. The median rent was \$823. Also in 2000, renters used 26.4% of their household income for that purpose.



Housing Values 2000, Based on Assessments		
Byram Township, Sussex County		
Characteristics	Number	Percent
Total Units	3,057	100%
Owner Occupied	2,608	85.3%
Renter Occupied	217	7.1%
Owner Occupied Value		
Less than \$10,000 to \$19,999	6	0.2%
\$20,000 to \$39,999	7	0.3%
\$40,000 to \$59,999	0	0.0%
\$60,000 to \$79,999	31	1.2%
\$80,000 to \$99,999	94	3.6%
\$100,000 to 124,999	205	7.9%
\$125,000 to \$149,999	422	16.2%
\$150,000 to \$174,999	524	20.1%
\$175,000 to \$199,999	444	17.0%
\$200,000 to \$249,999	507	19.4%
\$250,000 to \$299,999	190	7.3%
\$300,000 to \$399,999	143	5.5%
\$400,000 to \$499,999	14	0.5%
\$500,000 to \$749,999	18	0.7%
\$750,000 or more	0	0.0%
Median Value	\$175,700	
Units with a Mortgage	2,111	80.9%
Contract Rent		
Less than \$100 to \$499	13	6.0%
\$500 to \$599	29	13.4%
\$600 to \$699	19	8.8%
\$700 to \$799	34	15.7%
\$800 to \$899	20	9.2%
\$900 to \$999	0	0.0%
\$1,000 to \$1,249	67	30.9%
\$1,250 to \$1,499	17	7.8%
\$1,500 or more	0	0.0%
No cash rent	18	8.3%
Median Rent	\$823	
Rent as % of household income		26.4%



## DETERMINATION OF BYRAM TOWNSHIP'S FAIR SHARE AND OBLIGATION

Byram is located in Housing Region One (Bergen, Hudson, Passaic and Sussex counties). The Council on Affordable Housing (COAH) has established a 'pre-credited' need of 62 low- and moderate-income units for Byram, including two components:

1. A rehabilitation component of 28 units and
2. An 'inclusionary' component of 34, which must be new construction.

The pre-credited need is Byram's cumulative 1987-1999 affordable housing obligation, before the application of credits, reductions or adjustments available to the Township under COAH regulations.

The Township received credit for the rehabilitation of 28 units, completed since 1990, leaving an obligation of 34 units in new construction.

## FAIR SHARE PLAN

Byram Township's Fair Share Plan envisions the construction of its 34-unit obligation within the proposed Village Center Zone (VC Zone), which is part of the Township's Designated Village Center (Designated VC). That designation was obtained on May 19, 2004 from the New Jersey State Planning Commission in accordance with the State Development and Redevelopment Plan (SDRP). COAH requires that nine of the 34 units must be rentals and the remaining 25 must be owner-occupied..

### Rental Obligation of Nine Units

The entire nine-unit rental obligation will be fulfilled within a 20% 'set aside' (a portion of housing in new developments reserved for affordable housing) in the proposed 125-170 unit residential portion of the proposed Village Center, within the VC Zone. These



## Housing Goals

- Provide for a mix of housing types to meet existing and future population needs.







## Housing Objectives

- Implement Byram's Fair Share Plan and Housing Element pursuant to the Fair Housing Act, to meet indigenous housing needs.
- Provide housing opportunities for senior citizens and low-moderate income families.
- Provide a balance between housing and job opportunities.

may include apartments above retail stores or within duplexes where one unit must be owner-occupied and the other a rental.

### Remaining 25-Unit New Construction Obligation

The remaining 25 units will also be fulfilled within the 20% 'set aside' in the VC Zone project.

These units are to include a variety of housing types—single-family, duplexes, condos, two-family—with each type limited to a certain percentage of the 125-170 maximum housing count.

A full description and analysis of Byram's COAH obligation and plan can be found in the Township's Housing and Fair Share Plan.

### Continuing Affordable Housing Activities

On May 19, 2004, Byram obtained Village Center Designation from the State Planning Commission under the State Development and Redevelopment Plan (SDRP). The Township has secured a Smart Future Grant from the New Jersey Department of Community Affairs, Office of Smart Growth to determine whether the Village Center Zone is in need of 'redevelopment' (as defined by the N.J. Local Redevelopment and Housing Law) and to fund the redevelopment plan if the area meets the criteria. The Township wants to pursue redevelopment to take more control over the process and ensure that the Village Center Zone project meets all the needs of the community, including its affordable housing obligation.

The Township's Affordable Housing Ordinance, in accordance with the adopted Housing Element and

Fair Share Plan and the regulations of the New Jersey Council on Affordable Housing, was amended and adopted in January 2004. The ordinance addresses the mandatory set-aside of affordable units in the Village Center Zone, the allocation of units, inclusionary developments, the determination of maximum rents and prices, zoning, development fees, management of units, rehabilitated units, rental units, and a statement of the fair share obligation. Byram has also revised the Subdivision and Site Plan Review Ordinance to include the collection, maintenance, and expenditure of development fees for the purpose of providing low- and moderate-income housing. That ordinance was passed March 4, 2002 and amended January 20, 2004, taking effect February 9, 2004.

There have been a few approvals for development since the ordinance took effect. These applicants have started the building permit process and these fees have begun to be collected. A new checklist has been developed to ensure the timely collection of these funds by Township staff and all current and future Land Use Board resolutions state if the project in question is subject to the development fees.





*township*

**BYRAM**  
Master Plan



# CIRCULATION







# BYRAM



## CIRCULATION

### Regional Perspective

The Township of Byram is located in the southeast corner of Sussex County. This location places the Township at the crossroads of regional highways and the intersection of Morris, Warren, and Sussex Counties. The region is well served by local, county and State roads. Because of the proximity of Interstates 80, 287, and 280, many municipalities in the region have become bedroom communities for New York City and for urban areas in north and central New Jersey.

The proximity of I-80, which opened in the early 1970s, has had an enormous impact on Byram and the region. I-80 creates a link between the east and west coasts and has opened the region to residential, commercial, and industrial growth. The region still retains much of its rural character, but it has a more diverse economic base and is under increasing pressure for residential development. This has put strains on regional, county, and local roads that feed commuters to the Interstates.

Several major State highways, including Routes 206, 15, 94 and 23, also traverse Sussex County. The only State highway in Byram is Route 206, which forms the dominant regional access highway and commercial corridor. Route 206 and the other State routes provide the primary access to Interstates, adjacent counties, northeastern Pennsylvania, and southern New York State.

Byram Township will continue to struggle with the growth facilitated by this regional transportation network. The Interstates and State routes provide easy access to Byram Township from the entire New York City metropolitan region; and it is incumbent upon Byram to follow the best Smart Growth principles to manage this growth, focusing it in appropriate areas and limiting it elsewhere.





## EXISTING ROADWAY SYSTEM

### Interstate Roadways

Interstate 80 is a major freeway running from the east coast to the west coast, a portion of which crossed the southernmost corner of the Township and the nearest exit passes less than one mile from Byram's southern border. It is a six-lane, non-toll, high-speed freeway that connects with Route 206 at a large interchange and provides Byram residents easy access to the entire New York City metropolitan region. Interstates 80 and 280 are the major east-west connectors between the bedroom communities of northern New Jersey and New York City.

### State Roadways

Route 206 is the only State highway directly serving Byram Township. This north-south regional highway links Sussex County with Somerset, Morris, Hunterdon, and Mercer Counties. Route 206 also serves as an alternate to I-287 for travel between I-80 and I-78 farther to the south. Route 206 bisects Byram and is the locus of commercial development in the Township. The highway is primarily a two-lane, high-access roadway, with a third lane in some sections for passing on the Cat Swamp Hill section or left turns into the Byram Plaza or at intersections. The highway is the primary north-south route in the Township, collecting traffic from both County and local roads. The improvements planned for Route 206 are described later in this chapter.

### County Roadways

Five County roads currently serve Byram Township, providing access to neighborhoods and adjacent municipalities. These are all rural, two-lane, open-access roadways.

- Route 604/Waterloo Road: begins in southern Byram on the west side of Route 206 and provides access to Allamuchy State Park and Warren County..
- Route 607/Lackawanna Drive: begins in central Byram on the east side of Route 206 and provides access to the Lake Lackawanna neighborhood, Hopatcong Borough, and Route 605/Sparta Stanhope Road.
- Route 605/Sparta-Stanhope Road: neither begins nor ends in Byram, but provides access to the Lake Mohawk neighborhood and to the municipalities of Stanhope, Sparta, and Hopatcong.
- Route 613/Andover-Lake Mohawk Road: neither begins nor ends in Byram, but provides access to the Lake Mohawk neighborhood and Sparta.
- Route 671/Lee Hill Road: recently added to the County road inventory, this road provides access to the newer subdivisions next to the Lake Mohawk community and near the Sparta border, as well as to Andover Township.



## Local Roadways

Byram has a network of local roads linking its neighborhoods with one another and with County and State roadways and the Township's commercial district. These local roads can be sub-divided into four major types: primary arterial, secondary arterial, residential collectors, and minor roads.

A primary arterial provides intra-county and inter-municipal traffic flow and distributes traffic from secondary arterials to highways and other primary arterials:

- Tamarack Road- Primary Arterial
- Continental Drive- Primary Arterial

Secondary or rural arterial roads move traffic between primary arterials and link residential roads with primary arterials. They are often called 'collector roads:'

- Roseville Road- Secondary Arterial
- Amity Road- Secondary Arterial
- Tomahawk Trail- Secondary Arterial

Residential collector roads collect local traffic from neighborhoods and bring it to primary or secondary arterials. These roads are often the exit/entrance roads into neighborhoods:

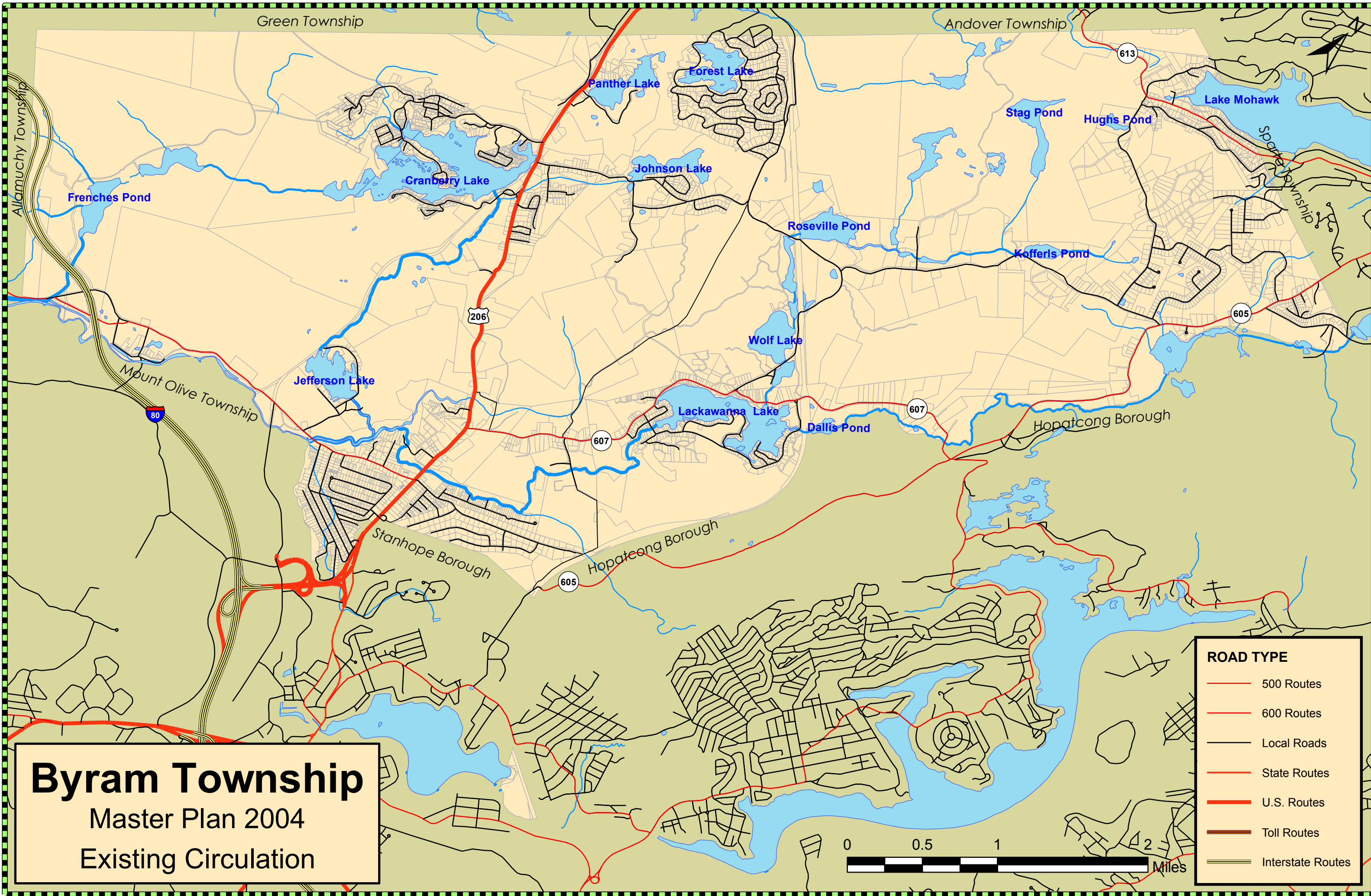
- Acorn Street- Residential Collector
- Brookwood Road- Residential Collector
- Crescent Drive North- Residential Collector
- Crescent Drive South- Residential Collector
- South Shore Road- Residential Collector
- North Shore Road- Residential Collector
- Heminover Street- Residential Collector
- Lake Drive- Residential Collector



## CIRCULATION GOALS

- Establish a circulation system that supports the regional and county network and facilitates movement between various parts of the Township.
- Create pedestrian walkways, bikeways, and other pathways to enhance both the ability and desirability of walking and bicycling.
- Establish trails and greenways linking neighborhoods, schools, recreational facilities, and community facilities with the lake communities and the Village Center.
- Retain rural roadways, with forested roadside shoulders, wherever possible.
- Participate in the planning and design of all County and State transportation projects to achieve Context Sensitive Design.





# Byram Township

Master Plan 2004

Existing Circulation

**ROAD TYPE**

- 500 Routes
- 600 Routes
- Local Roads
- State Routes
- U.S. Routes
- Toll Routes
- Interstate Routes



### Road Conditions

Road conditions vary throughout the Township, with the overall condition considered fair.

Almost 90 percent of Byram's local roads are paved, but without controlled drainage or curbing. Weather conditions, traffic, slopes and terrain, and snow plowing create cracks, holes, and other signs of wear, which result in patching. Roads in newer subdivisions are constructed to the specifications of the NJ State Residential Site Improvement Standards (RSIS), which specify macadam/asphalt paving, controlled drainage, and sometimes raised block curbing. County roads in the Township are generally macadam/asphalt paved and are generally in better condition than local roads.

Aside from the limitations of road materials and local conditions, many of Byram's roads are affected by poor alignment or configuration, causing poor traffic flow. Notable areas where poor design causes problems include:

- Route 206 at Acorn Street creates a bottleneck preventing the flow of commuter traffic. This section of Route 206 is poorly signalized, dangerous and the northbound approach is substandard .
- The intersection of Route 206 and both Waterloo Road and Brookwood Road is problematic because Waterloo Road and Brookwood Road are offset.
- Tomahawk Trail is a collector road with increasing traffic levels; a road surface upgrade and the application of traffic

Continue to incorporate Context Sensitive Design principles into Route 206 improvements to insure adequate traffic flow, limitations on speed, pedestrian and automobile safety, access, as well as attractive roadway design and traffic calming.

- Encourage appropriate mass transportation, namely buses and shuttles, for internal and external movement that will not unduly promote development in and around Byram.
- Clearly state the Township's opposition to the Lackawanna Cut-off re-activation and ensure communication with County and State transportation officials and neighboring affected communities.
- Clearly state the Township's opposition to the County Route 605/ Acorn Street extension and ensure communication with County and State transportation officials and neighboring affected communities.
- Recommend additional local road connections where necessary for safety but not to promote development in the limited-growth areas of the Township that lie outside the Designated Village Center.
- Create open space trail linkages between all neighborhoods and destinations in Byram while connecting with regional trails and Allamuchy Mountain State Park.
- Update the official map by classifying roads according to function and by identifying all major existing and proposed rights-of-way
  - Provide safe vehicular, pedestrian, and bicycle circulation by improving traffic signals at key intersections, utilizing traffic calming measures, providing adequate on and off street parking and sidewalks in appropriate locations.
  - Enhance the appearance of the Township's transportation corridors and improve signage on roads and at gateway locations to facilitate circulation and identify key destinations in the Township.
- Take measures to mitigate the effects of increased regional traffic, including actively participating in municipal, County, and State planning initiatives to control growth and sprawl in New Jersey and re-examine municipal, County, and State transportation policies.





- calming techniques are immediate requirements, as are sight line improvements and a wider cartway.
- Poor sight lines exist along the length of Tamarack Road.
- The intersection of 206 and North Shore Road has no left turn lane, restricting traffic flow and creating hazardous conditions.
- Old Wolf Lake Road has been poorly paved and presents a blind intersection where it intersects with Lackawanna Drive.
- The intersection of Sparta-Stanhope and Lackawanna Drive has confusing stop signs calling for traffic to stop in the wrong direction and poor sight lines. Four-way stop signs would be more appropriate. Although this intersection is just outside the Byram border, it is an important safety issue for Byram drivers. Byram should alert Sussex County to this problem.
- Roseville Road has poor sight lines as it goes through the Cut-off tunnel near Wolf Lake.
- There are inadequate caution and directional signs when approaching the two Cut-off tunnels on Roseville Road.
- Carpenter Road in the Lake Lackawanna neighborhood, is poorly designed and inadequate for the continuing residential development in this hilly section. The road is very narrow, steeply sloped, and rough.
- The intersection of Heminover Street, Lake Drive West, Reis Avenue and Carpenter Road is in need of improved traffic control devices.
- Speeding is a problem on most Township roads, particularly on roads used as inter-municipal connectors, such as Sparta-Stanhope, Amity, Roseville, Lee Hill, and Andover-Mohawk.



- The section of Amity Road where the steep hill meets the flatter section is the site of numerous incidents, including many accidents or near accidents that are not reported. Drivers speeding down the hill are not able to make the slight curve at the bottom.

Roadway rights-of-way throughout the Township vary in size. Most of the rights-of-way on local roads are 33 feet to 40 feet wide. Many County roads have 50-foot rights-of-way.. Route 206 has a minimum right-of-way of 80 feet with an additional passing lane on Cat Swamp Hill. I-80 just outside Byram has four to six lanes of high-speed traffic and full size shoulders. Cranberry Lake developed as a seasonal community and has some rights-of-way less than 20 feet wide.

Some local roads are dirt or unpaved and serve to restrict access to undeveloped areas of the Township. Old Wolf Lake Road is a dirt road that has been paved but remains in very poor condition. Dirt or gravel roads that provide limited access to undeveloped areas should remain unimproved to discourage new development.





## Critical Traffic Areas

According to Byram's Chief of Police, the intersections where most motor vehicle accidents occur are the Route 206 intersection with Waterloo Road and Brookwood Road and the Route 206 intersection with Lackawanna Drive.

The NJ DOT should address many of the traffic safety and design issues listed here in the Route 206 Highway Construction Plan. Under this plan, the three-way intersection of Route 206 and Waterloo Road and Brookwood Road would be realigned, Route 206 would be widened to four lanes with a central turning lane and minimal shoulders, except for the stretch between Waterloo/Brookwood and just north of Lubbers Run, which would be striped for two lanes but designed and paved for restriping to four if necessary. There would also be computerized timing of lights, turning lanes at the two intersections, and better signage.

There were 298 traffic accidents in Byram in 2002 and 293 traffic accidents in 2003, according to Byram Township Police Department records. The highest number of accidents reported in 2004 occurred in the following locations.

Location	Total Accidents	Accidents with Injuries
Route 206 and Waterloo Road/ Brookwood Road Intersection	19	2
Route 206 and Acorn Street Intersection	18	3
Route 206 from mile post 99 to 100	14	2
Route 206 and Lackawanna Drive intersection	13	1
Route 206 from mile post 98 to 99	10	2
Route 206 and North Shore Road intersection	6	4





### Bikeways and Pedestrian Paths

To further the Village Center vision and maintain a pedestrian-friendly atmosphere throughout the Township, a system of trails is proposed to link residential neighborhoods with the Village Center, school system, recreation areas, open spaces, regional trails, and neighboring towns. The Smart Growth Plan identified potential obstructions to this town-wide trail plan; and, as a result, the Township obtained a grant from the U.S. Environmental Protection Agency to study and improve the pedestrian and bicycle connections in and around the proposed Village Center. In October 2003, Suburban Consulting Engineers, Inc. prepared the Bicycle and Pedestrian Feasibility Study for Byram Township.

The study addressed the Township's vision of becoming more pedestrian-friendly and identified the following goals:

- Emphasize pedestrian-friendly streetscapes and access trails for the proposed Village Center, so that this new village-like neighborhood is easily accessible by foot and bicycle from surrounding residential and commercial areas.
- Link together and improve existing pedestrian/ bicycle paths, including the Mansfield Drive and Route 206 (High Glen) bicycle paths (both are in engineering stage at the time of this Master Plan).
- Connect Byram's neighborhoods to each other and to the proposed Village Center, area businesses, amusement parks, Allamuchy Mountain State Park, and other local parks and recreational areas via bicycle and walking paths.
- Provide access points to the proposed Village Center and the proposed Vita Course exercise circuit via linkages to the East Brookwood neighborhood, Wild West City, Lackawanna Drive, and Route 206.
- Reunite Byram Township and establish a sense of community.
- Provide pedestrian access to the historic landmarks and natural resources in and around the Township.
- Provide a safe alternative to automobile transportation in the Township.
- Provide appealing non-automotive alternatives to Route 206 for transportation in and around Byram Township.
- Increase recreational alternatives to busing for students and staff of the Intermediate and Lakes Schools and Lenape Valley Regional High School.
- Develop a pedestrian-friendly transportation





network throughout Byram that connects to neighboring towns.

- Use the proposed pedestrian tunnel underneath Route 206 along Lubbers Run to provide a safe and aesthetically appealing way for pedestrian and bicycle traffic to cross 206 and to get to the proposed Village Center.

### The Bicycle and Pedestrian Feasibility Study recommended a phased approach to meeting its goals, divided into four steps:

1. Link the Route 206 (High Glen) bicycle path to the Mansfield Drive bicycle path.
2. Link the proposed Lubbers Run pedestrian tunnel under Route 206 at Lubbers Run to the Mansfield and Route 206 (High Glen) bicycle paths.
3. Connect the proposed Village Center to adjacent neighborhoods and businesses.
4. Link existing sections of trail systems and improve access to surrounding neighborhoods, schools, and parks.

For more about the Byram Bicycle and Pedestrian Feasibility Study, please refer to the original document.

There are several existing trails and bikeways in the Township. The Sussex Branch Trail is a Rail-to-Trail project using the abandoned Sussex Branch right-of-way of the Delaware, Lackawanna, and Western railroad, stretching for twenty miles from Netcong to Branchville. The trail's main southern access point is on Waterloo Road in Byram; from there it passes just west of Jefferson Lake and proceeds through Allamuchy Mountain State Park and between Route 206 and Cranberry Lake. The Highlands Trail links the

Hudson River to the Delaware River, crossing Morris, Sussex, Warren and Hunterdon Counties. In Byram, the Highlands Trail enters from Hopatcong near the Hudson Farm (formerly Hudson Guild), travels the ridgeline above Lackawanna Drive, swings southeast to pass behind Lake Lackawanna, crosses Route 206 on a route to be finally established through the new Village Center, enters Allamuchy Mt. State Park at the High Glen neighborhood, goes south of Jefferson Lake, crosses the Sussex Branch Trail, and goes through the State Park to Waterloo Village. The Liberty Trail also passes through Byram by using the Sussex Branch Trail.

One the most scenic rail lines in New Jersey, the Lackawanna Cut-off, was the last mainline built in the State, constructed between 1908 and 1911. The Cut-off starts at Port Morris and travels west through Morris, Sussex and Warren Counties on its way to the Delaware Water Gap, across some of the world's largest rail embankments. In Byram, the Cut-off halves the Township, running from its border with Hopatcong and Stanhope near Lenape Valley Regional High School, northwest along the Township border to Lake Lackawanna, and west past Wolf Lake, Roseville Pond, and Forest Lakes to the Andover Township border. NJ Transit is proposing to re-open the Lackawanna Cut-off. Byram's opposition to this proposal is discussed in detail later in this chapter. Byram would prefer to move the Cut-off into a Rails-to-Trails program.

The Morris Canal Greenway is a trail project proposed for the right-of-way of the historic Morris Canal—a part of which near Waterloo Village is in Byram—and is a cooperative effort of the New Jersey Division of Parks and Forestry, the Canal Society of New Jersey, Waterloo







Village, and Friends of the Morris Canal. The Greenway's purpose is to preserve the remains of the Morris Canal and its associated natural environment, to interpret the Canal's history for the public, and to offer recreation

Other trails in the Township include the Lubbers Run Greenway trail, only partially in place, and various hiking trails in Allamuchy Mountain State Park. The Township would like to convert some of the undeveloped paper streets in Byram's forested areas into hiking trails to link other parts of the town-wide trail plan.

### Public Transportation and other Services

Byram Township operates a small bus, providing transportation for senior citizens to a short list of standard destinations a few days a week and also serving the Parks and Recreation department and other Township groups for trips or local tours.. The Sussex County Transit bus offers an early morning trip to Newton, with an early afternoon return, but residents must call the County office to arrange pickup. Lakeland Bus Lines stops in Byram at the bus shelter at the Cranberry Park-and-Ride and at the bus

shelter south of Waterloo Road, taking riders to the Port Authority in New York City, with five other stops in Sussex and Morris Counties. Most service is during rush hours, with limited mid-day, weekend, holiday buses. Byram Township is also close to the Netcong Borough and Mount Olive/ITC train stations, where NJ Transit's Montclair-Boonton and Morris & Essex (Morristown) lines, provide service to Newark, Hoboken, Secaucus Junction and New York City's Penn Station; at all these points, riders can transfer to other lines running throughout the greater N.Y.-N.J. metropolitan area

### Existing Planned Improvements to Transportation Infrastructure

There are several transportation initiatives at the State and County level that will affect Byram Township directly and indirectly over the next decade. The three most important proposals are the Route 206 improvements, the County Route 605/Acorn Street Connector, and the re-opening of the Lackawanna Cut-off.





## Statewide Transportation Improvement Program

The Statewide Transportation Improvement Program (STIP) is a comprehensive guide to major transportation improvements planned in the state of New Jersey and serves as the reference document required under federal regulations (23 CFR 450.216) for the Federal Highway Administration and Federal Transit Administration to approve federal funding for transportation projects in New Jersey. The federal Transportation Equity Act for the 21st Century (TEA-21) requires that each state develop a multimodal TIP for each area of the state.

The STIP divides the Route 206 improvements in Byram into two separate projects, Cat Swamp Mountain and Waterloo/Brookwood Roads. The STIP also includes the Sussex County DOT project known as the Route 605/ Acorn Street Connector. What follows is a summary of the STIP information, including the status of these projects on the 2003-2005 STIP.

## Route 206 – Cat Swamp Mountain

The improvements to the first section of this project (MP 99.7 - 100.3) include the widening of the roadway, extension of the northbound climbing lane, reconstruction of the horizontal and vertical curvature, and removal of rock faces to facilitate sight distance. Work in the second section (MP 101.15 - 101.35) is limited to mitigation of a high-hazard rock fall area, which includes the removal of rock outcrop and replacement of a substandard berm in the northbound direction. Construction will be multi-year funded under the provisions of Section 13 of P.L. 1995, c.108, with an anticipated construction cost of \$8.53 million

## Current Status:

- Improvements began October 2004; 18 months to two years to complete.





## Route 206 – Waterloo/Brookwood Roads

This project, from Acorn Street to the vicinity of the 76'ers Waterloo Inn, will include widening Route 206 to four lanes, with a center left-turn lane and realigning Waterloo Road with Brookwood Road. Waterloo and Brookwood will be widened, each with through and right-turn lanes and a shared left-turn lane. Drainage problems near Lackawanna Drive will also be addressed.



### Current Status:

Route 206 footprint agreed upon December 15, 2003. Four-lane expansion with center turning lane, except that in front of the Village Center Zone the roadway will be striped for only two lanes, with a four-lane capability should that become necessary. New timing of lights should keep traffic moving. Context Sensitive Design (CSD) process still to happen.







## Acorn Street/ Route 605 Connector

This project will investigate alternatives for connecting CR 605 (Sparta-Stanhope Road) to Route 206/183. This Sussex County project will affect Byram Township, Stanhope Borough, Hopatcong Borough, and Sparta Township.

### Current Status:

- Sussex County is in final scoping for the project.
- The report on this project is not complete, including the lack of an EIS.
- The Phase One Needs Assessment is complete.
- Phase Two is to consider alignment options. Various alignments are still under consideration, according to the information available to Byram Township.
- Stakeholder meetings will begin soon to discuss the project.

The Byram Township Council passed a resolution opposing this project. The Council sees no benefit to this road. Please see the discussion of the Acorn Street/ Route 605 Connector later in this Circulation Element for further explanation.

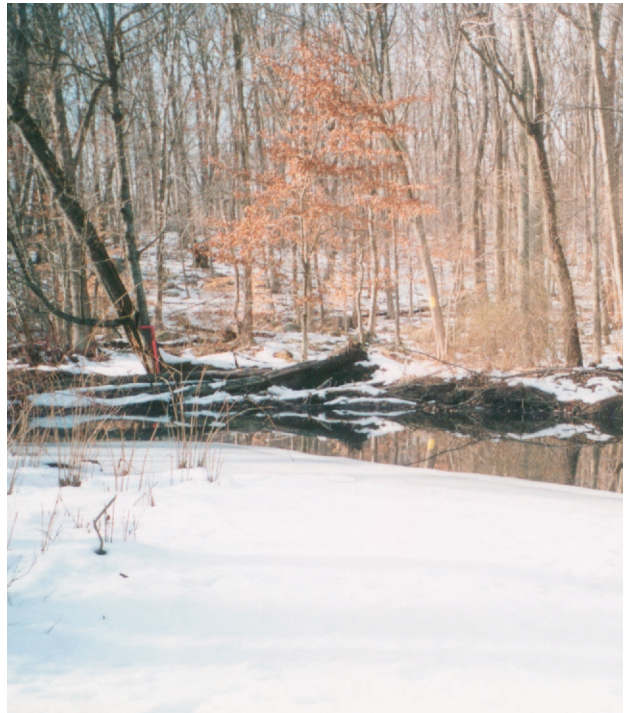


## New Jersey Transit – Lackawanna Cut-off Re-opening

The objective of the Lackawanna Cutoff proposal is to institute passenger service on this abandoned rail right-of-way, originally largely a freight line, and over existing freight rail in Pennsylvania. The project includes complete reconstruction of the line, including track and signal improvements to approximately 60 miles of right-of-way, new stations, parking facilities, a train storage yard, and additional rail rolling stock. It is assumed NJ Transit would operate the new service. The two proposed stations in New Jersey would be in Blairstown and Andover Township, with the latter located immediately behind the Forest Lakes neighborhood on the Byram Township line.

In 2000, the Draft Major Investment Study estimated the project cost at \$200-\$230 million; in 2004, the estimate was \$350 million. This estimate does not include property acquisition costs, including the \$21 million the State paid in May 2001 to repurchase the right-of-way from a private owner who bought it 10 years earlier for \$1 million. The construction is not yet funded, although substantial federal, State, and county dollars have been spent on studies and promotion thus far.

In October 2002, NJ Transit's Board of Directors authorized consultant work for conceptual design, completion of the environmental assessment, and preparation of the documentation required by the FTA for new transit lines. The completion of the Environmental Assessment and conceptual design was scheduled for June 2004 but not completed.



### Current Status

- Public sessions held by NJDOT are expected for the Lackawanna Rail Project. Byram Township has been seeking such meetings since 2000; although they were originally targeted for the end of 2003, no progress has occurred. Current estimates expect only 60 New Jersey riders, with more getting on in Pennsylvania, and only 2,800 riders within 20 years.

The Township sees no real benefit to this project; and in October 2004, the Council passed a resolution opposing the project. Please see the discussion of the Lackawanna Cut-off later in this Circulation Element for further explanation.





## Byram Township Response to Planned Improvements to Transportation Infrastructure

### Route 206

The Byram Township Council, Planning Board, and Environmental Commission have each held a long-standing position of objecting to a four-lane widening of Route 206, with this position memorialized in numerous letters, reports, and resolutions. The Township originally recommended that minimal changes, especially the straightening of the Route 206 and Waterloo/ Brookwood intersection, combined with a more sophisticated timing schedule for all traffic lights would adequately resolve traffic problems at less public expense and with minimal negative impacts on Byram and its future Village Center plans. The Township had no desire for a five-lane highway, with its subsequent increase in traffic speed and volume, which would be inappropriate within the Township's Designated Village Center and adjacent residential neighborhoods.

Ultimately, the Township Council, Sussex County, and NJDOT came to an agreement on 206 improvements from Acorn Street to Cat Swamp Hill. The highway and Lubbers Run Bridge would be widened to accommodate five lanes in anticipation of future need, but would be striped as a two-lane road in the segment next to the new Village Center Zone to satisfy the wishes of the Township. The bridge reconstruction would also include a pedestrian/bicycle underpass to avoid a crossing at grade.

The maintenance of the two-lane traffic pattern near the Village Center Zone, combined with other traffic calming measures along the roadway, would enhance the development of the Village Center Zone and promote pedestrian and bicycle movement in a safer environment. The NJ DOT and the Township have an on-going agreement to engage in a Context Sensitive Design process to try to minimize adverse impacts of the highway improvements on the Township, its future development, its appearance, and the new Village Center and adjacent Village Business zones.

The Township's Smart Growth planning efforts have resulted in changes in planning goals and policies for the community. The Township no longer looks at transportation improvements as a way of spurring residential and commercial development. The Township now sees transportation improvements as a way of creating pedestrian-friendly access between neighborhoods and providing Byram with a viable Town Center that functions as a focus for civic life. The Sussex County 2004 Transportation Study concluded that adding more traffic lanes to Route 206 is at best a temporary solution to the increased traffic flow on this section of the highway and accepted the conclusion of many recent transportation studies that bigger roads typically attract more development, more traffic, and more congestion. The Highlands Protection Act has also changed the basic assumptions about growth and development in the area. Taking the conclusions of the Byram Smart Growth Plan, the findings of the County Transportation Study, and changes in the development scheme for the entire region, this Master Plan Circulation Element recommends that the Township Council re-examine this issue.





### Route 605/Acorn Street Connector

The Byram Township Council, Planning Board, and Environmental Commission have each held a long-standing position of objecting to a Route 605 Connector at the Acorn Street traffic jug handle. While the currently proposed route is not within the borders of Byram Township, the effects of such a transportation project would greatly affect Byram for years to come. If the project were completed, it would open Sparta-Stanhope Road (County Route 605) to more development. There are already several large subdivisions planned in neighboring Hopatcong along this Route, which will increase traffic on Byram's local roadways and Route 206, especially during rush hour. The residents of the East Brookwood neighborhood are especially concerned about increased traffic and the potential of increased light industrial development directly behind their neighborhood in the adjacent areas of Stanhope.

Byram has worked very hard with NJ DOT and Sussex County to keep the Route 206 improvements within an appropriate scale for the Township. The completion of the 605 Connector could undo that effort by introducing a much higher traffic volume to that section of Route 206. The project also is proposed on very rugged terrain, which will increase the publicly funded costs for construction. In response to Council objections to not having been kept fully informed about this project and not being included in open discussions to examine the positive and negative effects, stakeholder meetings are now scheduled to come in 2005.





## Lackawanna Cut-off Re-opening

Over the course of the last several years, the Byram Township Council, Planning Board, and Environmental Commission have raised serious concerns about the re-opening of the Lackawanna Cut-off. The total project calls for complete reconstruction, including track and signal improvements to approximately 60 miles of right-of-way (the Cut-off is 28 miles of this), new stations, parking facilities, a train storage yard, and additional rail rolling stock.

Ridership in New Jersey is projected to be 60 people. Most ridership is projected to be from Pennsylvania, where commuters would make the three-hour journey to New York City. The proposed New Jersey stations in Blairstown and Andover Township are proposed for Transit Oriented Developments (TOD). While TODs are often an element of smart growth, they typically occur in urban or denser suburban areas where high-density development and walkable communities grow up in proximity to commuter lines. The TOD in Andover Township would be a 'green fields' development, creating instant density right along the border with Byram Township, where Byram has zoned for very low 10-acre density. The Andover TOD would back up to Byram's Forest Lake community; and the Cut-off line would also pass next to the Lackawanna community, C.O. Johnson Field, and the East Brookwood neighborhood.

New Jersey ridership is projected to be very low and the public costs for study, construction, and operating costs are very high. The number of commuters that are projected to be removed from Interstate 80 by the re-

opening will not begin to counterbalance the increased number of commuters on local roads traveling to the projected station locations. Byram is concerned that the line might be used to haul freight from the planned four-fold expansion of the New York-New Jersey ports and to haul New York City garbage to Pennsylvania landfills. In September 2004, the Township Council called its own meeting about the project, where 75% percent of those in attendance opposed the project. Following that meeting, the Council passed a resolution officially opposing the Cut-off reactivation.





## Circulation Plan

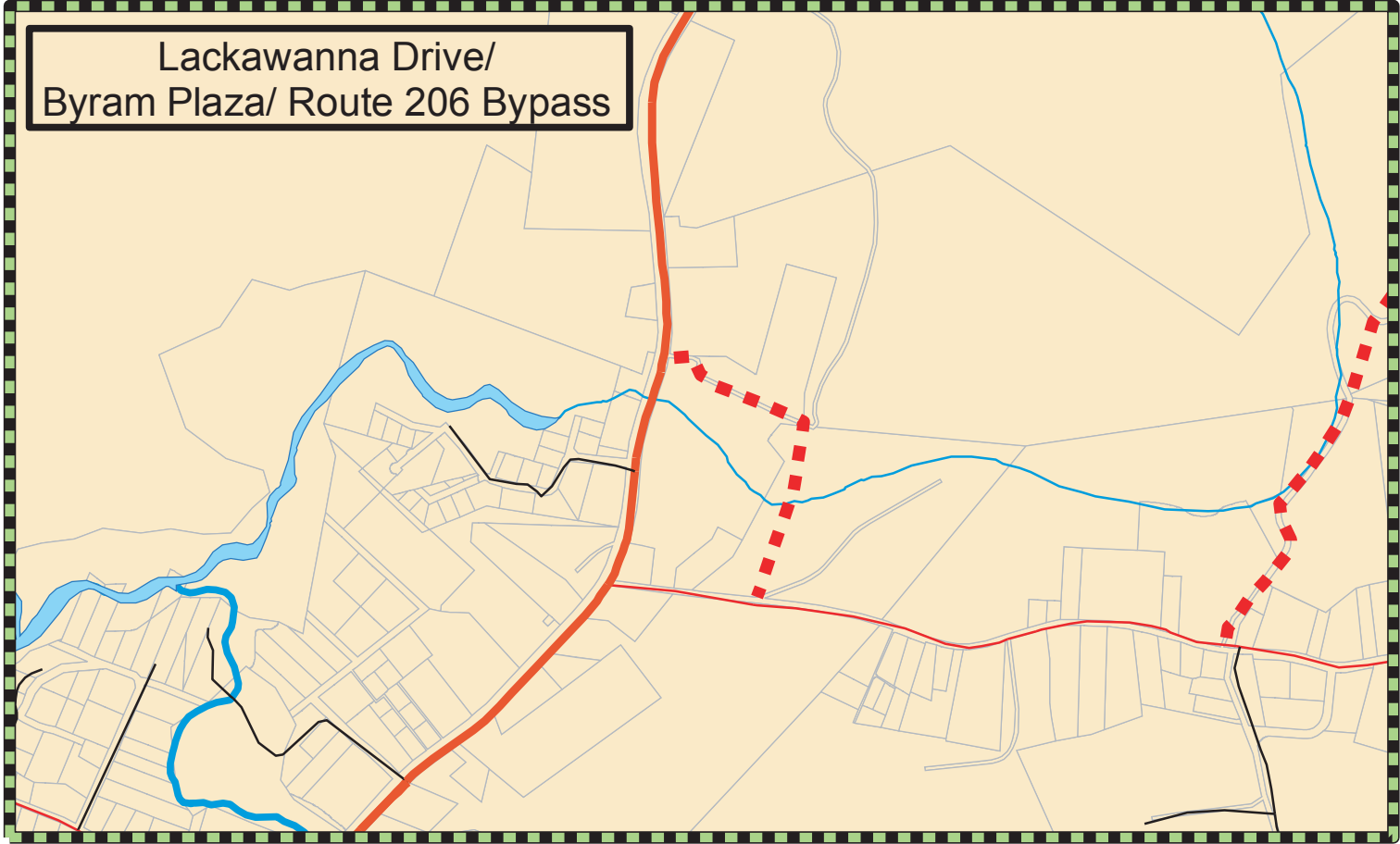
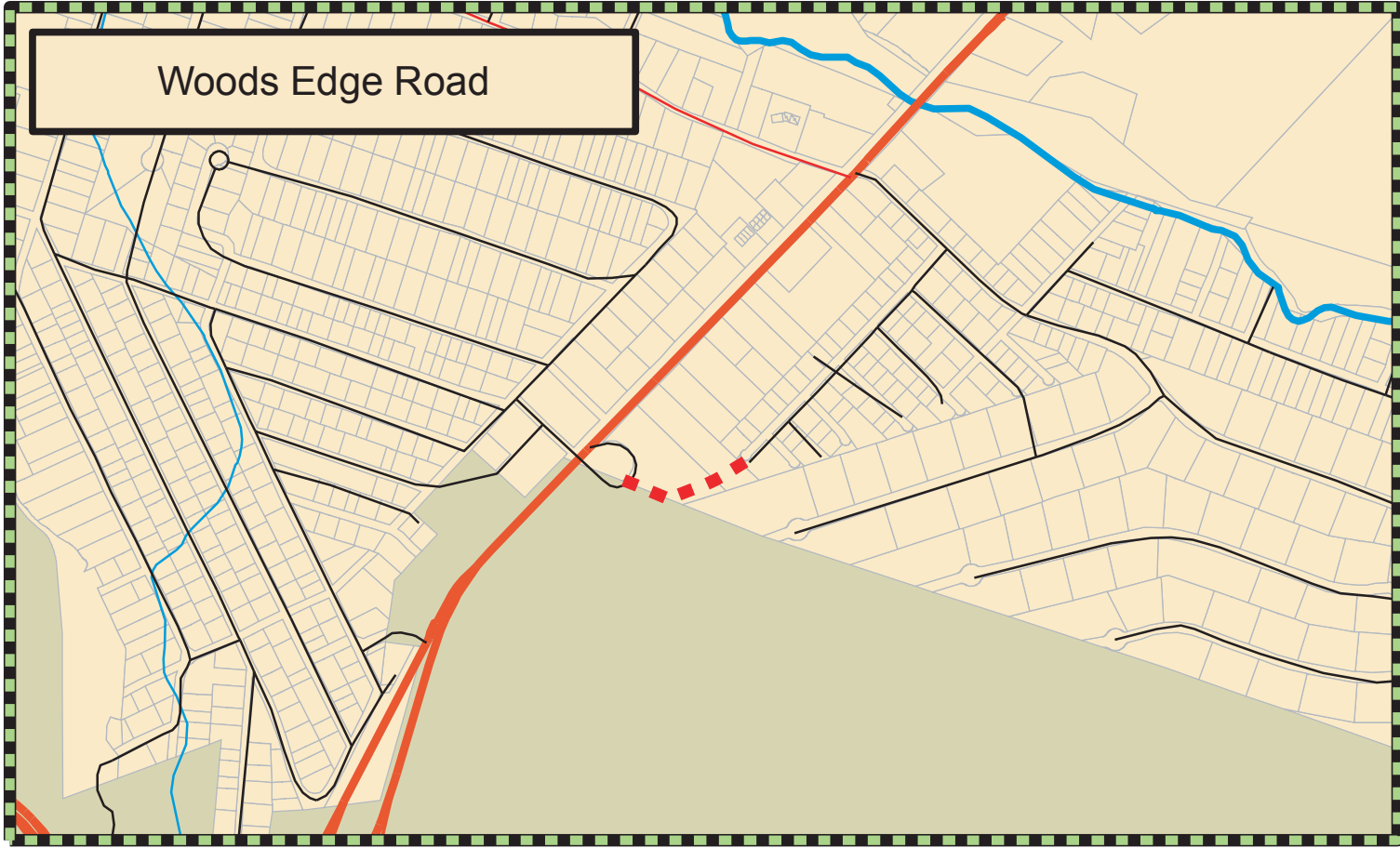
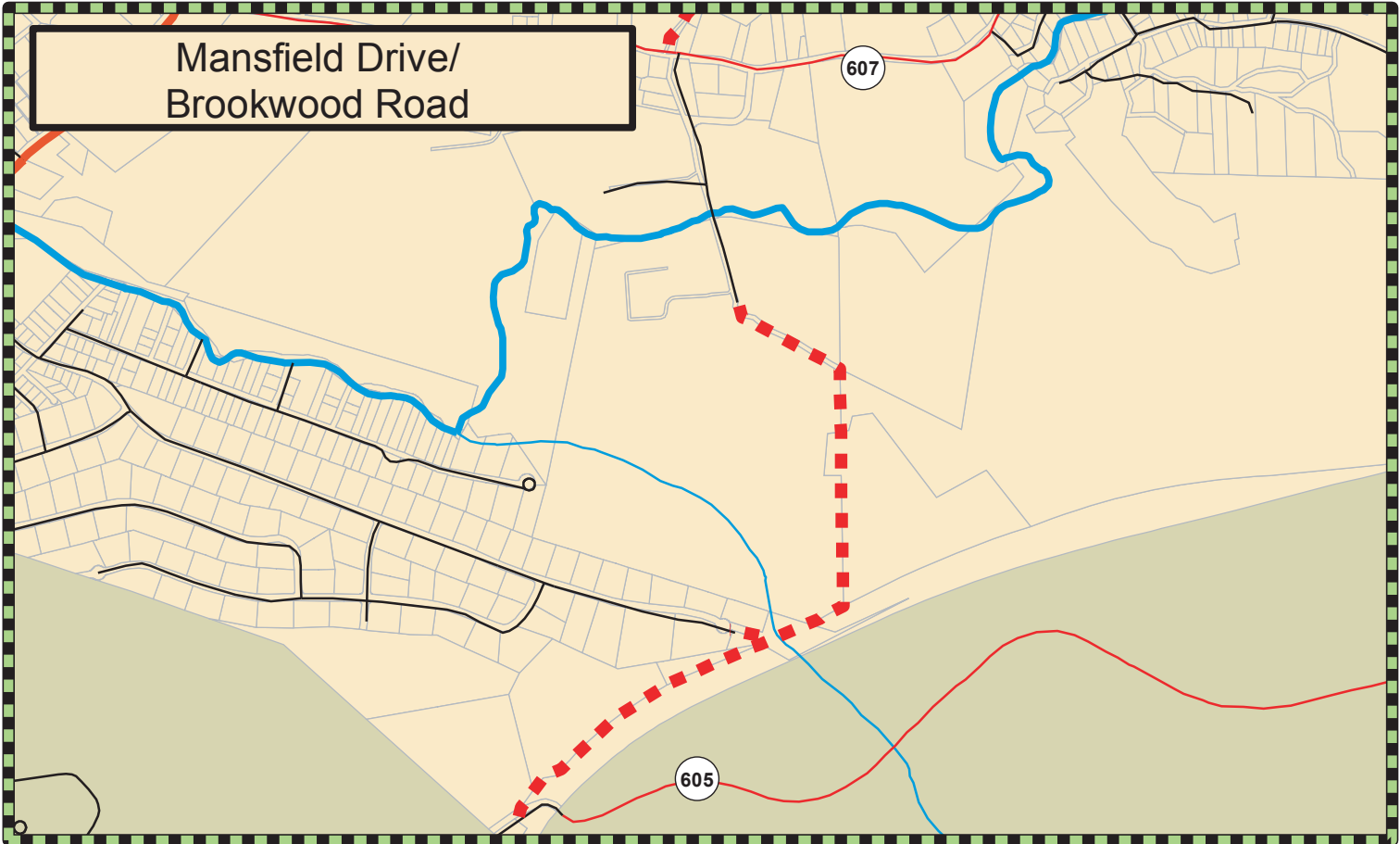
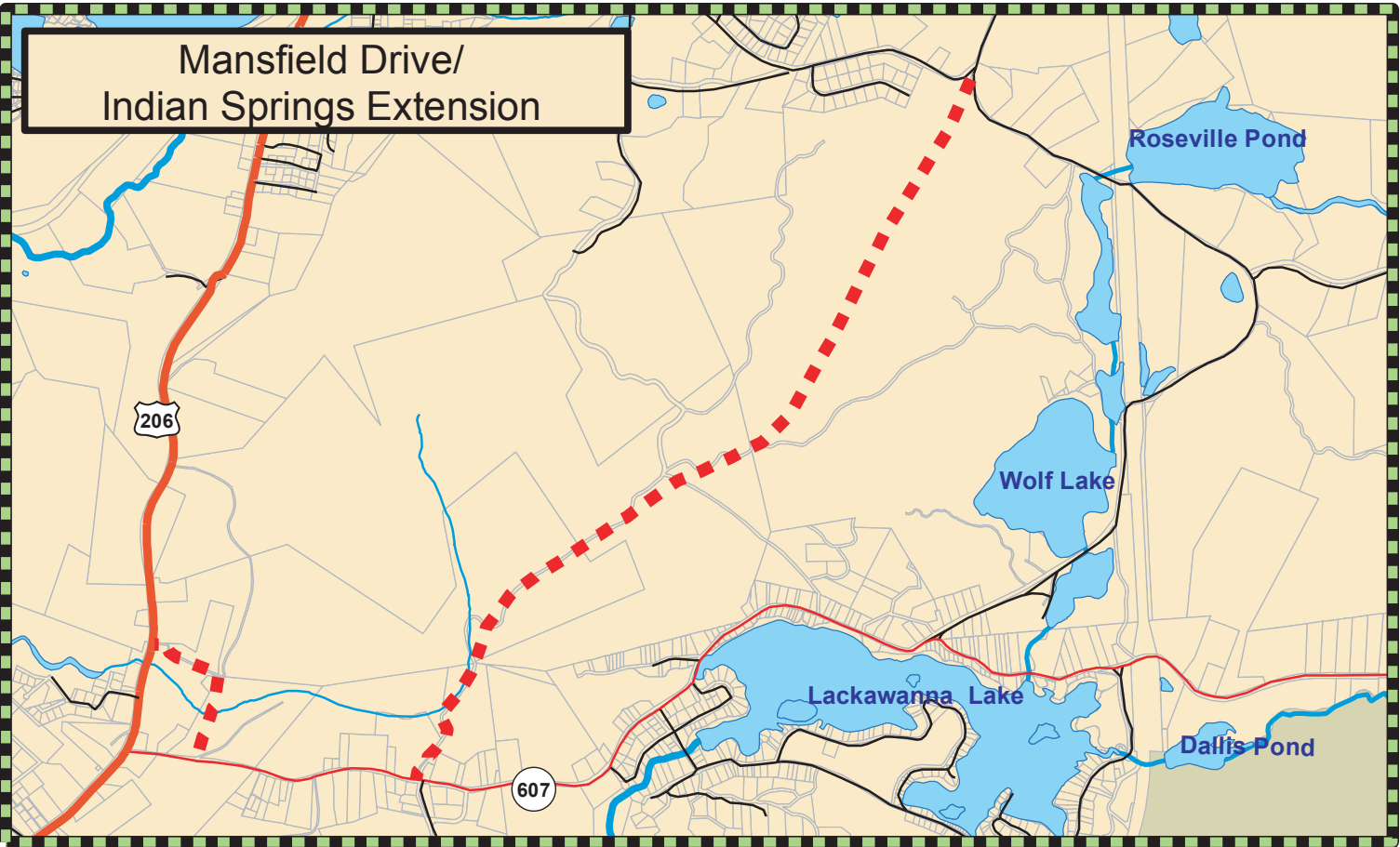
This Circulation Plan promotes the safe and convenient movement of goods and people throughout the Township by recommending changes, improvements, and additions to the transportation infrastructure. This Plan looks to promote and accommodate the Land Use Plan proposed in the Master Plan. It therefore does not look to promote growth in areas that are slated for reduced density, and it does recommend new roads for ease of access to key Village Center areas.

This plan retains some of the proposed new roads on the 1988 Master Plan circulation map, in so much that the Township has decided where those roads should be, if or when they are ever built. If certain areas are developed in the future or if residents need a road in the future, the routes shown on the 1988 circulation map would be preferred. It is imperative to understand that many of these roads are unlikely to be built and that their purpose should be to resolve circulation problems and not to promote development in undeveloped portions of the Township.

Many of the paper roads on the official map of the Township are proposed to be transformed into hiking or multi-use trails in the Bicycle and Pedestrian Feasibility Study for Byram Township. The changes in the Land Use plan that lower residential densities in some areas affected by these proposed routes will also limit probable development. The Township's advocacy to have these low-density residential areas included in the Highlands Preservation Core will obviate the need for some of these roads. If built, these new roads should be designed with sufficient 'traffic calming' elements to keep them from becoming short cuts or speedways, especially if they might promote more traffic through existing residential areas.









## Proposed Roads in 1988 that have been Constructed

Old Wolf Lake Road – Old Wolf Lake Road has been poorly paved from Lackawanna Drive to Roseville Road. This Circulation Plan, however, proposes that Old Wolf Lake Road should either be improved and redesigned, especially at the intersections, or abandoned and that abandonment is an acceptable option. This road is not necessary and presents a very dangerous intersection with Lackawanna Drive. This right-of-way might be more useful as a key link in the Highlands Trail.

Proposed Roads in 1988 that are no longer Proposed  
The following proposed roads no longer meet the needs of the citizens of Byram, nor do they fulfill the Smart Growth principles that drive the Land Use Plan and this Circulation Plan.

- Iron Mine Road from Route 206 and Roseville Road
- Brookwood Drive extension to Mansfield Drive
- Chestnut Trail between Hawthorne Trail and Cranberry Ledge Road
- Colby Drive extension to Mansfield Drive
- Proposed Development Road from Lackawanna Drive to Mansfield Drive
- Proposed Development Road from Brown Drive to Lake Drive and Mansfield Drive
- Proposed Development Road from Roseville Road to Sparta-Stanhope Road

## Proposed Roads in 1988 that are still Proposed

Mansfield Drive/Indian Springs Extension – If the Township decides that an additional east-west connector is needed, then this would be the preferred route, over the mountain from the Mansfield Drive/ Lackawanna Drive intersection to the Roseville Road/ Tamarack Road intersection. This extension would serve as a way to connect the Forest Lake and Johnson Lake neighborhoods with the municipal complex, Township schools, Byram Plaza, and the new Village Center. This extension would also provide improved access to the Village Business area along Route 206 and serve as an alternate to Route 206 between Lackawanna Drive and Roseville Road.





## Mansfield Drive and Brookwood Road

There is a Mansfield Drive extension to Brookwood Road now under construction as a hiking/biking trail, but the width of this trail has been reduced so that it is no longer a feasible emergency access to the East Brookwood neighborhood. With only one route of ingress and egress for the East Brookwoods, it is necessary to find a way to provide emergency access other than the Route 206 and Brookwood Road intersection. The close proximity of the Mansfield Drive to Brookwood Road connection to Sparta-Stanhope Road also presents the possibility of connecting these roads to Sparta-Stanhope Road.

There has been strong opposition among East Brookwood residents to the connection of these three roads to create a new local street system, primarily because these connections could become a short cut from Route 206 to Lackawanna Drive or Sparta-Stanhope Road. This extension might be subject to considerable traffic when Sparta-Stanhope Road in Hopatcong is developed and if the Route 605/Acorn Street connector is built.

However, the Mansfield Drive to Brookwood Road to Sparta-Stanhope Road extensions would provide improved ingress and egress to the elementary schools and municipal complex/police station on Mansfield Drive and a much shorter route to Lenape Valley Regional High School (saving on bus travel and that school budget expense) and to the Sussex County Branch Library on Sparta-Stanhope Road. In addition, these roads would provide an alternative route to the Byram Plaza and new Village Center for Brookwoods residents, thus relieving congestion on Route 206

Taking all of these concerns into consideration, this circulation plan recommends the following:

1. Mansfield Drive and Brookwood Road should be connected with a limit access roadway as an emergency-traffic-only right-of-way with an emergency-vehicles-only gate at either end. The existing trail project should be re-engineered to accommodate emergency vehicle traffic in the event that either Brookwood Road or Mansfield Drive is blocked and evacuation is necessary.
2. Mansfield Drive should be extended and connected to Sparta-Stanhope Road with a limited access roadway as an emergency vehicle and school bus only right of way. The roadway should have appropriate signage and a coincident township ordinance that restricts use of the roadway to emergency and school bus traffic only.
3. If the Township decides that additional access to the Mansfield Drive Schools, Police Station, Municipal Complex, Byram Plaza and the Village Center for Lake Lackawanna and Brookwoods residents is needed, then the Mansfield Drive and Brookwood Road connection should be made a local road with unrestricted access. One technique for limiting the negative effects of unrestricted access would be to require maximum traffic calming techniques in the design of this road.
4. This circulation plan does not advocate unrestricted access from Sparta-Stanhope road to either Mansfield Drive or Brookwood Road.







## New Proposals for New Roadways

Woods Edge Road – Woods Edge Road in the East Brookwood neighborhood should be extended with a one-way connection to the Acorn Street jug handle. This one-way, out-bound-only connection would give East Brookwoods residents improved access to Route 206 and should be designed and constructed with maximum traffic calming measures.

Lackawanna Drive/Byram Plaza/Route 206 Bypass – A bypass should be constructed to help alleviate congestion at the Route 206/ Lackawanna Drive intersection. This bypass would provide better access from Lackawanna Drive to the Byram Plaza and to northbound Route 206. The preferred route of the bypass would be through the 26-acre lower quarry parcel. Not only would this bypass ease traffic congestion and confusion at the Route 206/ Lackawanna Drive intersection, it also would facilitate better road and open space connections between the Village Center Zone, the Byram Plaza, and any subsequent development on the lower quarry parcels in the Designated Village Center. This route has been proposed previously by the Environmental Commission to help generate a more comprehensive solution to the Route 206/ Lackawanna Drive intersection traffic problems.

## Other Citizen Concerns Identified in the Master Planning Process

- Parking is required at the Village Center because not all residents will walk there.
- Keep dirt bikes and All Terrain Vehicle traffic off local roads.
- North Shore and South Shore Roads should be well maintained because they are the only means of ingress and egress for the Cranberry Lake neighborhoods.





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**BYRAM**  
Master Plan



# COMMUNITY FACILITIES







# BYRAM

## COMMUNITY FACILITIES

### EXISTING COMMUNITY SERVICES

#### Police Services

The Township of Byram Police Department consists of 15 officers and two clerical staff. The Department's equipment consists of six patrol cars (three marked and three unmarked), a fully equipped photo lab, and videotape equipment. The Police Department is headquartered in the rear portion of the municipal complex and consists of a locker room with adjoining lavatory, an evidence room, detective's office, lieutenant's office, patrol room, processing room, chief's office, photo lab, and a clerical area doubling as a dispatch area. The Department is dispatched regionally from the Hopatcong Police Department, which also dispatches police calls for Stanhope Borough. Currently, one-man patrol cars are deployed during parts of each day, although two-man cars are the average deployment.



In 2004, the Police Department's annual operating budget was \$1,405,000, with \$1,259,000 for salaries and \$146,000 for other expenses.

In 2000, the Township had a ratio of 1.8 police officers per 1,000 persons, below the County and State average. In 1988, there were 1,049 total offenses in the Township; in 2003, approximately 791.



Activity Report - Byram Township Police Department			
	2002	2003	change
Robbery	0	0	0
Sex Offense	3	6	3
Burglaries	20	14	-6
Theft	39	62	23
Motor Vehicle Theft	4	4	0
Assaults	27	41	14
Arson	2	1	-1
Fraud	29	29	0
Criminal Mischief	86	126	40
Weapons	0	0	0
Narcotics Offenses	16	46	30
Arrests (Adults & Juvenile)	265	263	-2
Alarms	245	317	72
Disorderly Conduct	121	169	48
Motor Vehicle Accidents	298	293	-5
Vehicle Related activity	7527	5677	-1850
Medical Assists	282	312	30
Miscellaneous calls	3688	3365	-323
Total Incidents	12652	10725	-1927



## First Aid

The Lakeland Emergency Squad serves Byram, Andover Borough, and Andover Township, with facilities in Byram and Andover Township, both located on Route 206. The squad has three modular ambulances and an emergency command center housed in the Byram and Andover facilities. Approximately 40 active squad members answer an average 900 calls per year using a paging system for notification. An emergency services building on Lee Hill Road serves both emergency and fire departments.

## Fire Services

Byram is served by the Byram Township Fire Department (formerly the Cranberry Lake Volunteer Fire Department), with stations on Route 206 near Cranberry Lake and opposite Johnson Boulevard and at

the intersection of Lackawanna Drive (Route 607) and Roseville Road. In 2004, there were 42 volunteers. The department's six vehicles include a chief's car, three engines, a tanker, and a rescue vehicle. A four-wheel drive vehicle is used for brush fires, which account for 30% of all fires in the Township. All personal protective gear is in compliance with federal standards. The Department also uses the Lee Hill emergency services building.

## Schools

The Byram Township school system consists of two schools serving kindergarten through eighth grade. Township students in grades 9-12 attend Lenape Valley Regional High School, a three-town school located in Stanhope Borough. The school facilities described below are based on the best available information. Projected school enrollments will be affected by the residential zoning revisions in this Master Plan.



## Circulation Goals

- Establish a circulation system that supports the regional and county network and facilitates movement between various parts of the Township.
- Create pedestrian walkways, bikeways, and other pathways to enhance both the ability and desirability of walking and bicycling.
- Establish trails and greenways linking neighborhoods, schools, recreational facilities, and community facilities with the lake communities and the Village Center.
- Retain rural roadways, with forested roadside shoulders, wherever possible.
- Participate in the planning and design of all County and State transportation projects to achieve Context Sensitive Design.





## Byram Intermediate School

The Byram Intermediate School, at 12 Mansfield Drive, serves grades five through eight. Byram's 1988 Master Plan cited enrollments of 650-675, when kindergarten through eighth grade students were housed there. The 2004-2005 enrollments were 562, with school capacity listed as 653 to 670, or about 18-19 students per classroom.

The original building was constructed in 1967, with additions in the mid-1970s and 1980. There are now 35 classrooms, two libraries, two cafeterias with one serving as an all-purpose room, a music room, computer room, and two playgrounds for third-to-fifth and sixth-to-eighth graders, as well as three baseball/softball fields and one soccer field.

## Byram Lakes Elementary School

The Byram Lakes School, at 11 Mansfield Drive, was completed in time to open for the 2003-2004 school year to serve children in kindergarten through fourth grade. Of the \$15,575,000 construction cost, \$4,609,200 was obtained through a State grant and \$10,965,800 was approved through a public referendum to be paid through local property taxes. The Byram Lakes school has 43 classrooms, a library, 'cafetorium,' gym, computer lab, media center, music room, and art room. It has its own playground but shares field space with the Intermediate School. The 2004-2005 enrollments were 647 with a capacity listed as 660 to 720, or roughly 15-17 students per classroom.

## Circulation Objective

Continue to incorporate Context Sensitive Design principles into Route 206 improvements to insure adequate traffic flow, limitations on speed, pedestrian and automobile safety, access, as well as attractive roadway design and traffic calming.

- Encourage appropriate mass transportation, namely buses and shuttles, for internal and external movement that will not unduly promote development in and around Byram.
- Clearly state the Township's opposition to the Lackawanna Cut-off re-activation and ensure communication with County and State transportation officials and neighboring affected communities.
- Clearly state the Township's opposition to the County Route 605/Acorn Street extension and ensure communication with County and State transportation officials and neighboring affected communities.
- Recommend additional local road connections where necessary for safety but not to promote development in the limited-growth areas of the Township that lie outside the Designated Village Center.
- Create open space trail linkages between all neighborhoods and destinations in Byram while connecting with regional trails and Allamuchy Mountain State Park.
- Update the official map by classifying roads according to function and by identifying all major existing and proposed rights-of way
- Provide safe vehicular, pedestrian, and bicycle circulation by improving traffic signals at key intersections, utilizing traffic calming measures, providing adequate on and off street parking and sidewalks in appropriate locations
- Enhance the appearance of the Township's transportation corridors and improve signage on roads and at gateway locations to facilitate circulation and identify key destinations in the Township.
- Take measures to mitigate the effects of increased regional traffic, including actively participating in municipal, County, and State planning initiatives to control growth and sprawl in New Jersey and re-examine municipal, County, and State transportation policies.



The campus for these two schools covers 106 acres, with the built area where the schools and fields are located occupying roughly one-third to one-half of that.. The remaining area is wetlands, containing habitat for threatened and endangered species. Hence, there is little or no room for expansion on the land currently owned by the Board of Education. The Township Open Space Committee has suggested that the wetlands be permanently preserved as part of Byram's open space program.

### Consolidated School

Prior to the construction of the Byram Lakes Elementary School, this building on Lackawanna Drive served kindergarten through second graders. The building (built in 1936, with additions in 1951 and 1957) is now owned by the Township and is called the Byram Civic Center. Various recreation and senior programs take place there, and parts of the building are rented to a special school for autistic children, Celebrate the Children.

### Lenape Valley Regional High School

Byram students in ninth to twelfth grades attend Lenape Valley Regional High School in Stanhope, which also serves Stanhope and Netcong boroughs. Enrollment in 2004-2005 was between 850 and 875. Current and projected enrollments are close to the school's total capacity of about 870-900 students. A new future needs assessment was being prepared in October 2004, with school officials estimating that capacity will prove adequate for the next two to three years and then will depend on planning and development in the three sending districts. In fall 2004, Lenape had 43 classrooms (including four being built in existing space during the 2004-2005 school year), a full and an auxiliary gymnasium, a cafeteria, an auditorium, a weight room, and a media center.





## COMMUNITY FACILITIES PLAN

### Police Services

Future requirements for police protection services will depend on various factors, including the zoning revisions in this Master Plan, that will affect future needs. General standards have been developed by the State as guidelines to predict the need for police manpower and equipment based on population. The following table shows existing and projected needs based upon these standards. The general standard is two policemen and 0.6 pieces of equipment per 1000 population. Based on these standards, there is a currently a need for additional manpower.

It should be noted that that such standards always come with the advisory that population ratios alone cannot determine actual need. In addition to population ratios, actual local need and local/regional standards should be considered. Factors in defining actual local need should include the nature of most crimes, areas and times of day of occurrences, and changes in crime patterns.



Recent development patterns increasing the population in Byram's northern area have led to the construction of a small emergency services facility on Lee Hill Road at its intersection with Stonehedge Lane.

Police Services; Existing & Future Needs					
Function	Standard	Existing	Need Calculated for 2000 population	Future Need at buildout - as per current zoning	Future Need at buildout - as per proposed zoning
Manpower	2.0/1000	15	17	28	23
Vehicular Equipment	0.6/1000	6	5	9	7





## Fire Services

Future fire protection services will call for ongoing assessments of personnel, facilities, and equipment. The Byram Township Fire Department is entirely volunteer, but manpower needs are increasingly strained. Attracting sufficient volunteers will be more difficult in the future, in Byram and other municipalities, where development attracts commuters, whose time at home and interest in the community is limited by their lifestyle.

The 1988 Master Plan suggested that the Township might consider offering incentives to attract volunteers, such as Township contributions to a retirement plan, tax rebates, or a per-fire fee. The Township should also monitor the State's on-going efforts to provide similar incentives.

The Fire Department also uses the Lee Hill emergency building to serve the large and growing population in that part of the Township.

As the Township develops, there may be a need for aerial equipment to service larger commercial or industrial structures.

## First Aid

The First Aid Squad is also a volunteer service that will probably find it increasingly difficult to attract sufficient manpower. As with fire protection services, the Township should consider incentives to encourage volunteer participation.

## Schools

The Township of Byram Board of Education is responsible for planning all school facilities and was at work on a new long-range facilities plan at the time this Master Plan was completed.

Data about the 2003-2004 enrollment and capacity showed a total enrollment of 1,175 students and a total capacity of 1,313 to 1,390 students. From the 2003-2004 to the 2004-2005 school year, enrollment in K-8 increased by 34, to 1,209. Were this trend to continue, within five years the K-8 population would increase by roughly 170 students, still generally within the capacity of the two schools. The residential zoning revisions in this Master Plan and the development restrictions imposed by the Highlands Act should reduce those projections considerably.



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**BYRAM**  
Master Plan



# OPEN SPACE AND RECREATION





# BYRAM

## OPEN SPACE, PARKS AND RECREATION

### BYRAM TOWNSHIP OPEN SPACE AND RECREATION PLAN

The Byram Township Open Space Plan, completed in 2000, was a cooperative effort of the Byram Township Open Space Committee and the Township's open space advisors from Morris Land Conservancy. The plan recognizes that 25% of the Township is currently permanently preserved open space and that an additional 60% of the land within the Township has open space potential.

The plan identifies the following goals: preserve the Lubbers Run greenway, enhance the existing trail system, connect protected State and municipal open space, acquire land for active recreational field space, protect the Township's drinking water supply, protect the Township's farmland, protect the Township's forests, protect the Township's steep slopes, and adhere to the principles of the State Development and Redevelopment Plan. The



Byram Open Space Plan also recognizes the increased development pressure in the region and the role of open space protection in managing that growth.

The Plan catalogs the natural, built, historical, and cultural resources of the Township, summarizes the 1988 Master Plan, and describes the other public and private land conservation programs operating in the region.

It inventories Byram's open space lands by owner, including State, municipal, quasi-public, private, commercial and non-profit open space, as well as undeveloped lands in private ownership. The total amount of protected land is 3,264 acres, with 93% of the publicly held land in permanent protection. About 25% of the total land area of the Township is preserved, with 94% of that being State parkland (Allamuchy Mountain State Park). A total of 7,928 acres of land is still undeveloped, including vacant







lands, farmland, Boy Scout and private campgrounds, NJDOT property, and non-profit holdings. This represents another 60% of the Township available for open space protection. The Plan's recreation needs assessment calls for additional active recreation facilities, an expanded trail system, and more aggressive protection of key historic resources. This recreation assessment, however, was written before the Township hired its first full-time recreational director and began to expand recreational facilities and programs, including a \$1.5-million expansion plan for C.O. Johnson Park (\$250,000 funded through a low-interest State Green Acres loan).

There is also a need to protect drinking water supplies for private well owners and the Township's 11 small water purveyors (10 private, one owned by the Sparta Water Utility), protect the lake ecosystems from eutrophication, link current open space holdings, and protect farmland. The Open Space Plan also supports the findings and recommendations of the Lubbers Run Greenway Project.

Funding sources for preservation are listed, as are numerous types of preservation tools, from direct acquisition and conservation easements, to leases and zoning changes.

The document ends with a priority acquisition list that includes project areas, including Allamuchy Mountain State Park, Lubbers Run, Dallis Pond, Camp Westby, Wolf Lake, Roseville Pond, Panther Lake, Roseville Pond to Kofferls Pond, and various farms or woodland parcels. The Lakefront Development Plan also included additions to this list for each of the Lake Communities, and supported many goals of the Open Space Plan, including preserving the Lubbers Run Greenway, protecting the Township's drinking water supply, protecting the Township's forests, protecting the Township's steep slopes, and adhering to the principles of the State Development and Redevelopment Plan.

For further details concerning the Byram Township Open Space and Recreation Plan, please refer to the original document.



## LUBBERS RUN GREENWAY PROJECT

The Byram Township Environmental Commission commissioned the Lubber's Run Greenway Project in 1997 and updated it in 2000. The study documents natural resources along the two-mile stretch of Lubbers Run that flows through Byram from Lake Lackawanna to the Musconetcong River. The greenway plan then proposes to link local historic and cultural landmarks using the stream corridor and existing and proposed local trails. A stream corridor protection plan recommends preserving critical ecological areas identified in the study, extending to the entire Lubbers Run sub-watershed.

Siltation and surface water quality degradation were found to pose a threat to the integrity of the stream corridor. Existing and future development in the area are the greatest threats, including commercial

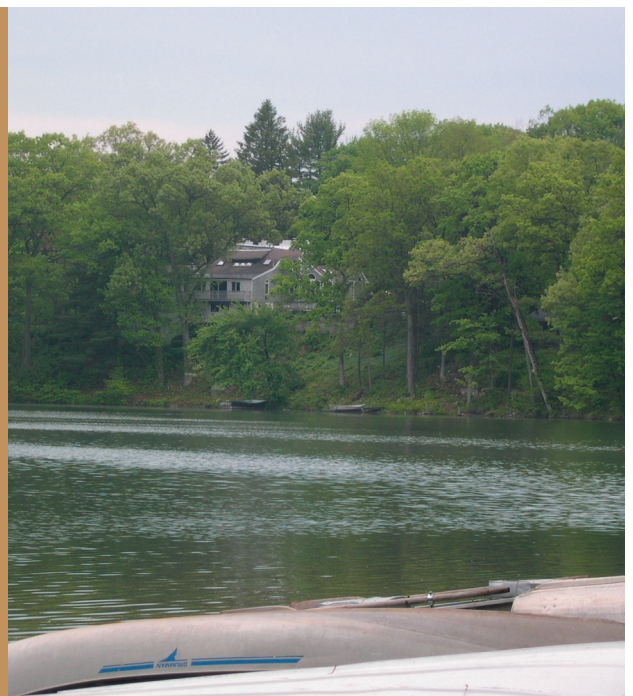
development, Route 206 improvements, and the proposed Village Center. Several homes in the Lake Lackawanna neighborhood that front on Lubbers Run have extensive lawns extending to the water's edge, and this typically results in fertilizers and pesticides contaminating the stream. In comparison, most homes in East Brookwood—with some exceptions where homeowners have been clearing and filling in the floodplain—maintain a vegetative buffer near the stream.

Historic resources within the Lubbers Run and associated Musconetcong watersheds include the old schoolhouse, Lockwood Cemetery, ruins of Lockwood Forge, Waterloo Village, and Sussex Branch Trail. The study recommends expanding Byram's trail system to complete several key linkages within these watersheds. The municipal complex, the school, the Lockwood landscape nursery, and certain residences in the Lake Lackawanna and East and West Brookwood



## Open Space and Recreation Goals

- Provide open space and recreation amenities to all residents throughout the Township.
- Implement the recommendations of the Open Space and Recreation Plan, the Byram Trails Plan, and the Lubbers Run Greenway Project.





neighborhoods disrupt visual and scenic continuity along Lubbers Run.

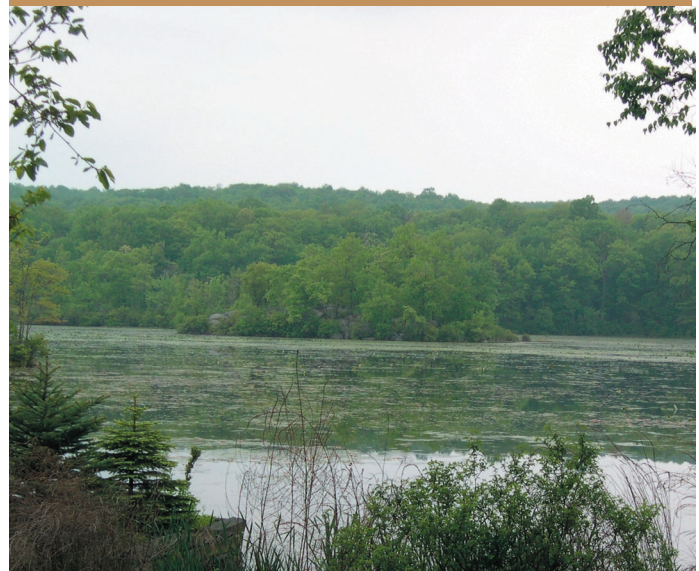
Critical areas in the stream corridor and the extended Lubbers Run watershed were divided into three zones. Zone One captured the most critical areas, including identified wetlands, floodplains and forested slopes in excess of 15%. Zone Two was a 150-foot stream buffer, considered critical. Zone Three included a 500-foot stream buffer and remaining forested areas.

Recommendations included land acquisition and conservation easements in critical areas and the creation of an interpretive trail, including footbridges over the stream and a pedestrian underpass where Lubbers Run crosses Route 206. Other recommendations include maintenance of 'gateway' areas in the stream corridor, landscape buffering between incompatible uses, and land development ordinances to control construction in sensitive areas. Limiting access to sensitive lands in public ownership is recommended. Finally, public education is seen as instrumental for the success of any of the recommendations.

The Lubber's Run Greenway Project included an extensive description of Best Management Practices (BMPs) or special methods to maintain or develop land to improve water quality in the stream corridor. Many of these recommendations were incorporated into the Lakefront Development Plan. Key recommendations include native vegetation buffers and forest retention, strategic lawn placement, and landscaping using native plants. The greenway plan includes an excellent native plant list to inform homeowners of the plants they

## Open Space and Recreation Objectives

- Preserve the Lubbers Run Greenway.
- Develop a town-wide trail system, as illustrated by the Byram Trails Map, the Open Space and Recreation Plan, and the Lubbers Run Greenway Project.
- Acquire, enlarge and connect protected State, municipal, and non-profit lands in the Township.
- Establish a green boundary that helps delineate the growth zone but continues to allow important connections between the Village Center and the outlying Environs.
- Use open space acquisition to protect the sources of the Township's drinking water.
- Acquire land for additional active recreation field space.
- Promote recreational opportunities for all residents, especially teenagers and senior citizens.
- Enhance the recreational opportunities through better use of current facilities.







should use and an exotic/invasive plant list of plants to avoid or remove. Stormwater management with vegetated swales and filter strips is another BMP, as are wet ponds and detention basins. Salt reduction during de-icing in winter and increased street sweeping are roadway management practices that can improve water quality.

Suggested ordinances include measures for headwater protection, stormwater management, forest preservation, natural resource inventories, and development alternatives, such as clustering and Transfer of Development Rights (TDRs). Open space provisions are discussed, as are the benefits of conservation easements; and potential cooperative partners for open space acquisition are listed.

The Lubbers Run Greenway Project is an excellent model for studying an issue in detail and devising a comprehensive set of solutions. The Lakefront Development Plan not only follows this example, but also incorporates many of the recommendations designed to improve water quality in Lubbers Run and applies them to the much larger lake Communities.

For further details concerning the Lubber's Run Greenway Project, please refer to the original document.



## BYRAM TRAIL AND BIKEWAY PLAN

The Village Center vision incorporates a community green, recreational amenities, and spaces for town-wide community interaction. In order to further the vision and promote pedestrian and bicycle travel throughout the Township, Byram has developed and mapped a system of existing and proposed trails to link the residential neighborhoods with the Village Center, school and municipal complexes, recreation areas, open spaces, neighboring towns, and the several regional or national trails that traverse the Township.

However, the Township's Smart Growth Plan identified potential obstacles to establishing this town-wide trail system. To help overcome these obstacles, the Township obtained a grant from the U.S. Environmental Protection Agency to study and improve the pedestrian and bicycle connections in and around the proposed Village Center. The Bicycle and Pedestrian Feasibility Study for Byram Township was published in October 2003.

The study focused on making Byram pedestrian-friendly, as well as on open space and recreational opportunities associated with the trail plan. Some of the plan's goals include:

- Reunite Byram Township and establish a sense of community.
- Increase the recreational opportunities in Byram Township.
- Provide pedestrian access to the historical landmarks and natural resources in and around the Township.
- Link together and improve existing pedestrian/bicycle paths, including the Mansfield Drive and

Route-High Glen bicycle paths.

- Via bicycle and walking paths, connect Byram Township neighborhoods to each other and to the proposed Village Center, area businesses, amusement parks, Allamuchy Mountain State Park, and other local parks and recreational areas.

The plan outlined the Township's existing trail system, including:

1. Sussex Branch Trail.
2. Lackawanna Cut-off.
3. Morris Canal Greenway.
4. Lubbers Run Trail/Greenway.
5. Allamuchy Mountain State Park.
6. Paper streets, bridle paths and utility rights-of-way.

The plan recommended a four-phased approach:

5. Link the Route 206-High Glen bicycle path to the Mansfield Drive bicycle path.
6. Link the proposed pedestrian tunnel under Route 206 at Lubbers Run to the Mansfield Drive bicycle path and the Route 206-High Glen bicycle path.
7. Connect the proposed Village Center to adjacent neighborhoods and businesses.
8. Link existing sections of trail systems and improve access to surrounding neighborhoods, schools, and parks.

For further details concerning the Byram Trail and Bikeway Plan, please refer to the original document.







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**BYRAM**  
Master Plan



# HISTORIC PRESERVATION





# BYRAM

## HISTORIC PRESERVATION

The Historic Preservation Element identifies Byram's historic sites and resources to help preserve and protect the Township's history. The Historic Preservation Element is also intended to help understand where the community has been, what it is now, and what it may accomplish.





## History

The Township of Byram has a long and rich history. In 1753, Sussex County became the thirteenth county in New Jersey. Byram Township was officially created on February 5, 1798, when it separated from Newton Township. At this time, Byram Township included all of Stanhope, as well as parts of both Sparta and Hopatcong. Between 1798 and 1957, the Township's borders were changed six times; creating the Township that exists today.

## Registered Sites and Structures

The preservation of historical resources is an extremely important aspect of preserving the social fabric of the community. The following is an inventory of sites and structures that are on the state and national historic register.

Property or District Name	Location	State Register	National Register
Delaware, Lackawanna and Western Railroad Lackawanna Cut-off Historic District	Extends from the Delaware River in Phillipsburg, Warren County, to the Hudson River in Jersey City, Hudson County.	11/26/1973	10/1/1974
Morris Canal	Phillipsburg, Warren County, to Waterloo Village in Byram	11/23/1976	8/24/1977
Rutan Log Cabin	Musconetcong River and County Route 604, in Waterloo Village	2/3/1977	9/13/1977
Waterloo Village	Musconetcong River and County Route 604	2/3/1977	9/13/1977





## Historically Significant Properties

Following is an inventory of historically significant properties in the Township, as identified by the Byram Township Historical Society. The properties are not listed by importance but rather are separated by type. Some of the descriptions were taken from the short history in the 1994 Natural Resources Inventory.



Property	Block & Lot	Date of Construction/Description
Historic Schools		
The Log School		Circa 1850 until construction of Cut-off (1908-1911).
Roseville Schoolhouse	Municipal Complex	Circa 1850. The Historical Society moved the building in 1980, refurbished and maintains it.
Amity Schoolhouse	Block 344, Lot 7	Circa 1840. Foundation remains.
The Mud School		19 <sup>th</sup> Century.
Cranberry Lake Schoolhouse		Early 20 <sup>th</sup> Century.
Historic Mines and Iron Working Centers		Most operating in the 19 <sup>th</sup> century.
Columbia Forge		Built c.1800; on Lackawanna Drive and Lubbers Run. Made anchors; remains of dam still visible.
Lockwood Furnace		On Lubbers Run just west of Route 206.
Roseville Mine		Eastern corner of intersection of Roseville/Amity.





Gaffney Mine		About 400 feet east of Lee Hill Road.
McKain (or McCain or McKean) Mine		South of Tamarack Road opposite Johnson Lake.
Cascade or Smith Mine		About ¼ mile north of Jefferson Lake on east side of Sussex Branch Trail.
Frenche's Mine		West side of Frenche's Pond.
Bedell Mine		Virtually no traces remain; near Gaffney Mine.
Allis Explorations		North of Cascade Mine.
Byerly Openings		Virtually no traces remain; near Roseville Mine.
Charlotte Uranium Mine (Bemco Prospect)		Just south of Cranberry Lake and west of Sussex Branch Trail. Closed and monitored by the State.
Waterloo Village (Andover Forge)		On Waterloo Road and the Musconetcong River; originally an important stop on the Morris Canal.
Old Andover (New Andover Bloomery)		On Musconetcong River, 1.5 miles east of Waterloo. Some foundations of the small hamlet remain.
Historic Cemeteries		
Colby Cemetery		Near Forest Lakes.
Lockwood Cemetery	Block 365, Lot 3	Maintained by the Byram Historical Society. Revolutionary soldiers are buried here.
Historic Railroads		
Sussex Mine Railroad		Built 1848; mule-driven for ore hauling.



Sussex Railroad		Delaware, Lackawanna and Western line; used most of the Sussex Mine Railroad route.
Erie Lackawanna Cut-off		Built 1908-1911; an engineering wonder-of-the-world. Tracks removed 1983-4.
Roseville Tunnel (part of the Cut-off)		The only tunnel on the 28 miles of the Cut-off; 1/5 mile long.
Other Historic Sites		
Indian Villages		One at Frenche's Pond; one at Black Ash Swamp.
Wolf Den		To the west of Cranberry Lake in Allamuchy Mountain State Park.
Byram Family Homestead		Some remains near entrance to Columbia Valley Campground.
Kately Homestead		Circa 1820. Oldest house in Byram.
Lime Kiln		Near Old Indian Spring paper road.
Lockwood Tavern		On Route 206 (originally Morris-Sussex Turnpike); stage stop and trading post; built circa 1807; originally part of the Heminover estate.
Cranberry Lake Amusement Park		Operated from 1902-1911.
Hudson Guild Farm		About 86.5 acres were in Byram; the mansion, built about 1917, is in Hopatcong.
Morris and Sussex Turnpike		State's first chartered turnpike (1801); now Route 206.
Ice Houses		On Cranberry, Jefferson and Waterloo Lakes; operated from 1890s to 1920s..
Lackawanna Railroad Hotel		Also a casino; operated at the same time as the Cranberry Lake Amusement Park; on the site of the current Cranberry Lake Community Club.







Kimm Homestead	Block 348, Lot 9C	Circa 1845. One of the first houses in Byram.
McMurty Homestead	Block 337, Lot 2	Slave graveyard. Found when Tomahawk Lake was being expanded.
Roleson Homestead	Block 334, Lot 14.03	Circa 1820. Rock walls and foundation.
Cranberry Sales Office	Block 216, Lot 72	The original sales office for summer rentals at Cranberry Lake.
Whitehall Homestead	Block 360, Lot 21.01	Circa 1840. Part of Will's Estate.
Spranger Homestead	Block 380, Lot 4	Second oldest house in Byram.
Victory Road	Public Road	Now White Hall Hill Road. Washington used this as a major supply route for the Revolutionary War to get supplies from upstate NY.
Colby Mansion	Block 360, Lot 508	Colby owned from Byram to Lake Hopatcong. This 1909 mansion was modeled on a French chateau.
Kaloua	Block 348, Lot 4	Circa 1910. Built by Colby for his daughter.
Tall Oaks	Block 348, Lot 5	Circa 1911. Built by Colby for his son.



## Recommendations

To protect these historic sites and to obtain and publish information about Byram's history:

- A Historic Preservation Commission should be established in accordance with the provisions of the Municipal Land Use Law. As part of its responsibilities, the Commission should review and render advisory comments on all planning and zoning board applications within the designated area. Voluntary compliance is encouraged.
- The Commission should prioritize historic sites and embark on a process of registering them with the State and nationally.
- The Commission, in consultation with appropriate Township entities, should develop standards, procedures, and design guidelines.
- The Commission should seek out grants and loans to support additional research on the Township's history and historic sites and to disseminate this information to the public.



## Historic Preservation Goals

- Encourage awareness and protection of Byram's cultural, social, and historic heritage to provide a tangible link to the past, to enhance the appearance of neighborhoods, and to promote economic development.
- Further develop and promote the Township's identity and unity without undermining its established character.





## Historic Preservation Objectives

- Conduct a survey to identify additional properties for nomination to the State and National Registers of Historic Places.
- Create 'Gateways' to neighborhoods and recreation areas by encouraging historic facades, intensive natural or native landscaping, and redevelopment with historic designs.
- Preserve the character and special sense of place of the lake communities.

## Resources

The following is a list of resources for preservation efforts.

RESOURCES	PROGRAM DESCRIPTION	ADMINISTERED BY	ELIGIBLE ENTITY
Garden State Historic Preservation Trust	Provides two categories of matching grants to encourage the preservation and rehabilitation of historic properties.	DCA-New Jersey Historic Trust	County, Municipal, Non-profit
Preservation Easement Program	Offers permanent legal protection to a wide range of historic properties.	DCA-New Jersey Historic Trust	County, Municipal, Non-profit
Revolving Loan Fund	Provides financing for the preservation, improvement, restoration, rehabilitation and acquisition of historic properties and certain non-construction activities.	DCA-New Jersey Historic Trust	County, Municipal, Non-profit







*township*

**BYRAM**  
Master Plan



# UTILITY SERVICES





# BYRAM

## UTILITY SERVICE

### Overview

The Township of Byram is served by a limited network of utilities. The extreme environmental constraints placed on the Township by its topography, surface waters, surficial geology, and soils and the limited development of regional systems have been the dominant factors in minimizing the utility network. New planning initiatives, on the local and State level, now support this approach and call upon municipalities like Byram to confine utility networks to limited growth centers and to prevent their spread into more rural areas.

The Township has no natural gas or town-wide potable water network. The sanitary sewer network is currently available in a very limited area of the Township. Propane gas, individual septic systems, private neighborhood water companies, and individual wells comprise the primary utilities.

The nature of utilities in the Township has been determined largely by the fragmented character of residential development,



mostly centered on the Township's several lake communities, and by the Township's limited commercial sector. Although Byram maintains an identity as a lake resort community, most of the seasonal cottages are now year-round homes. This trend has placed a strain on the existing utility network of individual septs, small water companies, and private wells.







### Various studies

Primarily of wastewater and stormwater control—have been undertaken at the local and county level to analyze the Township's utility needs.. The studies concluded that the Township should establish an effective plan to accommodate the increasing need for stormwater and wastewater management. The Township is preparing a new stormwater plan, as required under recent State legislation. Under a 2004-2005 Smart Growth Grant from the Association of New Jersey Environmental Commissions (ANJEC), the Township will reduce its wastewater management district where sewers exist or would be permitted to coincide with its Designated Village Center, where future development is to be concentrated. The grant will also be used to extend the Township's septic management requirements to a third lake neighborhood. The Township is acutely aware of the need to improve its, wastewater and stormwater strategies to protect the quality of its surface waters and groundwater, whose purity and use are vital to the Township's future.

### Septic Systems

Since only a small part of Byram is served by a sanitary sewer system, the primary method of wastewater disposal is through on-site septic systems. Due to the age, poor design and maintenance, or the limited capacity of some of these systems, especially in the older lake neighborhoods, and to a lack of septic maintenance programs in many of the Township's older and newer neighborhoods, these systems present a potential threat to the Township's lakes, streams, and potable wells. The Township is addressing this problem through septic management programs and through ordinances and development review procedures that require better scrutiny of existing or proposed septic systems.



## Sewer System

The Township of Byram is located in three designated '208' drainage regions and three NJDEP designated '201' planning areas. The Musconetcong River Basin covers nearly all of eastern, central and southern Byram while small portions of the far western and northern areas are within the Pequest and Wallkill regions. The Musconetcong Sewerage Authority (MSA), located immediately southeast of Byram on the Musconetcong River, is the only sewer facility that serves the immediate area.

The Township of Byram has a current allocation of 60,000 gallons, serving mostly the commercial development along Route 206, the municipal complex and Township schools, and a few homes along the route of the trunk line. This allocation has been entirely used. The Township has an additional allocation of 40,000 gallons, which is reserved for the Village Center

Zone (VC Zone), that part of the Designated Village Center (Designated VC) where the Township will permit mixed-use commercial and residential development.

There are no significant sources of industrial wastewater in the Township. Until such time that this type of development occurs, it is unlikely that the Township will need to address any issues related to industrial wastewater.

### Alterations to the Sewer Service Area

The current sewer service area map extends beyond the sewered area, and there are no plans for additional capacity. The sewer service map and wastewater plan is in the process of being amended to reduce the sewer district to its current actual extent, basically coinciding with the Township's Designated Village Center, obtained under the State Development and Redevelopment Plan, plus the municipal and school complexes.



## Utility Goals

- Direct higher density development to areas currently served by utilities as a means to shape development patterns and optimally use the existing systems.





## The main sewer area includes:

- Developed commercial parcels along Route 206
- Village Center Zone
- Municipal Complex
- Byram Plaza
- Byram Intermediate and Byram Lakes Schools
- Some homes along Lackawanna Drive

## Areas to be removed:

- East and West Brookwood residential neighborhoods
- Wild West City
- Portions of the current ICP zone on the mountain behind ShopRite and along Route 206.

The Musconetcong River can accept no more waste flow, and thus there is no more capacity available at the Musconetcong Sewer Authority's plant..

## Storm Water Control

At present, very limited control of stormwater exists in the Township, except for newer developments and areas that have been retrofitted. Most stormwater drains to catch basins, detention/retention basins, drainage ditches and pipes, which send the stormwater into the Township's streams, lakes, or wetlands. A series of State lake management grants at Cranberry Lake have paid to install catch basins with sediment traps, to reduce harmful impacts on the lake. However, most catch basins in the Township do not trap sediments or contaminants. In several areas of the Township, particularly in Forest Lake and the East Brookwoods, stormwater control is a major problem because of the intensive residential development on steeply sloped

## Utility Objectives

- Preserve and maintain the existing utility infrastructure, including its sewer and storm water facilities.
- Focus development in those areas served by adequate utility systems.
- Ensure that stormwater and wastewater management is addressed in all future plans.
- Complete the revisions to the Township's wastewater management plan to reflect the actual extent of the intended sewer service area, encompassing the Designated Village Center and the existing municipal and school complexes.
- Implement the Township's stormwater management plan, as required under new NJDEP stormwater regulations.
- Maintain contact and service are information for the 11 water companies with service in the Township.





terrain.. Also, all stormwater runoff from the Route 206 commercial area flows directly into Lubbers Run or its tributaries and wetlands, usually with no control of sediments or contaminants.

The Township is currently mapping catch basins and outflows, as required under new State regulations, and drafting a stormwater control ordinance emphasizing recharge and natural control strategies.

Under the Township's development regulations, new subdivisions and major development plans must incorporate stormwater control measures, to date typically consisting of retention/detention basins, catch basins, and drainage pipes. However, stormwater runoff remains a major problem that impacts surface water quality, the overall physical character of the Township, and the general well being of its residents. As development and resulting densities in some areas of the Township increase, the need for stormwater measures will become more apparent.

## Surface Water Issues

Byram is a lake community, and thus its lakes, streams, wetlands, and tributaries are vital to the Township's identity and its overall living environment. Some surface water contamination has resulted from past and present land use patterns. Surface water runoff (which carry chemical contaminants from roads and lawns, for instance) and septic systems are the two primary sources of stream and lake contamination. Groundwater discharge, wildlife, and certain other human activities are secondary sources. Although surface water contamination was not



considered significant or critical at the time of the last Master Plan, it has become an issue because of rapid development in and around the lake and streamside communities and a better understanding of the harmful impacts of such 'non-point source' (NPS) pollution. Swimming, fishing, and the breeding of fish and birds are important uses of the surface waters in the Township that may be impaired by NPS impacts.

Recent studies by the County, as described in the most recent County 208 Water Management Plan, show that nitrates, phosphorus, and coliform are the most frequent surface water contaminants. Although not always found in levels that would make the waters unsuitable for human activity, these contaminants do pose long-term threats. Lake eutrophication is of increasing concern to Byram and its residents. In this process, as a result of increased contamination, increased weed and algae growth, sedimentation, and reductions in aquatic life, lakes 'age' more quickly and tend toward becoming swamps.





Phosphorus and nitrates are the most common contaminants, and they are associated with agricultural and lawn runoff and septic system malfunctions. Byram has few farms, but poorly designed or maintained septic systems and the use of fertilizers and pesticides on lawns and gardens continue to damage surface water quality, as does the presence of substantial populations of Canada geese and other water fowl. Summer testing at Byram's swimming beaches show that coliform counts are usually within acceptable readings, with occasional or sometimes persistent readings above standard. In some cases, for instance at Forest Lakes, this has been attributed to the Canada geese problem.

Using several lake management grants, Cranberry Lake has studied these problems and addressed them through retrofitting all catch basins around the lake with sediment traps, harvesting some weeds mechanically to avoid herbicides and the contamination and sedimentation caused by their use, education of its residents, and dredging of selected areas. The Cranberry and Mohawk lake neighborhoods also have septic management programs, requiring that residents map their systems and pump them every three years. These septic management programs have also prompted many residents to repair or replace old or substandard systems. In late 2004, the Township received a Smart Growth Grant from the Association of New Jersey Environmental Commissions (ANJEC) to establish a septic management program at Lake Lackawanna, the Township's third largest lake community. The Township's Lake Development Plan calls for septic management at all lake communities, as does the 2004 Sussex County Strategic Growth Plan

## Solid Waste Disposal and Recycling

All solid waste disposal in the Township is currently through a private carrier and is part of the regular Township budget, not a special tax. The trash is taken to the Sussex County landfill in Lafayette, as Byram has no landfill of its own. The Township's carrier will pick up certain recyclables at curbside, or residents may deliver a broader range of recyclables to the Township recycling center.





## Potable Water

In 2003-2004, the Township Environmental Commission obtained a \$2,500 grant from the N.J. Department of Environmental Protection's Environmental Services Program, with a \$2,500 municipal match, for a study entitled "Groundwater Supply: Inventory and Investigation." The project described the Township's geology and the limited potable supplies in the majority of its aquifers and summarized past or existing episodes of contamination. The study recommended new ordinances to better protect existing supplies. It also found a lack of comprehensive information in municipal files about the eleven well companies that serve approximately one-third of Byram's residents. Such files should be established and should include: maps of each well company's distribution area with actual hookups shown; historic data about the drilling of the well (s) and their depths and geology; current and historic data about water quality testing, static water levels, and major repairs or alterations to the well or distribution systems. Some of this information (not comprehensive and not including systems maps) is contained within the Groundwater Supply grant

report, available from the Environmental Commission secretary at the municipal building. The Township Board of Health is probably the proper agency to gather and maintain more complete information.

Below are brief descriptions of the eleven companies, obtained from local and State documents and an informal telephone survey. Of the 11, ten are owned and administered by private homeowner associations. The eleventh is the Sparta Township Water Utility, which serves several hundred Byram residents in neighborhoods near Sparta and has one of its wells located within Byram's borders. The rest of Byram's residents are served by individual wells, although a small number of homes at Cranberry still draw water from the lake.

## Frenches Grove Water Association

In the Township's 1994 Natural Resources Inventory (NRI), the Frenches Grove Water Association reported 85 hook-ups, on a seasonal basis only. The few year-round homes in this neighborhood have private wells. At present, this company has no reported water quality or quantity issues, based on a daily-to-monthly testing regimen for a range of contaminants, including bacteria, metals, and VOCs. In 2004, NJDEP reported this company served 225 people and had water quality violations for nitrites/nitrates in 2003.

## North Shore Water Association

In the 1994 NRI, the North Shore Water Association reported 22 year-round and 40 summer hook-ups, most drawing from one of the Association's two wells. One well was reported to be seasonal only. In 2004, NJDEP







listed this well company as having 35 connections, serving 60 people and reported the company had violations for coliform in 2002 and copper in 2000. The North Shore Water Association is an old system, with low water pressure, and the supply lines are reported to have maintenance issues. They test quarterly for bacteria, metals, and VOCs.

## Briar Heights & Della Heights Property Owners Association

With only nine hookups, the Briar Heights & Della Heights Property Owners Association is seasonal only, and testing is limited to the beginning of each season. This is an older system dating from the 1920s. There are no reported water quality or quantity issues, and NJDEP has no record of this company.

## Strawberry Point Property Owners Association

According to NJDEP in 2004, the Strawberry Point Property Owners Association has 35 hookups (all but about five year-round, according to the 1994 NRI) and serves 90 people. At present, they have no reported water quality or quantity issues, and they test monthly for bacteria, metals, and VOCs. The water has also been tested for traces of MTBE.

The above water companies supply approximately 160 homes within the Cranberry Lake neighborhood. The Lake's approximately 365 other homes rely on private wells or, in a few cases, on water drawn from the lake and/or bottled water.

## Forest Lakes Water Company

The Forest Lakes Water Company supplies drinking water to virtually all homes in the Forest Lakes neighborhood. In 2004, NJDEP lists a total of 395 hookups (360 in Byram and 35 in Andover Township) serving 1,400 people. At that time, the Water Company reported it was at capacity, based on State pressure requirements, and unable to accommodate any further homes. The company has no reported water quality or quantity problems.

## Colby Water Company

The Colby Water Company supplies 19 homes, 18 on Colby Drive and one on Tamarack Road, and a total of 72 people. At present, there are no reported water quality or quantity issues and testing is done weekly or monthly for bacteria, metals, VOCs. NJDEP reports that in 2002, the company had a coliform violation.



### Sparta Township Water Utility

The Sparta Water Utility has 442 residential hookups in Byram Township, including homes within the Lake Mohawk neighborhood and other developments in Byram near the Sparta border..The Sparta Utility has nine wells altogether, with specific wells serving the various Byram neighborhoods, such as the Lake Mohawk, Seneca/Tomahawk Lake Communities, Cedar Glen Estates, and Autumn Hill/Mohawk View. In 2004, some Sparta and Byram neighborhoods served by certain wells within this Utility tested high for natural uranium contamination.

### East Brookwood Property Owners Association Water Company

According to NJDEP in 2004, the East Brookwood Property Owners Association Water Company serves 180 homes (a total of 612 people). The company has three wells, two of which are operational and no reported water quality problems. The company reports it might be able to add hookups, but might have to find additional sources of supply.

### Brookwood-Musconetcong River Property Owners Association

According to NJDEP in 2004, the Brookwood-Musconetcong River Property Owners Association has 417 hookups, serving 1400 people. It has three wells and no reported issues of water quality or quantity. Within the past decade, the BMRPOA has worked on plans to construct a water tower to address pressure problems within the system.

### Willor Manor Water Company

The Willor Manor Water Company serves 16 homes and a total of 50 people. Although some excess capacity does exist, it is unlikely that an expansion of the system will occur due to the lack of buildable land. In the past, the Willor Manor Company has been designated as an enforcement case by the NJDEP for a variety of reasons, including inadequate storage, poor and inadequate testing, and for the presence of volatile organic contaminants. NJDEP also reports a coliform violation in 2001.

### Byram Homeowners Association Water Company

According to NJDEP in 2004, the Byram Homeowners Association serves 152 homes in the Forest West and Forest South developments.. Other than a 2003 coliform violation, there are no reported problems.





## Testing and Management

Data from the N.J. Department of Environmental Protection shows that, of the Township's 11 water companies, recent test results show six had some form of contamination. Since most were the lowest 'Level 1,' no specific recommendations were made and only random sampling is required. Two of the 11 companies, Willor Manor and North Shore, had 'Level 2' results; and requirements include periodic monitoring, confirmation of sampling results, and a recommendation calling for either alternate water sources and/or appropriate treatment techniques.

Contaminants in these water systems included trichloroethane and tetrachloroethane, substances used in degreasing household agents; dichloroethylene, a solvent of fats, and additive to dyes and lacquer solutions; and ortho-xylene, meta-xylene, and paraxylene, low-level contaminants associated with gasoline (or generated in the laboratory during testing).

In most cases, the levels of contaminants have remained stable and resulted only in limited remedial actions, with the exception of Willor Manor. In general, both water quality and quantity are acceptable or manageable. The primary problems associated with these small private companies are fiscal and organizational, concerning their ability to monitor water quality, maintain, upgrade, or expand their systems, and administer services in a fiscally sound manner.

The Township has no policy concerning these well companies and their ability to continue to supply water in a safe and reliable fashion. Some of these companies may be targets for purchase by the several large national or multinational water purveyors that are rapidly accumulating water companies in New Jersey, the United States, and worldwide.







# BYRAM

## RECYCLING

The New Jersey Statewide Mandatory Source Separation and Recycling Act of 1987 requires that municipal master plans include a recycling plan element that incorporates State Recycling Plan goals for the collection, disposition and recycling of materials designated in the Township's Ordinance. This legislation recognizes that the disposition of solid waste has become an increasing problem and one of the most serious problems facing each municipality in the State.





### The statute stipulates the following municipal obligations:

- Designate a recycling coordinator,
- Provide for a collection system of recyclable materials,
- Adopt a municipal recycling ordinance,
- Revise the municipal Master Plan which shall include provisions for the collection, disposition and recycling of recyclable materials,
- Revise the Land Use Ordinance requiring site plans and subdivisions to conform to the recycling ordinance.

Municipal recycling plans must also be consistent with and be coordinated with the County District Plan (DRP). Each DRP is required to include designation of recovery targets in each municipality to achieve the maximum feasible recovery of recyclable materials from the municipal solid waste stream that shall include following schedule:

- The recycling of at least %15 of the prior year's total municipal solid waste stream by the end of the first full year succeeding the adoption and approval by the department of the district recycling plan; and
- The recycling of at least %25 of the second preceding year's total municipal solid waste stream by the end of the second full year succeeding the adoption and

approval by the department of the district recycling plan.

The State of New Jersey and the Department of Environmental Protection (DEP) regulate recycling and solid waste through many statutes. The Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., the New Jersey Statewide Mandatory Source Separation and Recycling Act, N.J.S.A. 13:1E-99.11 et seq., and recycling regulations as per N.J.A.C. 7:26A-1 et seq., govern the management, collection and disposal of solid waste and recyclable materials. These efforts ensure the preservation of natural resources, savings of various energy types and the reduction in pollution.

The New Jersey Solid Waste Management Act designated all 21 Counties and the Hackensack Meadowlands District as Solid Waste Management Districts and mandated the Boards of Chosen Freeholders in each of the Counties to develop comprehensive plans for waste management in their district. In response to this, the Sussex County amended its Solid Waste Management Plan to adopt a countywide district-recycling plan and require certain materials to be recycled. In order to meet State and district mandates and achieve the goals and benefits of the State Law for its citizens, the Borough adopted a mandatory recycling ordinance.



## Recycling In Byram Township

The Township recognizes that separating recyclable materials from the solid waste will extend the life of existing landfill facilities, conserve energy and valuable natural resources, and increase the supply of reusable raw materials for industry.

The Recycling Ordinance states that it shall be mandatory for all persons to separate aluminum cans, bimetal cans, glass, newspaper, corrugated paper and plastic (PET and HDPE) bottles from all other solid waste. The Recycling Center at the Byram Municipal Building, 10 Mansfield Drive is a designated drop-off point and monthly roadside pickup is provided.

Preparation of the materials for recycling pickup or drop-off is as follows:

- A. Cardboard (heavy corrugated packing boxes only), high-grade paper, newspaper and junk mail shall be tied and bundled or put in a reusable container and placed at roadside or placed in the appropriate designated location at the recycling center.
- B. Glass (clear, green and amber), aluminum cans, bimetal cans (labels removed) and limited specific types of plastic (soda, water, milk, juice and detergent bottles) are to be rinsed clean and placed in a reusable container for roadside pickup or placed in the appropriate designated location at the recycling center. Caps and neck rings should be removed from all plastic and glass bottles and jars prior to recycling.



## Recycling Goals

- Continue to be a leader in the use of recycle materials throughout the community, including in parks and Township offices.
- Continue to promote recycling throughout the Township by residences and businesses.
- Incorporate energy conservation, solid waste management and recycling techniques in the Township's land development and other related ordinances and regulations.
- Incorporate 'Green Building' principles such as appropriate building siting, insulating landscaping techniques, and energy conserving heating and cooling systems in the Township's land development and other related ordinances and regulations.





C. Recyclable items placed at roadside for pickup must be in a reusable container, no larger than 32 gallons.

The Township offers a Bulky Waste Collection and drop-off program. Materials that will be picked up roadside include carpeting, furniture, televisions, clothing, toys, and home accessories. Bulky waste materials that may be brought to the township recycling center include: metal items, white goods (e.g. stoves, refrigerators) and automobile tires.

Items that cannot be picked up at roadside or brought to the recycling center and must be brought to the Sussex County Municipal Utilities Authority (SCMUA) are: all construction debris (e.g. wood scrap, sheet rock, shingles, kitchen cabinets), household hazardous waste items (e.g. chemicals, pesticides, herbicides, paint thinner, driveway sealant, motor oil, anti-freeze, yard waste, gas/propane tanks.) There is a disposal fee charged for these items based upon weight of the item.

The ordinance designates the Township Manager or his or her authorized agent(s) as the responsible official authorized to enforce the regulations. Penalties for noncompliance include a maximum fine of \$100 for the first offense, \$200 for the second offense and \$500 for a third offense and any offenses thereafter.





*township*

**BYRAM**  
Master Plan



# RELATIONSHIP TO OTHER PLANS







# BYRAM

## RELATIONSHIP TO OTHER PLANS

It is imperative that the Township also consider the Land Use planning conditions that surround and supercede those made at the local level, to ensure that the actions taken by Byram to control it's development destiny are not in conflict with the plans of other locales or agencies. If the goals of Byram differ with other areas, it is important that the Township be aware of these differences and find ways to work cooperatively with all jurisdictions to adapt and create Land Use policies that will be mutually beneficial and lead to continued cooperation. That is why the Municipal Land Use law specifically requires that each Master Plan include a section that describes the relationships between it and the surrounding Municipalities, as well as the State, County and other controlling agencies.

This Relationship to other Plans element will look at the State Development and Redevelopment Plan (SDRP), County Strategic Revitalization Plan, surrounding Community Master Plans, the Highlands Act Land Use Controls and a review of prior Planning documents of the Township.





## STATE PLAN

The State Planning Commission adopted the State Development and Redevelopment Plan (SDRP) on March 1, 2001. The SDRP contains a number of goals and objectives regarding the future development and redevelopment of New Jersey. The primary objective of the SDRP is to guide development to areas where infrastructure is available. New growth and development should be located in 'centers,' which are 'compact' forms of development, rather than in 'sprawl' development. The overall goal of the SDRP is to promote development and redevelopment that will consume less land, deplete fewer natural resources and use the State's infrastructure more efficiently.

The 2001 SDRP identifies Byram as part of the PA 4 Rural (28% total land area), PA 5 Environmentally Sensitive (50% total land area) and PA8 State Parks (22% total land area) Planning Areas.



## Planning Area 4 – Rural

According to the SDRP in the Rural Planning Area, PA 4, the intention is to:

- Maintain the Environs as large contiguous areas of farmland and other lands;
- Revitalize cities and towns;
- Accommodate growth in Centers;
- Promote a viable agricultural industry;
- Protect the character of existing, stable communities; and
- Confine programmed sewers and public water services to Centers.

The State Plan recommends “protecting the rural character of the area by encouraging a pattern of development that promotes a stronger rural economy in the future while meeting the immediate needs of rural residents, and by identifying and preserving farmland and other open lands. The Plan also promotes policies that can protect and enhance the rural economy and agricultural industry, thereby maintaining a rural environment”.

Moreover, the SDRP states that, Rural Planning Areas need strong Centers and that Centers should attract private investment that otherwise might not occur.

## Planning Area 5 – Environmentally Sensitive

According to the SDRP, the Environmentally Sensitive Planning Area contains large contiguous land areas with valuable ecosystems, geological features and wildlife habitats and that the future environmental and economic integrity of the state rests in the protection of these irreplaceable resources.

PA 5 is vulnerable to damage of many sorts from new development in the Environs, including fragmentation of landscapes, degradation of aquifers and potable water, habitat destruction, extinction of plant and animal species and destruction of other irreplaceable resources, which are vital for the preservation of the ecological integrity of New Jersey’s natural resources. Perhaps most important, because the environs in PA 5 are more sensitive to disturbance than the Environs in other Planning Areas, new development in PA 5 areas has the potential to destroy the very characteristics that define the area.





Allamuchy Township

Green Township

Andover Township

Sparta Township



Mount Olive Township

Hopatcong Borough

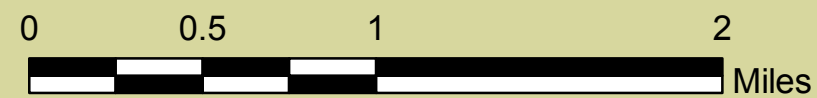
Stanhope Borough

Hopatcong Borough





# Byram Township

Master Plan 2004

State Plan Areas



**State Planning Areas**

	PA 4 Rural
	PA 5 Rural/ Env. Sensitive
	Park
	Water



## According to the SDRP in the Environmentally Sensitive Planning Area, PA 5, the intention is to:

- Protect environmental resources through the protection of large contiguous areas of land
- Accommodate growth in Centers
- Protect the character of existing stable communities
- Confine programmed sewers and public water services to Centers
- Revitalize cities and towns

The State Plan indicates that large contiguous areas of undisturbed habitat should be maintained to protect sensitive natural resources and systems. Moreover, new development in PA 5 should capitalize on the inherent efficiencies of compact development patterns found in existing Centers. Benefits associated with center focused development include the preservation of: open space, farmland and natural resources and to preserve or improve community character, increase opportunities for reasonably priced housing and strengthen beneficial economic development opportunities.

SDRP is very specific in its intention for PA 5; “new development should be guided into Centers to preserve open space, farmland and natural resources and to preserve or improve community character, increase opportunities for reasonably priced housing and strengthen beneficial economic development opportunities”.

Byram determined at the beginning of the Smart Growth planning process that achieving Village Center

status for a neo-traditional, mixed-use, high density development built in partnership with a landowner and developer was a vital part of it’s Smart Growth strategy. By developing a Village Center, Byram could accomplish many different goals at once. The Village Center would accommodate the next ten years of growth, facilitate it’s obligation for affordable housing, create an identifiable center for the Township on it’s commercial corridor and provide low cost housing so families could afford to stay in Byram for generations. Center Designation identifies the village center of Byram on the State Development and Redevelopment Plan (SDRP). The State now recognizes Byram’s commitment to focusing development in a high-density center to accommodate the preservation of the remaining forestlands and critical areas.



## Sussex County Strategic Growth plan

The Sussex County Master plan, which was prepared in 1977, is outdated and no longer reflects the direction of development activities taking place in the county. There has been no updating or revision of the county plan since it was prepared. In 2000, the county received a Smart Growth Grant from the Office of State Planning to prepare the Sussex County Strategic Growth Plan (SGP), intended to update the existing master plan. This Plan was published in the fall of 2004.

### The SGP had certain Visioning Goal Statements that share similarities to the Byram Township Master Plan:

1. Maintain the quality of life in Sussex County.
2. Encourage protection of agricultural production areas
3. Protection of private property rights
4. Preserve environmentally sensitive areas
5. Maintain and enhance surface and groundwater quality/water quantity
6. Direct future growth into areas, which can support and sustain proposed development uses, intensity and economic development opportunities.

The SGP then established strategies to implement the proposed County Visioning Goal Statements. The strategies are as follows:

1. Protect areas of steep slopes and viewsheds. In areas with steep slopes of 35% or greater, recommend and encourage low density "mountain conservation" Development of 1 dwelling unit per 10 acres.
2. Establish and maintain a 150 foot buffer along all stream segments mapped by the NJDEP (75 feet on either side of stream).
3. Recommend minimum lot areas for all new septic systems based on NJDEP Surface Water Quality Standards.
4. Support farmland preservation efforts and right to farm programs.
5. Encourage downtown and highway corridor revitalization while simultaneously encouraging future growth in areas, which do not destroy environmentally sensitive areas of the county.
6. Channel future growth of high-density residential development and high intensity non-residential development into existing and future Sewer Service Areas.
7. Support the collaborative effort of federal, state and municipal agencies in setting open space priorities in the county.
8. Transportation

An examination of these County Strategies for implementing the Visioning Goal Statements reveals the direct link between the County and the Byram Township Master Plan and Land Development Ordinances. Byram Township has a Tract Disturbance Ordinance that prohibits development on critical







slopes in excess of 25%. The Land Use Plan proposes 10-Acre and 5-Acre density zoning in large forested areas that are typified by steep slope areas. The Master Plan endorses the Lubbers Run Greenway Project and the Land Use Plan proposes increased buffers around any surface water, including vegetated buffers.

The revised bulk standards in the Land Use Plan recommends new standards for minimum lot sizes linked to utility infrastructure, requiring a 1-acre minimum lot size for new home construction utilizing on-site septic and wells, 20,000 square feet for new home construction utilizing on-site septic and a water company supply and only allowing 10,000 square foot lots for new home construction if both sewer and water service is available.

The Village Center and Village Business zones are designed to create a downtown mixed-use center and a revitalized Route 206 corridor while limiting growth in the Environs. The Village Center is the only remaining vacant land with access to the last remaining sewer capacity in the Township. The Village Business zone incorporates the existing sewer service area along Route 206. The Open Space and Recreation Plan encourages cooperation with the State and County Park systems. Byram has a carefully planned Circulation plan that serves to address the continued needs of local residents while considering impacts of transportation alternatives.

The SCG then divides the County in component Landscapes. These landscapes have been chosen because they are self-explanatory and are generally exclusive of each other. These Landscapes include:

- Rural/Agricultural Landscape
- The Highlands
- Centers Landscape
- Parklands And Private Wildlife Management Area Landscape
- Job Creation Centers Landscape
- Lake Communities Landscape

Byram is typified by most, if not all of these Landscape designations. The Rural/Agricultural Landscape definition includes as areas with low-density residential development, farmlands, highway commercial, quarries, and golf courses. All of which is found in Byram Township. The Highlands Water Protection and Planning Act has designated all of Byram, except for the Designated Village Center as part of the Highlands Core area. Centers are the types of places that Byram is endeavoring to create in the Village Center zone. Allamuchy Mountain State Park is a part of the Parklands Landscape. Byram does not have a Job Creation Center, but is near the International Trade zone, which typifies this type of Landscape. Of course Byram, 'the Township of Lakes', is the location of many Lake Communities.

The SCG states goals for each of the Landscape Areas that are similar to the goals that Byram has for these same areas. Byram Township's Master Plan anticipates many of these initiatives and has recommendations



similar to the County's recommendations. The Rural Landscape goals relate primarily to Transfer of Development Rights (TDR) programs in the County, while focusing on land conservation efforts. The SCG has many recommendations for the eventual Highlands Commission to further County goals in the Highlands Landscape focusing on groundwater and surface water quality and the creation of a Highlands Interpretative Center.

Job Creation Centers and Traditional Centers are to be supported and developed within the ecological context of the surrounding environs, but encouraged to maintain economic vitality and community character. It is noted that Parks and Wildlife Areas occupy approximately one-third of the County and serve many functions including recreation, habitat protection and eco-tourism opportunities. The Lake Communities are known to be typified by small lots and residential density levels that cause the lakes to suffer from eutrophication. Necessary measures to reverse this trend are promoted throughout the County.



The SGC presents several Plan foundation elements, which are in-depth reviews of local conditions. The Byram Master Plan has many of these same elements, yet at the more local level of concern. These foundation elements include:

- A population and demographics study
- A housing study
- An economic development study
- A natural resources study
- A circulation study
- A historic preservation study
- An agricultural and farmland preservation study
- An open space study
- A build out analysis
- A State Development and Redevelopment Plan review

These foundations elements inform the actual Strategic Growth Plan. The Strategic Growth Plan is organized by the Landscape Areas and there are critical issues that are addressed in each Landscape. These critical issues are:

- Development Patterns
- Housing
- Transportation
- Resource Conservation
- Agriculture
- Landowner Equity





Each of the Landscape areas has a series of recommendations for each of the critical issues identified. Those with particular resonance with Byram Township include:

## DEVELOPMENT PATTERNS

### Rural/Agricultural Landscape

- Development in the environs should be restricted to relatively low densities. Densities should be determined through carrying capacity analysis using tools such as the Nitrate Dilution model and soils data derived from the newly completed Sussex County Soil Survey
- Streamside protection is always appropriate.
- Reduce the impact of light pollution through a Dark Sky or similar lighting specifications in new and existing developments.

### Highlands

Although the new rules and regulations for the Highlands were not promulgated at publication, the County anticipated these major effects:

1. Near total halt to subdivision and new site plans in the core preservation area. This will make provision for individual single-family construction or expansion, minor expansion of non-residential facilities.
2. A major shift in demand for land and facilities from the core preservation area to the planning area and adjacent municipalities.

Although not provided to date (it will be part of the Highlands Master Plan), an analysis of the economic

impact to property owners and all levels of government and school districts will provide a basis to review the reasonableness of those rules, which are implemented.

### Traditional Town Centers

- These will become the focus of the majority of development in Sussex County.
- Existing centers should be revitalized. Proposed centers should provide a wide range of densities, styles and mixes of development.

### Parks and Wildlife Management Areas

- Efforts should continue to acquire in holdings, link preserved lands, trails, historic and cultural sites, etc.

### Lake Communities

Avoid creation of and minimize development of undersized lots except where waste disposal technology permits.

- Create septic management districts.
- Analyze land use patterns in order to improve surface water quality.





## HOUSING

### Rural/Agricultural Landscape

- Permit modest, low-density development.
- Cluster development wherever possible.

### Highlands

- Maintain existing housing in safe and sound condition.

### Traditional Towns, Villages, and Hamlets

- Provide a range of housing opportunities to all segments of the County population.

### Lake Communities

- Maintain lake communities as small scale, residential neighborhoods. Consider floor area ratio as a means to quantify an appropriate scale of development.
- Implement septic management programs.





## CIRCULATION

### Rural/Agricultural Landscape

- Reduce scattered land development in order to achieve necessary concentrations of population/business to support mass transit.
- Support safety and congestion management improvements.

### Highlands

- Encourage the repair and maintenance of existing highway and bridge infrastructure.
- Support reactivation of the former Lackawanna Cut-off and New York, Susquehanna and Western railroads. (Note: The Byram Township Circulation Plan is in opposition to the reactivation of the Lackawanna Cut-off for numerous reasons detailed in the Circulation Element and is a noteworthy difference in local and County policy)

### Job Creation Centers

- Support general highway improvements and rail service reactivation and expansion. (Note: The Byram Township Circulation Plan is in opposition to the reactivation of the Lackawanna Cut-off for numerous reasons detailed in the Circulation Element and is a noteworthy difference in local and County policy)
- Increase employment at a competitive wage to serve the commuter population.

### Traditional Towns, Villages, and Hamlets

- Expand bus service within the County.
- Expand connections with and opportunities for inter-

county mass transit operations. For example, make connections with NJ Transit at the Dover train station.

- Provide pedestrian oriented development.
- Plan for Transit Oriented Development (TDO) near future rail stations. (Note: The Byram Township Circulation Plan is in opposition to the reactivation of the Lackawanna Cut-off and the creation of new high-density TDOs for numerous reasons detailed in the Circulation Element and is a noteworthy difference in local and County policy)
- Use traffic calming designs to address and mitigate the common problem of major roads, which divide centers and create unsafe conditions for pedestrians.

### Parks and Wildlife Management Areas

- Facilitate access to existing state and federal facilities.

### Lake Communities

- Maintain safe internal road networks.
- Investigate possibilities of mass transit at these destinations.



## AGRICULTURE

### Rural/Agricultural and Parks and Wildlife Management Areas Landscapes

- Support the establishment of agricultural industry (e.g. value added produce processing) in close proximity to agricultural operations.
- Expand agri-tourism and the range of complimentary uses of farm properties (e.g. Bed & Breakfast).
- Require buffers between agricultural operations and conflicting land uses (e.g. residences, notification of Right-to-Farm).

### Highlands

- Issues are similar to those in the Rural/Agricultural landscape. Of particular concern will be landowner equity and agriculture.







## RESOURCE CONSERVATION

### Rural/Agricultural Landscape

- Focus construction that does occur by clustering development thereby reducing impervious coverage, stormwater discharge, and general land disturbance.
- Protect surface water bodies and community wells.
- Encourage landowner practices, which minimize fertilizer and siltation impact.

### Highlands

- Resource protection is the rationale for the Highlands Protection Act; presumably the regulations governing development will reflect this fact.

### Job Creation Centers

- Promulgate standards, which meld economic growth and development with environmental protection.
- Locate job creation centers and nodes (e.g. corporate campus facilities) in areas of substantial water availability and soil permeability.
- Ensure that public wells are protected and that the development review process requires consideration of known contaminated sites, spills, etc.
- Limit uses and development performance standards to those, which avoid discharge of toxics and minimize storage of hazardous materials.

### Traditional Centers

- Site/expand at the most advantageous natural resource locations.
- Where disturbance is required (as, for example of steep slopes), employ extensive safeguards to offset

the effects of such disturbance.

- Ensure that the carrying capacity of the site, as expanded through central water and sewer infrastructure, is the foundation of the center design and build out.
- Where major employment facilities are to be located at some significant distance from an established center boundary, require on site service infrastructure and functional connections between such facilities and the center they support.

### Parks and Wildlife Management Areas

- The focus of activities should be on natural heritage, historic and cultural sites and areas, views and other environmentally critical areas.



## ADJACENT MUNICIPALITIES

Byram is bordered to the northeast by Sparta Township, to the southeast by Hopatcong Borough, to the south by Stanhope Borough and Mount Olive Township, to the west by Green Township, Andover Township and Andover Borough, and to the southwest by Allamuchy Township. Byram Island is bordered by Roxbury Township, Stanhope Borough and Hopatcong Borough.

### Allamuchy Township (Warren County)

Allamuchy Township, approximately 21 square miles in area, is located to the southwest of Byram. Much of the Township is devoted to Allamuchy State Park, portions of which cross over into Byram Township. The portion of Allamuchy Township adjacent to Byram is zoned PPE Parks Public & Education. Byram's future land use map indicates that the area adjacent to Allamuchy Township will be zoned for open space. The park represents a continuous land use between the two Townships, assuring compatible land uses.

### Green Township

Green Township borders Byram to the west. Most of the land bordering Byram is zoned AR-5/2 Agricultural/Industrial. Although the land along the western edge of Byram is zoned for single-family residential use, the Township's future land use map shows that a majority of this area will be zoned for open space; these uses are compatible with land uses in neighboring Green.

### Andover Borough

A very small portion of the western border of Byram is shared with Andover Borough. Along the border,

Byram is zoned R-2 single family residential, and Andover is zoned C-3 Office, Shopping Center & Limited Industrial. The Andover ordinance requires that more intensive land uses that border less intensive uses must contain a landscaped buffer area. Due to the buffer requirement, and the extremely small size of the shared border between these two municipalities, no conflict in land uses is anticipated.

### Andover Township

Andover Township is situated to the west of Byram. Andover lands along the Byram border are zoned for single-family residential use, and a small portion of land is zoned for planned commercial development. The adjoining land in Byram is also zoned for single-family residential use. The Andover Master Plan indicates that there are significant wetlands in the PCD Planned Commercial Development zone adjacent to Byram. Furthermore, the Master Plan notes that significant buffering is required when such a use abuts a residential zone, and recommends that no activities, which require late evening hours, be permitted to about these residential zones.

### Sparta Township

Sparta borders Byram along its northeastern edge. Both Sparta and Byram lands along the border are zoned residential, indicating that the two areas are compatible.

### Hopatcong Borough

Hopatcong is located along the southeast border of Byram Township; Hopatcong's border with Byram





runs generally along Lubber's Run and the Columbia Valley Road South railroad right-of-way. Along the border, Byram contains lands zoned for commercial recreation, single family residential, and a small area zoned IPR Industrial Professional Recreational. Bordering land in Hopatcong is zoned for low-density residential, planned residential development, and light manufacturing uses. The small industrial zone in Byram coincides with the M-I Light Manufacturing zone in Hopatcong. The majority of bordering lands in both municipalities are zoned for residential use, with several small pockets of low intensity commercial recreation uses in Byram. The abutting zones are generally compatible and are further separated by Lubber's Run and the railroad ROW.

Byram Island is zoned NC Neighborhood Commercial. Abutting land in Hopatcong is zoned for medium density residential development. Adequate buffering and sound planning should mitigate any potential incompatibility between the uses.

## Stanhope Borough

The Borough of Stanhope, comprising approximately two square miles, is located along the southern border of Byram Township. Bordering lands in Byram are zoned for single-family residential, highway commercial, and industrial commercial park. Abutting lands in Stanhope are zoned for highway commercial, planned light industrial/commercial development, and a small portion of land is zoned for medium-low density residential. Sensitive site planning and buffering may be required to screen industrial/commercial development in Stanhope from adjacent

residential uses in Byram.

Byram Island is zoned NC Neighborhood Commercial. Abutting land in Stanhope is zoned for medium density residential development. Adequate buffering and sound planning should mitigate any potential incompatibility between the uses.

## Mount Olive Township (Morris County)

Mount Olive Township is located along the southern border of Byram. Lands in Mount Olive along the border are zoned for mining and public use. Bordering land in Byram includes Allamuchy State Park and residential uses. The Musconetcong River and Lake Waterloo act as natural buffers between the municipalities. Additional buffering in Mount Olive Township may be necessary to screen noncompatible uses.

## Roxbury Township (Morris County)

Byram Island is zoned NC Neighborhood Commercial. Abutting land in Roxbury is zoned for residential development. Adequate buffering and sound planning should mitigate any potential incompatibility between the uses.

## New Jersey Highlands Water Protection and Planning Act

The Legislature and Governor passed the NJ Highlands Water Protection and Planning Act (Highlands Act) in 2004. Byram Township is located within the designated Highlands region, the majority of the Township is in the Protection Area and the Designated Village Center area is in the Planning Area. This will have widespread





and lasting impacts on the Township. This section will describe the known impacts of this legislation on the Township, but the newness of the Highlands Act and its regulations, combined with the impending membership of the “Highlands Water Protection and Planning Council” (Highlands Council) and the ensuing Highlands Regional Plan still leave many questions unanswered and only time and experience will paint a full picture of the Highlands Act’s impacts.

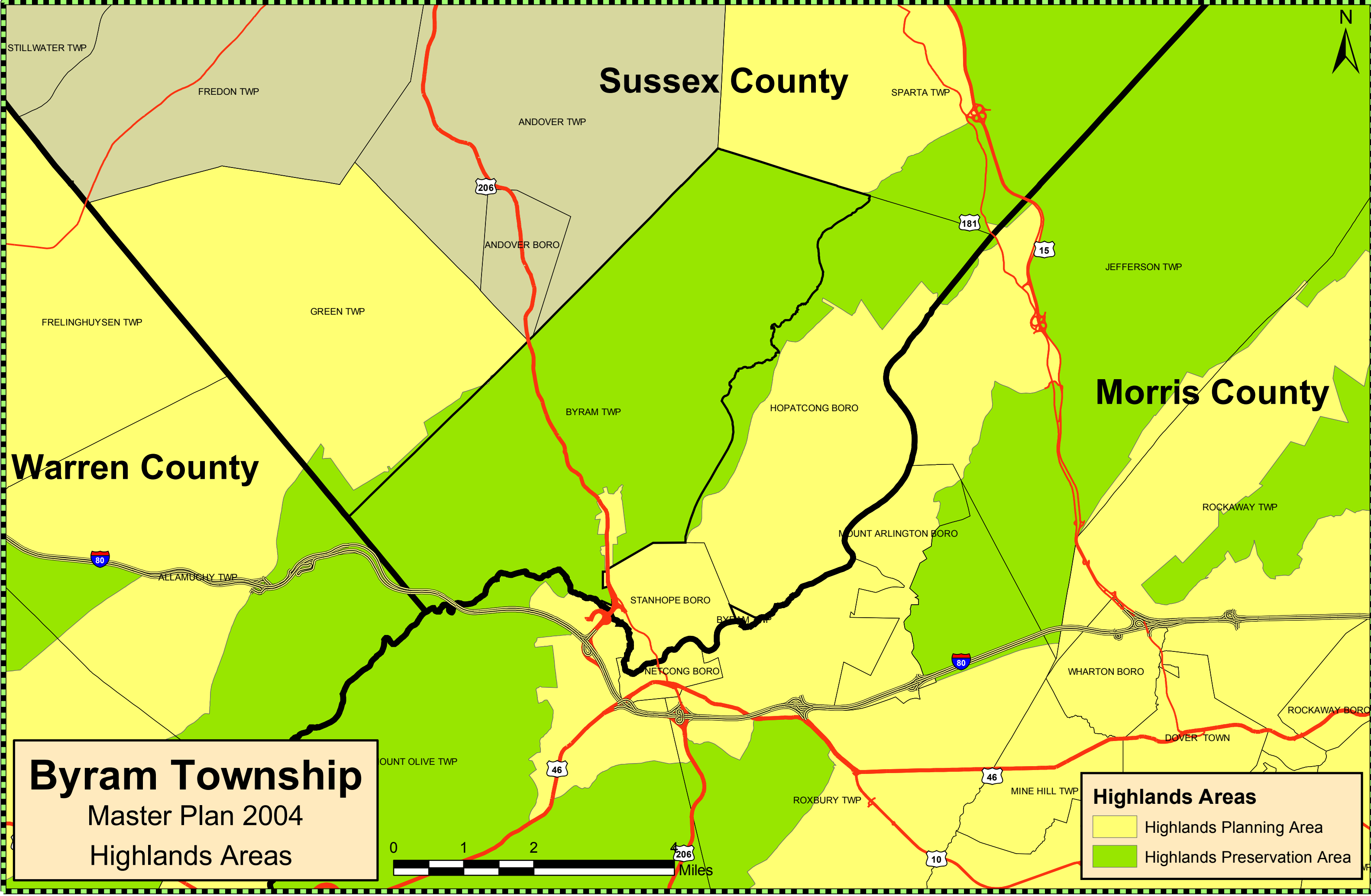
The Highlands Act designates 88 municipalities in New Jersey in seven different counties as constituting the New Jersey Highlands Region. Communities in Bergen, Hunterdon, Morris, Passaic, Somerset, Sussex and Warren Counties are all included in the Highlands Region. This region encompasses about 800,000 acres or 1,250 square miles and is divided into two separate areas. The interior area within the region is the “preservation area” or the Core and is roughly half of the region. The remaining area of the region is the “planning area.” The preservation area has the most stringent controls on development and the strongest water quality protections in the region. The majority of Byram Township is in the preservation area. Only the designated Village Center is in the planning area and is therefore subject to fewer restrictions and is to be considered the growth area or even the eventual receiving area for a potential regional Transfer of Development Rights program.

The Highlands Act creates a 15-member Highlands Council to create a Highlands Management Plan and draft and implement regulations for the region. The membership of the Council is appointed by the Governor and consists of eight residents of the counties

in the region, five of whom would be elected municipal officials and three of whom would be elected county officials. Of these eight people, there would be at least one resident from each of the counties. The other seven members of the council would consist of seven residents of the State and would represent farmers, environmentalists and the business community. The Governor reserves the right to veto any action of the Highlands Council.

The Highlands Act mandates that the Highlands Council shall prepare and adopt a regional master plan for the Highlands Region. The Highlands regional master plan shall be periodically revised and updated at least once every six years. The Council shall not adopt the Highlands Regional Master Plan unless it recommends receiving zones in the planning area and the capacity of each receiving zone for the Transfer of Development Rights program authorized Highlands Act. The Highlands Council will submit the plan to the State Planning Commission for endorsement pursuant to the rules and regulations adopted by the State Planning Commission. The State Planning Commission review shall be limited to the planning area only.





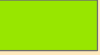
**Warren County**

**Sussex County**

**Morris County**

**Byram Township**  
Master Plan 2004  
Highlands Areas

**Highlands Areas**

	Highlands Planning Area
	Highlands Preservation Area



The goal of the regional master plan with respect to the entire Highlands Region shall be to protect and enhance the significant values of the resources. The goals of the regional master plan with respect to the preservation area shall be:

- (1) Protect, restore, and enhance the quality and quantity of surface and ground waters therein;
- (2) Preserve extensive and, to the maximum extent possible, contiguous areas of land in its natural state, thereby ensuring the continuation of a Highlands environment which contains the unique and significant natural, scenic, and other resources representative of the Highlands Region;
- (3) Protect the natural, scenic, and other resources of the Highlands Region, including but not limited to contiguous forests, wetlands, vegetated stream corridors, steep slopes, and critical habitat for fauna and flora;
- (4) Preserve farmland and historic sites and other historic resources;
- (5) Preserve outdoor recreation opportunities, including hunting and fishing, on publicly owned land;
- (6) Promote conservation of water resources;
- (7) Promote brownfield remediation and redevelopment;
- (8) Promote compatible agricultural, horticultural, recreational, and cultural uses and opportunities within the framework of protecting the Highlands environment; and
- (9) Prohibit or limit to the maximum extent possible construction or development which is incompatible with preservation of this unique area.

The goals of the regional master plan with respect to the planning area shall be to:

- (1) Protect, restore, and enhance the quality and quantity of surface and ground waters therein;
- (2) Preserve to the maximum extent possible any environmentally sensitive lands and other lands needed for recreation and conservation purposes;
- (3) Protect and maintain the essential character of the Highlands environment;
- (4) Preserve farmland and historic sites and other historic resources;
- (5) Promote the continuation and expansion of agricultural, horticultural, recreational, and cultural uses and opportunities;
- (6) Preserve outdoor recreation opportunities, including hunting and fishing, on publicly owned land;
- (7) Promote conservation of water resources;
- (8) Promote brownfield remediation and redevelopment;
- (9) Encourage, consistent with the State Development and Redevelopment Plan and smart growth strategies and principles, appropriate patterns of compatible residential, commercial, and industrial development, redevelopment, and economic growth, in or adjacent to areas already utilized for such purposes, and discourage piecemeal, scattered, and inappropriate development, in order to accommodate local and regional growth and economic development in an orderly way while protecting the Highlands environment from the individual and cumulative adverse impacts thereof ; and
- (10) Promote a sound, balanced transportation system that is consistent with smart growth strategies and principles and which preserves mobility in the Highlands Region.





The Act further mandates that the Council shall use the regional master plan elements, including the resource assessment and the Smart Growth component, to establish a Transfer of Development Rights program for the Highlands Region that furthers the goals of the Highlands Regional Master Plan. The Transfer of Development Rights program shall be consistent with the “State Transfer Of Development Rights Act’

Any Municipality in the preservation area must revise its Master Plan and ordinances to conform to the Highlands Regional Plan. This Byram Township Master Plan is being crafted with this requirement in mind is not expected to require much revision at all to be compliant. Municipalities, such as Byram, that are in both the preservation area and the planning area will have to work with both the State Planning Commission and the Highlands Council on planning and development matters.

The Highlands Act also gives the Highlands Council the right to review and accept or reject particular building projects, either public or private that disturb two acres of land or lead to a cumulative increase in impervious surface of one acre or more once it has a Highlands Plan in place. In the preservation area these projects cannot proceed without Highlands Council approval and in the planning area the Council decision is advisory and non-binding.

Any municipality in the Highlands Region whose Master Plan and ordinances have been approved by the Council as being in conformance with the Regional Master Plan shall qualify for State aid, planning assistance, technical assistance, and other benefits

and incentives that may be awarded or provided by the State to municipalities and counties which have received plan endorsement by the State Planning Commission or implement Smart Growth strategies and principles. Any such municipality or county shall also qualify for any State aid that may be provided for Smart Growth projects.

Additionally, every municipality located wholly or partially in the preservation area shall be entitled to State aid to compensate for any decrease in the aggregate amount of property tax revenues derived from the taxation of real property in that portion of the municipality located in the preservation area that is directly attributable to the implementation of the Highlands Act. The council shall annually calculate the amount to which each municipality is entitled and shall certify and transmit such amounts to the State Treasurer and to the Director of the Division of Local Government Services in the Department of Community Affairs.

The Act further defines the role of the NJDEP and it’s promulgation of new rules and permitting required in the Highlands Region. It also describes the relationship between the Highlands Council and the Council of Affordable Housing. The Act also describes it’s relation to other State environmental protection acts, such as the Freshwater Wetlands Act, Water Pollution Control Act, Safe Drinking Water Act, Water Quality Planning Act, and Flood Hazard Area Control Act.

United States Forest Service HIGHLANDS REPORT  
The Highlands Act was drafted and passed after countless hours of work from concerned citizens and





lawmakers in the Highlands Coalition. Many of these citizens used a United States Forest Service report as the scientific cornerstone of their argument. The Highlands Act recognizes that the national Highlands Region has been recognized as a landscape of special significance by the United States Forest Service; that the New Jersey portion of the national Highlands Region is nearly 800,000 acres, or about 1,250 miles, covering portions of [90] 88 municipalities in seven counties; and that the New Jersey Highlands Region is designated as a Special Resource Area in the State Development and Redevelopment Plan.

Byram Township is located within the Highlands region, which encompasses more than two million acres in northwestern Connecticut, the lower Hudson River valley, northern New Jersey and east-central Pennsylvania. Open high hills, ridges, valleys and rolling plains characterize the landscape.

The Highlands Coalition prepared a Draft New York/New Jersey Highlands Regional Study, dated March 2002, which identifies numerous challenges and opportunities for the Highlands Region. The study documented the remarkable quality of natural resources in the Highlands. The study identified four challenges facing the region. These include water, habitat, recreation and productive forest and farms.

## Water

- Increased water consumption
- Increased storm water runoff
- Decreased infiltration and decreased stream baseflow and groundwater availability

- 90% of lands identified as exceptional value are identified as deserving further protection

## Habitat

- Increased habitat destruction
- Increased habitat fragmentation
- Increased number of exotic species
- 60% of lands identified as exceptional value deserve further protection

## Recreation

- Decrease in recreational opportunities
- 38% of lands classified as exceptional recreation value deserve further protection

## Productive Forests and Farms

- 78% of the exceptional value farmlands and 50% of productive forest warrant further protection



**The Report established the following five (5) goals:**

Manage future growth – Manage growth to the most appropriate sites, thus creating a landscape that sustains a regional economy through natural biological productivity and maximizes inherent recreational opportunities.

Maintain an adequate supply of quality water

- Manage the surface and ground water resource to prevent degradation and depletion. Maintain the highest possible water quality that meets the needs of local and downstream users with minimal artificial treatment.

Conserve contiguous forests

- Implement management consistent with private property rights for the forests and other renewable resources for the region. This management should protect critical habitats, while providing a sustained yield of goods and services such as clean water, hunting and fishing, wood products and recreation

Provide appropriate recreational opportunities

- Develop and implement comprehensive recreation and tourism management that promotes indigenous natural, historic and cultural resource based recreational opportunities.

Promote economic prosperity that is compatible with Goals 1 through 4

- Foster integrated regional land use planning that focuses development and redevelopment in infrastructure rich areas, and minimizes the pressure on local tax bases by incorporating the incremental increase of municipal services into the development cost.







## BYRAM PLANNING DOCUMENTS

### SMART GROWTH PLAN

The Byram Township Smart Growth Plan of 2002 presents a strategy to alter current development trends by directing growth to population centers while protecting rural resources and environmentally sensitive areas of the Township. By focusing development in a Village Center, the rural landscape will remain largely intact. The plan envisions that development in the environs will primarily take the form of hamlet scaled lake communities. The Smart Growth Plan will serve as a long-range guide for the Village Center and the Township as a whole. It is a policy document detailing the Township's official vision of the physical form and appearance of the Village Center and its environs.

The Village Center Core Planning Area encompasses lands immediately adjacent to Lackawanna Drive and Route 206. The Smart Growth Plan envisions the highest density of development adjacent to Route 206. Such development would consist of mixed-use retail with office and residential spaces on upper floors. The "interior" of the Center is intended for a community green with civic buildings having a high degree of pedestrian uses. Surrounding the green should be the highest intensity residential uses, e.g. townhouses and duplexes. The outlying ring of development is detached small lot single-family residential homes. The State Development and Redevelopment Plan (SDRP) defines the Environs as areas outside Center Boundaries. Byram Township has petitioned the Office of State Planning for center designation in areas on and adjacent to Route 206. Therefore, the Smart

Growth Plan considers the environs to include all lands, with the exception of the Village Center and the Lake Hamlets, as the environs. The SDRP envisions the environs as areas for the protection of large contiguous areas, which include farmland, open space and large forest tracts. The environs represent over 80% of the land area of Byram.

The Smart Growth Plan further describes the Lake Communities as originating as seasonal summer retreats that were utilized for recreation and enjoyment. Seasonal inhabitants relied upon the Lackawanna Cut Off and the Sussex Branch rail lines to reach Byram's lakes. Unbeknownst to visitors and townspeople of the time, the lake communities and their housing, surrounded by environmentally constrained lands, established a desirable land use pattern for the Township. Each Lake District serves as a hamlet or small village. From a land use planning perspective, such a layout and design reduces land consumption and



reduces the cost of infrastructure improvements.

The Smart Growth Plan recognizes Cranberry Lake, Lake Lackawanna, Lake Mohawk, Forest Lake, Johnson Lake, and Panther Lake as existing established residential lake communities and recognizes the interrelationships between the surrounding environs, lake Communities and the Route 206 corridor. The Plan also addresses functional interconnection between land use, open space, environmental protection, circulation, economics, utilities and community facilities.

The Smart Growth Planning process recognized that the Township received a Smart Growth Assistance Grant from the Association of New Jersey Environmental Commissions (ANJEC). The grant was awarded to study, recommend and implement ordinances to better regulate development on lakes. During public meetings associated with the Smart Growth Plan, public input was sought regarding existing problems and solutions to negative environmental impacts associated with lake front development. The ANJEC study and its recommendations are this Lakefront Development Study and Plan. After the completion of the Lakefront Development Study and Plan, the Smart Growth Plan will be revised to incorporate the Lakefront Development Study and Plan as its Lake District element.

## LUBBERS RUN GREENWAY PROJECT

The Byram Township Environmental Commission commissioned the Lubber's Run Greenway Project in 1997, which was updated in 2000. The study documents the existing natural resources along the two-mile stretch of Lubbers Run that flows through Byram from Lake Lackawanna to the Musconetcong River. The greenway park plan then proposes to link local historic and cultural landmarks using the stream corridor and existing and proposed local trails. A stream corridor protection plan recommends preserving critical ecological areas identified in the study.

Siltation and surface water quality degradation were found to pose a threat to the integrity of the stream corridor. Existing and future development in the area are the greatest threats, including commercial development, Route 206 improvements and the proposed Village Center. Homes in the Lake Lackawanna District that front on Lubbers Run have extensive lawns that extend up to the water's edge and this inevitably causes a higher flow of nutrients and fertilizer chemicals into the surface water of the stream. In comparison, most homes in East Brookwood are wooded lots with a vegetative buffer near the stream and can serve as an example of how to maintain a residential lot in a stream corridor.

Historic resources include the old schoolhouse, the Lockwood Cemetery, the ruins of Lockwood Forge, Waterloo Village and the Sussex Branch Trail. An extensive and well-maintained trail system exists





in Byram and can be expanded to complete several key linkages. The municipal complex, the school, the landscape nursery and certain residences near Lake Lackawanna disrupt visual and scenic continuity along Lubbers Run. Critical areas in the stream corridor were divided into three zones. Zone one captured the most critical areas, including identified wetlands, floodplains and forested slopes in excess of 15%. Zone two was a 150-foot stream buffer, considered critical; and zone three included a 500-foot stream buffer and remaining forested areas.

Recommendations included land acquisition and conservation easements in critical areas and the creation of an interpretive trail, including footbridges and pedestrian underpasses. Other recommendations include gateway maintenance and landscape buffering for incompatible uses and land development ordinances to control construction in sensitive areas. Limiting access to sensitive lands in public ownership is recommended. Finally, public education is seen as instrumental for the success of any of the recommendations.

The Lubber's Run Greenway Project included an extensive description of Best Management Practices (BMPs) or special methods to maintain or develop land to improve water quality in the stream corridor. Many of these recommendations were incorporated into this Lakefront Development Study and Plan. Key recommendations include native vegetation buffers and forest retention, strategic lawn placement and native vegetation plantings. The greenway plan

includes an excellent native plant list to inform homeowners of the plants they should incorporate into landscaping and an exotic/invasive plant list to inform homeowners of the plants they should avoid. Storm water management with vegetated swales and filter strips is another BMP, as are wet ponds and detention basins. Salt reduction during de-icing in winter and increased street sweeping are roadway management practices that can improve water quality.

Suggested ordinances include measures for headwater protection, storm water management, forest preservation, natural resource inventories and development alternatives such as clustering, and Transfer of Development Rights (TDRs). Open space provisions are discussed, as well as the benefits of conservation easements; and potential cooperative partners for open space acquisition are listed.

The Lubbers Run Greenway Project is an excellent model for studying a particular issue and devising a comprehensive set of solutions to address the many aspects of the issue. The Lakefront Development Study and Plan not only follows this example, but also incorporates many of the recommendations designed to improve water quality in Lubbers Run and applies them to the much larger Lake District areas.





## BYRAM TOWNSHIP OPEN SPACE PLAN

The Byram Township Open Space Plan, completed in 2000, was a cooperative effort of the Morris Land Conservancy and the Byram Township Open Space Committee. The plan recognizes that 25% of the Township is currently permanently preserved open space and that an additional 60% of the land within the Township has open space protection potential. While a large portion of the Township is in open space protection, the recreation needs of the community are still not being met. Byram only has six municipal parks and a struggling recreation department. Approximately 2,000 youngsters in the community utilize recreation activities on a limited amount of public athletic fields.

The plan identifies the following goals; acquire land for active recreational field space, preserve the Lubbers Run greenway, enhance the existing trail system, connect protected state and municipal open space, protect the Township's drinking water supply, protect the Township's farmland, protect the Township's forests, protect the Township's steep slopes and adhere to the principles of the State Development and Redevelopment Plan. The plan recognizes the increased development pressure in the region and the role of open space protection in managing that growth.

The Open Space Plan catalogs the natural, built, historical and cultural resources of the Township. It continues with the planning rationale and the objectives of the latest Master Plan, as well as the objectives of other organizations, public and private, working in the region on open space preservation.



The plan inventories the open space lands within the Township, by owner, including state, municipal, quasi-public, private, commercial and non-profit open space, as well as undeveloped lands in private ownership. The total amount of protected land is 3,264 acres, with 93% of the publicly held land in permanent protection. About 25% of the total land area of the Township is preserved, with 94% of that being state parkland. A total of 7,928 acres of land is still undeveloped; this includes undeveloped lands, farmland, Boy Scout and private campgrounds, NJDOT property and non-profit holdings. This represents another 60% of the Township available for open space protection.

An outdoor recreation needs assessment for the Township highlights a need for more active recreation facilities, an expanded trail system and expanded protection of key historic resources. There is also a need to protect drinking water supplies for private well owners, protect the lake ecosystems from





eutrophication, link current open space holdings and protect farmland. The open space plan also supports the findings and plan of the Lubbers Run Greenway Project. Numerous types of preservation tools are described, from direct acquisition and conservation easements, to leases and zoning changes, as well as funding sources for acquisition.

The document ends with a priority list for acquisition for several areas of the Township, including Allamuchy Mountain State Park, Lubbers Run, Dallis Pond, Camp Westby, Wolf Lake, Roseville Pond, Panther Lake, Roseville Pond to Koeffler's Pond, and various farms. The Lakefront Development Study and Plan will suggest additions to this list for each of the Lake Communities, in support of many of the goals of the Open Space Plan, including preserving the Lubbers Run greenway, protecting the Township's drinking water supply, protecting the Township's forests, protecting the Township's steep slopes and adhering to the principles of the State Development and Redevelopment Plan.

## LAKEFRONT DEVELOPMENT PLAN

This Lakefront Development Study and Plan examines six of the twenty-five lakes and ponds as established residential communities. The lake communities included in this study are Cranberry Lake, Lake Lackawanna, Forest Lake, Johnson Lake, Panther Lake and Lake Mohawk. The purpose of this report is to formulate a plan for these heavily developed lakes based on an examination of the current and future potential land use as well as the environmental constraints present at each of the Lake Communities, both in isolation and as a system. The plan is designed to maintain the current character of development in each of these communities and to help ensure the basic water quality of these man-made lacustrine systems.

Some of Byram's lake communities began as seasonal summer communities with small, rustic cottages on narrow lanes that were used for recreation and relaxation. Others were planned communities based on



a lakefront lifestyle; still others have developed slowly, over time, with less intensity. All of these lake areas and their housing, surrounded by environmentally sensitive and largely undeveloped lands, established the distinct land use pattern for the Township.

The Lake Communities serve as identifiable neighborhoods that engender a sense of place and foster neighborhood cohesion, with each lake serving as a 'hamlet' or small 'village'. From a land use planning perspective, this layout and design reduces land consumption and reduces the cost of infrastructure improvements, such as water supply and road networks. These centers are set in a matrix of environmentally sensitive environs.

The Lake Communities are defined as the extent of developed parcels surrounding the immediate vicinity of the lakes. The environs are defined as the remainder of the sub watershed areas that form the groundwater and surface water system for each of the lakes. The environs have a distinct impact on the Lake Communities, since both are inextricably linked hydrologically with, both ground water and surface water. While many of the recommendations will focus on the Lake Communities, land use planning in the environs will be addressed as well.

This study presents a brief review of the entire Township from a planning, land use, demographic and environmental perspective, as well as examining lake issues, the findings of past lake studies and smart growth principles.

## Lakefront Development Plan Recommendations

Recommended zoning changes are specific to each Lake District and take into account the current development patterns, existing undeveloped tracts and environmental constraints. Recommendations include the following:

Recommended bulk standards for all Lake Communities based on environmental constraints and best management practices.

Lot sizes/Infrastructure: Any new lot proposed to utilize on site well and septic systems shall be a minimum of 40,000 square feet in size. Any new lots created or new home construction on lots less than 40,000 square feet in size are required to connect to a potable water supply.

## Septic Management Ordinance

Lake Mohawk and Cranberry Lake presently participate in a Septic Management Area Ordinance. It is recommended that the remaining Lake Communities engage in similar programs. The key provisions of a Septic Management Plan include:

- Septic management certificate and a copy of NJDEP's Septic Operation and Maintenance Manual
- Septic system cleaning every 3 years
- Map of the septic system components and private water sources







## Design Guidelines

The establishment of design guidelines is intended to maintain the rural character and a sense of identity in the Lake Communities, to preserve scenic views and the scenic quality of the lake areas, and to improve the water quality and quantity by improving septic tolerance by design.

- Careful consideration to be given to existing development in surrounding lots.
- The natural setting of the site and characteristics of the area should be the bases for design.
- Considerable landscaped or wooded areas must be preserved on lake front lots.
- Native plants should be used for all landscaping in or near environmentally sensitive areas, while exotic or invasive plants should be avoided.

## Conservation Easements

- Conservation easements are conservation tools that limit the development rights of a property, while allowing the owner to retain possession and use of the property. They should be encouraged for undeveloped lands in private ownership surrounding lakefront areas.
- Properties in private ownership that are appropriate for conservation easements should be listed in the Township Open Space Plan.

## Open Space Acquisition

- The Township can purchase private property in fee-simple ownership. This provides the Township with greater control than conservation easements, but it is more expensive and completely removes the

property from the tax rolls. It should be sought for undeveloped lands in private ownership surrounding lakefront areas

- Properties in private ownership that are appropriate for open space acquisition should be listed in the Township Open Space Plan.

## Lake Bottom Consolidation

- Tax records indicate that the Cranberry Lake bottom is owned by three different owners including the State of NJ and Byram Township, three different owners own the Johnson Lake bottom and two different owners own the Panther Lake bottom. This creates a situation where no single entity is responsible for maintenance of the lake and for the drafting of a lake management plan. This can lead to a lack of a cohesive management regime.
- The Lake Lackawanna Investment Company owns the Lake Lackawanna bottom, the Forest Lake Club owns the Forest Lake bottom, and the Lake Mohawk Country Club owns the Lake Mohawk bottom. Single ownership allows these entities to draft management plans, monitor water quality and manage the lakes for a variety of recreation activities.



## Septic Failure and Improvement Monitoring Program

Neither the County health department nor the Township keeps a database to track of failed septics. Creation of a database in the Township to monitor failed septics and septic system improvements is recommended, especially in the Lake Communities. This will allow Byram to identify areas in need of improvement and to inform the Township of possible water quality testing and monitoring needs.

## Storm Water Management Plan

The Township lacks a cohesive storm water management plan. While several different ordinances address the larger issue of storm water management from the standpoint of roads, right-of-way improvements and tract disturbance, there is no single cohesive plan for storm water management. Storm water runoff can have significant impacts on

lake systems, increasing sedimentation and Non-Point Source (NPS) pollution. The Township should adopt a storm water management plan in accordance with the standards outlined in N.J.A.C 7:8.

## Wastewater Management Plan Update

The Township has an adopted wastewater management plan. It is recommended that the findings of this report be incorporated into that plan, to better protect the water quality and quantity in the Lake Communities.

## Dam Safety Management Plan

All of the lakes identified in this Plan were created and maintained by dams. With the exception of the state-owned dam at Cranberry Lake, these dams remain in private ownership and need to be monitored and maintained. The state is responsible for inspection and enforcement of dam safety.

## Water Quality Monitoring Program

The Sussex County Health Department conducts regular tests for fecal coliform at Township lake beaches throughout the summer. Individual lake community groups also engage in some limited water quality monitoring, such as the Lake Mohawk monitoring program. These existing testing regimes need to be formalized as a Township function and expanded to more sites. The testing regime needs to occur at regular time intervals and be diverse in the types of tests administered.





### Lake Management Plans for Each Lake

Aside from the land use controls and Township planning documents, it is suggested that each lake community adopt its own lake management plan. The lake management plan is a citizens' document, crafted by the Lake District residents. It is an examination of each lake's current condition, current and future recreational uses and a list of steps necessary to maintain the quality of the lake for its continued recreational use. The lake management plans should include.

- Ecological Inventories
- Goals And Objectives For the Lake
- Problems And Issues Facing the Lake
- Water Quality Assessment
- Action Agenda Based on Current Principles of Watershed Management
- Implementation Plan for the Action Agenda
- Continued Monitoring of Water Quality Measurements
- Reassessment of Actions Taken

### Outreach and Public Education Program

The recommendations of this Lakefront Development study should be made public by way of meetings and informational materials. Township residents should be informed that the preservation of lakes is a common interest of all concerned residents and is thus a common responsibility. Apart from programs organized by the Township to oversee the quality of the lakes and the surrounding area, each individual lot owner/developer is responsible for correcting or reducing the effects of development on the environment.

