

# **Master Plan 1993**

**Township of Upper**  
Cape May County, New Jersey

Upper Township Planning Board  
Adopted: January 27, 1994  
Clarification and Revision Adopted: July 21, 1994

## Acknowledgements

This Master Plan document is the result of a coordinated and comprehensive effort undertaken by the Upper Township Planning Board and the Township Planning Consultant, the Waetzman Planning Group. This Master Plan contains eleven master plan elements adopted by the Planning Board of the Township of Upper at a public hearing on January 27, 1994. There was a clarification and revision to the Future Land Use Plan and Map of the Master Plan adopted by the Planning Board at a public hearing on July 21, 1994.

We would like to acknowledge the time and effort of the members of the Planning Board Subcommittee who attended meetings, made insightful comments, and helped bring about this Master Plan.

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A signed and sealed original is on file with the Township Clerk.

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# I. Introduction

## Regional Location

Upper Township occupies 63.7 square miles in northern Cape May County, New Jersey. Upper is 12 miles north of Cape May Court House, the County seat, and approximately 14 miles south of Atlantic City. Regional highway access is provided by the Garden State Parkway and U.S. Route 9 along the eastern portion of the Township, both providing north/south transportation access, and NJ Routes 49 and 50 within the western and central portion of the Township, both providing east/west transportation access. (See Map 1: Regional Location.)

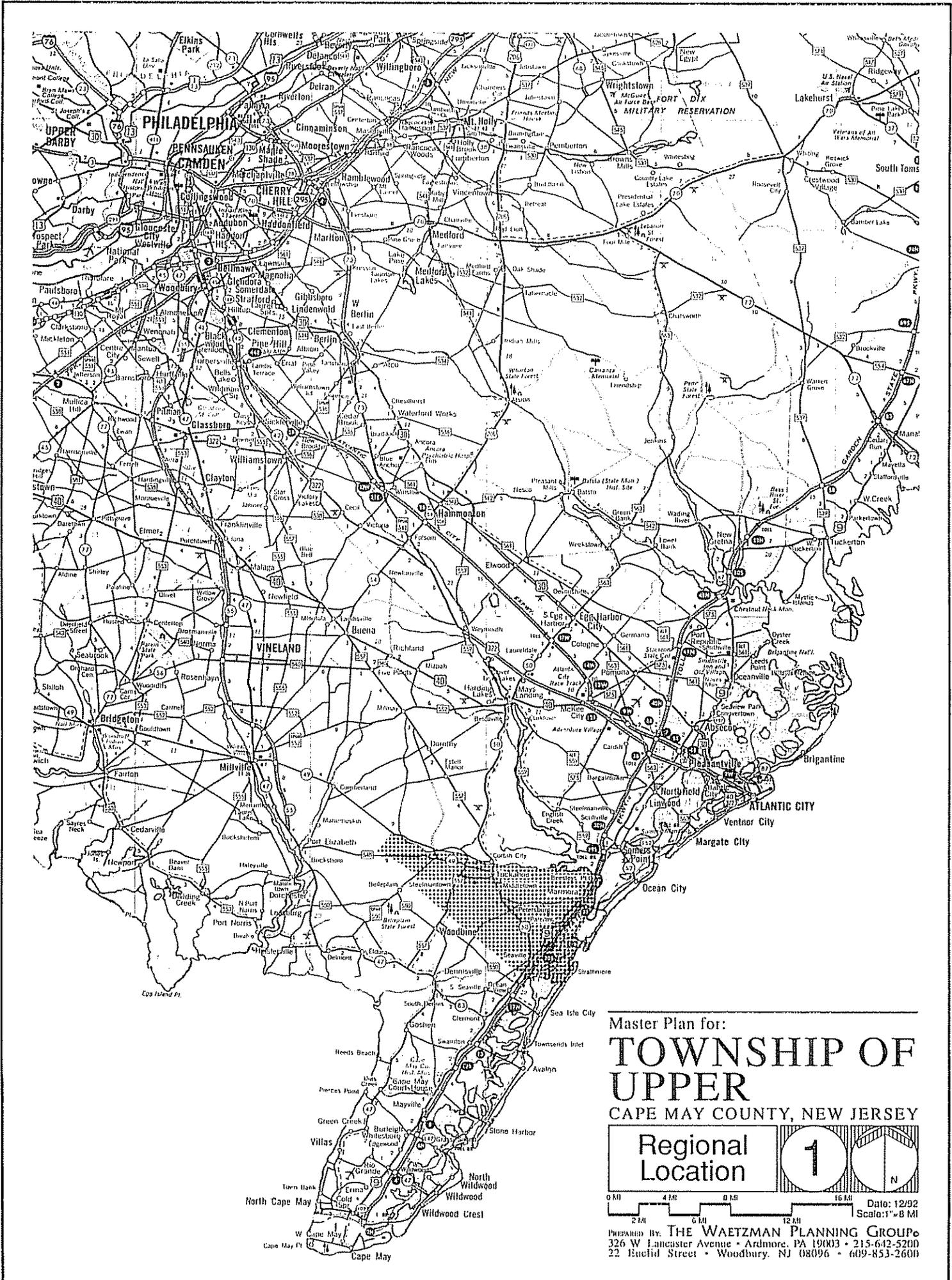
Upper Township is primarily a residential community with distinct single family neighborhoods in the east, along the Route 9/Old Stagecoach Road corridor, and also in the central/western portion of the Township which is separated from the eastern portion by the Cedar Swamp Creek and its associated wetlands. The barrier island community of Strathmere is physically separated from the mainland community by marshland and tidal lands. The Township is bordered by the Cape May County municipalities of Dennis Township, Woodbine Borough, Ocean City and Sea Isle City, the Atlantic County municipalities of Corbin City and Estell Manor, and the Cumberland County municipality of Maurice River Township.

## Economic and Population Impacts

Upper Township experienced significant residential and moderate nonresidential growth in the 1980's, generated by the expanding Atlantic City regional market area, as well as the building boom experienced not only by New Jersey, but by much of the United States. Development peaked in the mid 1980's when, along with the entire region and much of the country, Upper Township witnessed a downturn in the economy beginning in late 1989, early 1990 and continuing into 1993. This downturn has caused a dramatic slowdown in development activity within the Township, in sharp contrast with the previous development surge.

## Need for the Master Plan

Although the economy has recently slumped, the Upper Township Planning Board recognizes that the increased residential development and the few large scale commercial developments along Route 9 constructed within the 1980's have had significant impacts on the Township, some of which have been adverse, affecting the community's natural environment, its traffic circulation system, and its public facilities and services. An update of the Township's Master Plan was determined to be necessary to respond to the changing conditions of the social, physical, economical and environmental fabric of the community. A prime function of the Master Plan process is to reconcile the conflicting demands on the land with its ability to support those demands.



Master Plan for:  
**TOWNSHIP OF UPPER**  
**CAPE MAY COUNTY, NEW JERSEY**

Regional Location

1

Date: 12/92

Scale: 1" = 8 MI

0 MI 4 MI 8 MI 16 MI

2 MI 4 MI 6 MI 8 MI 10 MI 12 MI 14 MI 16 MI

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## Master Plan Purpose

In accordance with the New Jersey Municipal Planning Enabling Act, the purpose of Upper Township's Master Plan is to provide a guide to accomplish a coordinated and harmonious development of the municipality. Based on the analyses of present and future needs, the plan is designed to promote health, safety, and general welfare, as well as efficiency and economy in the land development process, and the maintenance of property values.

Specifically, the Master Plan is to identify land use constraints and opportunities and serve as a formal statement of Upper Township's policies regarding future land use and development. The Plan is designed to encourage sound growth and general welfare, to strengthen and sustain Upper Township's economy, and to establish appropriate criteria for the location of housing, commerce and light industry coordinated with the protection and enhancement of existing natural resources.

The Master Plan serves as a basis for zoning as well as for reviewing development applications. It is a listing of priorities and preferences which, when instituted as an integral part of the decision-making process, can help to ensure sound, high-quality land use in Upper Township. This report has been designed to meet the statutory provisions of the New Jersey Municipal Land Use Law (Chapter 291, Laws of New Jersey, 1975), and will provide the Township with an up-to-date, meaningful planning program designed to permit orderly residential and non-residential growth within the municipality.

In 1992, the Master Plan process was initiated and several planning studies were prepared for the Plan, including a land use survey noting the current use of each property within the Township and special studies regarding each plan element. This 1993 Master Plan represents an update of the Township's 1975 Master Plan and 1986 Reexamination Report. Much of the previous studies are relevant and help put in perspective the historical pattern of growth witnessed by the Township. Additionally, a Housing Plan Element and Fair Share Plan was prepared in 1989 for Upper Township by the planning firm of James Rutala, P.P., AICP. The Upper Township Planning Board officially adopted the Housing and Fair Share Plan on November 16, 1989.

## Municipal Planning Assumptions

The 1993 Master Plan of the Township of Upper has been developed by the Planning Board based upon assumptions, each of which has been important in determining the policies and recommendations of this Master Plan. These assumptions are:

- *Upper Township will continue to face development pressure in limited areas of the municipality, especially residential development, although not at the rate it experienced during the mid 1980's.*

During the mid-1980's, Upper Township witnessed a large increase in the amount of new dwellings constructed. During the period from 1983 - 1988, over 1,000 homes were constructed, representing almost 20% of the Township's entire housing stock built in this six-year period. The expanding market and employment area around Atlantic City as well as smaller employment areas within Cape May County spurred interest in the single-family residential development along the Route 9 and Old Stagecoach Road corridor in the communities of Miramar, Marmora, Palermo and Seaville, and also in portions of Petersburg.

Also impacting on the development seen within the Township was the relatively inexpensive cost of land, the proximity to an attractive setting near existing neighborhoods in the Township, and the continued build-up of surrounding communities such as Somers Point and Ocean City, resulting in the creation of new residential communities. Also, a few developers and builders are locating large homes on large lot, rural residential settings, primarily in the western and central portion of the Township.

The past three years have seen a major downturn in economic activity in the region as well as the entire country from the previous surge in the economic cycle. The Master Plan recognizes that such economic cycles occur. When the economy improves, development pressures in the eastern portion of the Township will be limited to some remaining large tracts of land, and other smaller tracts. Current County population projections for the Township note that population is expected to increase, although at a declining growth rate as seen by the Township in the past two decades. Development potential of the land in the western portion of the Township will be limited to large lot residential development due to the unavailability of a public sanitary sewer system and the constraints placed on development by the Pinelands Commission. Significant areas of the central portion of the Township are constrained by wetlands and floodplains and are mainly under federal and county control.

The few remaining agricultural uses in the eastern portion of the Township will continue to decline as future incoming suburban development continues to create increasing operational problems for farm activities. In addition, the general decline in farming income coupled with the increase in land values will make the sale of farm lands an attractive economic prospect for many of the owners of farms located within the areas of highest demand for new suburban housing. However, the farmland in the western portion of the Township, under control of the Pinelands Commission, will face less development pressures and will remain a viable land use activity.

- *Upper Township may experience light development pressure for commercial development along the Route 9 corridor in the near future.*

Areas north of Upper Township, in Atlantic County, have experienced dramatic commercial development pressures and when there is an upswing in economic activity in the region, this development pressure will continue to push down the Route 9 corridor as prime locations further north are developed and occupied. Although, it is assumed that a demand for larger commercial space will not materialize within the near future, appropriate locations near limited access highways should be reserved for future such uses in the Township.

- *Upper Township's Master Plan seeks consistency with other area wide planning policies.*

The greatest amount of authority for planning and zoning in New Jersey is given to the local municipality. In order to coordinate local efforts and promote orderly and rational development patterns, the State requires municipalities during the master plan review process to review the master plans of contiguous communities, the county in which it is located, and the State Development and Redevelopment Plan.

The master plans of adjacent municipalities have been reviewed in the course of developing the Upper Master Plan. Also, the plans of Cape May County, the Pinelands Commission, and the New Jersey State Development and Redevelopment Plan have been reviewed. The most recent state, regional, and county land use plans recognize that Upper

Township is classified as a limited growth area and is likely to attract only limited additional residential and commercial development as infill along the Route 9 Corridor and within Petersburg and Tuckahoe.

a. New Jersey State Development and Redevelopment Plan -

The most significant of these plans is likely to be the New Jersey State Development and Redevelopment Plan which was adopted by the State Planning Commission during 1992. The focus of the State Plan emphasizes its use in resource allocation at all levels. Funding for infrastructure is limited at all levels of government and the intent of the State Plan is to use that money in the most efficient manner by channelling it to centers and their outlying planning areas that can use it most wisely. A companion document to the State Plan, the Resource Investment and Management System Report projects infrastructure investment needs of \$114 billion by the year 2010, not including existing infrastructure needs. This translates into a required \$6 billion spent per year on new infrastructure, in comparison to a combined governmental expenditure at all levels in the State of about \$23 billion per year.

The likely effect of the State Plan will be the reallocation of funding from the Fringe, Rural or Environmentally Sensitive Planning Areas to the Centers, Metropolitan and Suburban Planning Areas. Upper Township has been identified as a combination of Planning Areas, with five village or hamlet centers delineated. The future land use plan as presented in this Master Plan is consistent with the intent of the State Master Plan.

The State Plan was developed in order to respond to the changing patterns of land use and development, and the loss of open space as well as the vitality of urban areas. It acts as a guide for local planning efforts, giving policies rather than regulations. The goals of the Plan can be summarized as follows:

1. Revitalize the State's urban areas and centers;
2. Conserve natural resources statewide;
3. Promote beneficial economic growth, development, and renewal;
4. Protect the environment;
5. Provide adequate public services at a reasonable cost;
6. Provide adequate housing at a reasonable cost;
7. Preserve and enhance historic, cultural, open space, and recreational lands and structures; and
8. Ensure sound and integrated planning statewide.

The general strategy for achieving these goals is focused on the coordination of public and private actions so that growth is guided into compact forms of development and redevelopment that maintains environmental systems and uses infrastructure efficiently. The plan identifies the types and patterns of compact forms, called "Centers", that meet the needs of infrastructure and environment. There are five types of Centers: Urban Centers, Towns, Regional Centers, Villages, and Hamlets. Within Upper Township, the only Centers designated are Villages and Hamlets. Marmora, Tuckahoe, Petersburg, Seaville, and Strathmere are identified as Villages, while the identified Hamlets include Beesley's Point and Palermo.

Villages are defined as having the following conditions: primarily mixed-use residential, offering some employment and basic shopping services; a population of not more

than 4,500 persons, and a density of at least 3 units per acre; and partially served by water and sewer, and having reasonable proximity to an arterial highway.

Hamlets are the smallest places given a Center designation, usually found in rural areas at crossroads. Primarily residential, they may also include some public or civic uses such as a tavern, church, or convenience store within their central core. They have a population of no more than 250 people, and generally have no public water or sewer system.

Regions, containing critical natural and built resources in need of protection or enhancement, are also identified in the State Plan. These are known as "Planning Areas." These are designated as PA1 Metropolitan Planning Area, PA2 Suburban Planning Area, PA3 Fringe Planning Area, PA4 Rural Planning Area, and PA5 Environmentally Sensitive Planning Area.

The developing area along Route 9 has been identified as PA2 Suburban Planning Area. This includes exurban lands and includes residential subdivisions, shopping malls, and small office centers. Since much infrastructure is generally in place in such areas, although not in Upper Township, they are usually marked to receive much of the future growth that may be expected. In order to decrease continued congestion and sprawl, and make efficient use of infrastructure, policies for this Planning Area focus on the creation of internally focused, mixed use developments.

A stretch of the Township along Route 49 and Route 50 (from Marshallville to Petersburg) is identified as Planning Area IV Rural. This includes sparsely developed farmlands and forests. Policies for Area IV focus on the enhancement of agriculture and other rural land uses, and the protection of the environment. New development is encouraged in appropriate patterns (mainly within the existing village centers) using clustering, Transfer of Development Rights (TDR's), and other creative design methods.

The final designation in the Township is Planning Area V Environmentally Sensitive which covers by far the greatest amount of land within the Township. Typically, such an area is made up of wildlife habitats, aquifer recharge areas, wetlands, prime forest lands, scenic areas, and other lands with significant topographical, geological, or environmental features. In Upper Township, this area is made up of the large swath of lands west of the developed Route 9 area, from the Cedar Swamp Creek north to the Tuckahoe River, as well as the marshlands east of the Garden State Parkway. New development is strongly discouraged in these areas, as the protection of sensitive resources is of primary importance.

The Residential and Commercial land use areas along the Route 9 corridor in the Township (as shown on Map 3: Future Land Use in Section III., Land Use Plan), generally correspond to the Suburban Planning Area (PA 2) criteria of the State Plan; the Residential and Commercial land use areas along the Route 49 and Route 50 corridor from Marshallville to Petersburg generally correspond to the Rural Planning Area (PA 4) criteria; and the Township's Conservation land use areas, correspond to the Environmentally Sensitive Planning Area (PA 5) criteria of the State Plan.

The vast western area of the Township controlled by the Pinelands Commission has not been designated separately within the State Plan as the Pinelands Comprehensive Management Plan supersedes the State Plan and sets its own land use policies.

b. Pinelands Commission -

Upper Township's Master Plan recognizes the land use policies of the Pinelands Commission and intends to maintain the working relationship with the Commission to ensure the coordinated development or the protection of the resources delineated within the Township as Pinelands Area. In seeking to reduce the number of waivers to its requirements, the Pinelands Commission adopted amendments to its waiver process in March of 1992. This process, by which property owners may seek to bypass some restriction or requirement set by the Commission, has proven to be slow and extremely complex. The new regulations call for a "density transfer" program. This is meant to enable owners of existing undersized lots within the Pinelands to develop their property; it will not allow owners of large parcels to subdivide their land.

In order to develop their property, a landowner must purchase additional acreage within the Pinelands (not necessarily contiguous to the developable lot), and place it under a deed restriction. While this deed restricted land may not be built upon, the owner retains the right to use it for agricultural, forestal, or recreational purposes. For instance, the owner of a parcel three acres in size within an area zoned for 25-acre minimum lot size may develop the three acre property after purchasing an additional 22 acres elsewhere within the Pinelands. These additional acres are then placed under a non-developable deed restriction, and may be used for the purposes mentioned above. As one of the 52 jurisdictions within the Pinelands, Upper Township has recently revised its local zoning ordinance in accordance with the new Pinelands Commission regulations.

c. U.S. Fish and Wildlife Service -

The Department of the Interior, Fish and Wildlife Service, is in the process of purchasing additional land for the Cape May National Wildlife Refuge. Covering several townships in Cape May County, the proposed acquisition area will encompass approximately 15,300 acres. This will include 4,000 acres in Upper Township, of which some 2,325 acres have been purchased as of this Master Plan, mainly in the area of the Great Cedar Swamp.

d. Cape May County -

The County Master Plan currently dates from 1985 and will be updated in the near future. The 1985 plan sets policies and makes recommendations for a full range of issues, including the environment, housing, historic preservation, recreation and tourism, industry, and transportation.

Of greatest concern to the County is the potential growth allowed under the current zoning of the various municipalities. If build-out were achieved for each community under the zoning now in place, the County would experience a 300% increase in housing units. While this is not a likely scenario, it points to the need for more rational ordinances. Since water supply has become a major issue within the County, especially in the southern municipalities, the recommendations made by the County to achieve rational land use densities are based on the groundwater allocations for each municipality under the Municipal Utilities Authority (MUA). However, Upper Township does not have a severe groundwater problem and is not a part of the MUA, so County recommendations for Upper are based on other concerns, including natural resource management, recreation, historic preservation.

Although the Township experienced a population growth rate of 59% in the 1980's resulting in a 1990 population total of 10,681, the Cape May County Planning Board projects that Upper Township will have growth rate of 26% in the 1990's, equaling a total population of 13,500 people by the year 2000. By the year 2010, the County projects that the Township will grow to 16,000 people, at a growth rate in the 2000's of 18.5%, and is projected to grow to 18,000 people by the year 2020, a growth rate of 12.5%. Clearly, the population projections for the Township are to increase at a declining level of growth.

e. Surrounding Municipalities -

Upper Township is bordered to the southwest and south by the Cape May County communities of Dennis Township, Woodbine Borough, and Sea Isle City; to the west by the Cumberland County community of Maurice River; to the north by the Atlantic County municipalities of Corbin City and Estell Manor; and to the east by the Cape May County community of Ocean City.

*Dennis Township* - The Township is currently undertaking an update of its 1974 Master Plan, although no date for its completion is yet available. The 1974 Plan provides for conservation districts permitting "extremely low density" residential development as well as agricultural and recreational uses in environmentally sensitive areas. Moderate density (R-1) residential development of one unit per acre was proposed along Route 9 and low density (R-2) residential development of one unit per two acres was proposed around the Dennisville-Petersburg Road area.

*Woodbine* - A "Planned Development" district is provided for near Dennisville-Petersburg Road, permitting a mix of residential, commercial, and/or industrial uses, requiring a 1-acre minimum lot size, or 3.2 acres if septic systems are used. Surrounding the railroad right-of-way is a zone of R-1 moderate density single family residential use. The western portion of Woodbine is an Agricultural Residential district with a 5-acre minimum lot size.

*Ocean City* - A barrier island community, Ocean City lies to the east of Upper Township and is separated from it by inlets and wetlands. Land uses in both municipalities are therefore well separated; access to and from Ocean City is by two bridges, one across Roosevelt Boulevard and another across Corsons Inlet from Strathmere. The area around Roosevelt Boulevard also caters to the seasonal tourism and resort industry.

*Sea Isle City* - Sea Isle City lies south of Strathmere, and shares the same barrier island with it. Current land use in the area adjacent to Upper Township is limited to a small number of residential lots which are seasonal resort homes. As this area is only a narrow sandy strip and constrained by marshland, no expansion of this or any other land use is anticipated by the Sea Isle City Master Plan.

*Corbin City* - Lands of Corbin City abutting Upper Township are planned for conservation and residential uses according to the City's 1978 Master Plan. Lands owned by the State within the City extending to Great Egg Harbor are not included under any Master Plan designation.

*Estell Manor* - The Tuckahoe River separates Estell Manor from Upper Township. The majority of the border between the two communities is composed of the Peaslee Fish and Wildlife Management Area. A small portion of the border area, between the Management Area and Corbin City, designated in the 1989 Master Plan as "Neighborhood V", is zoned

residential. Bordering Upper Township from Head-of-the-River to almost Marshallville, it is described in the community's Master Plan as containing the highest concentration of historic and cultural resources within Estell Manor. Even so, it is a lightly populated area with only 57 residents and 19 housing units, as of 1989.

*Maurice River* - The Peaslee Fish and Wildlife Management Area covers the entire border between Upper and Maurice River Townships. There is no major activity on this eastern side of Maurice River, which is zoned for limited large lot residential growth, agriculture and low intensity public recreational use.

f. Federal Wild and Scenic River Act -

The Great Egg Harbor River became New Jersey's first federally designated "wild and scenic river" in October of 1992. Congress passed the Wild and Scenic Rivers Act in 1968 and the Act created a system to protect remaining selected free-flowing rivers that have outstanding natural, cultural and/or recreational values for the benefit and enjoyment of present and future generations. Although the Wild and Scenic Rivers Act helps protect designated rivers, it does not necessarily impose regulations on municipalities along the river. Instead municipalities create their own river management plans with assistance from the National Park Service, state and county government, and local environmental groups such as the Great Egg Harbor Watershed Association.

As part of the Great Egg Harbor River Watershed, the Tuckahoe River was one of a number of tributaries to be included in the overall watershed designation. The Tuckahoe River (lower segment) from its confluence with the Great Egg Harbor River to the Route 50 Bridge, approximately 9 miles, was designated as a scenic river, while the segment of the Tuckahoe River from the Route 50 Bridge to the Route 49 Bridge, approximately 7.3 miles, was designated as a recreational river.

Upper Township is encouraged to prepare and adopt a local river management plan to cover goals such as the following:

- Land Use - Maintain existing land uses and develop criteria for future land uses that are compatible with protection and enhancement of the river.
- Recreation - Enhance the free-flowing character and conditions for appropriate recreational uses of the river.
- River Management - Streamline existing regulations and coordinate their enforcement to balance the protection of the river with development and the rights of private property owners.
- Resource Protection - Enhance the natural, cultural, and scenic resources of the watershed, and recognize their relationship to a larger ecosystem for today's and future generations.

## II. Goals and Policy Objectives

This Master Plan is based upon the following general policies which establish its direction. They include a set of general goals and a more specific set of objectives, principles, policies and standards which guide the major elements of this Plan. These adopted Township goals also are the criteria against which all land use and development activity should be measured.

The Master Plan does not propose radical revisions of prior land use goals or policy objectives, nor wholesale changes in the concept of managed development within the community. The Plan does propose a refinement of prior policies and provides direction for future growth, reinforcing the community's environmental resources and well established residential neighborhoods. The Goals and Policy Objectives of the 1993 Master Plan are as follows:

### Overall Goals of the Master Plan:

- Improve the quality of life in Upper Township through sound land use planning.
- Maintain the Township's rural residential character and provide for the continued scenic and low density nature of the Township by guiding development and land uses to appropriate areas so as to protect the overall Township character.
- Consider the importance of the existing residential centers to the present Township landscape and image, and develop a land use plan and development regulations which protect their integrity.
- Preserve the Township's natural and cultural resources which contribute to both the positive image and overall strength of the Township.
- Continue to provide for the preservation of open space by protecting woodlands, open fields, stream corridors, tidal marsh, wetlands, floodplains, and bodies of water. Use these natural features to organize and separate different types and intensities of land uses where necessary. Establish controls on the permitted disturbance of critical resources during land development.
- Provide diversity and strength to the local tax base. Foster a well integrated and balanced community with a mix of residential, commercial, agricultural, and other types of land uses. A mix is encouraged for the convenience of the residents and enhancement of the tax base of the Township. The land use plan and development regulations should be designed to minimize conflicts between activities so that one land use does not adversely affect neighboring land uses.
- Establish and maintain the level of community facilities and public services required to satisfy the needs of present and future residents of Upper Township and allow for the well planned expansion of these public facilities and services.

## Policy Objectives

### Residential Objectives -

- Assure decent homes to all present and future residents of the Township without regard to their economic status by providing for a full range of housing choices which are affordable to low, moderate, middle, and upper income households.
- Encourage variety in the type, design, and size of housing constructed; and encourage the attractive and ecological setting of residences while retaining natural existing vegetation and providing new vegetative buffering.
- Provide for streets, utilities (presently concentrating on Strathmere), schools, parks, police and fire protection, and other services sufficient to meet the needs of the residential areas.
- Maintain the existing residential character of the Strathmere community, requiring sufficient side, front and rear yards.
- Limit the encroachment of non-compatible uses into established residential neighborhoods, such as sand extraction operations and heavy industrial type uses.

### Commercial Objectives -

- Provide for a range of commercial activities in appropriate locations where the circulation, utility, and community service systems are best suited to handle the resulting volumes.
- Provide appropriate design controls for small scale commercial development to minimize hazardous conditions and encourage good design.
- Promote the development of attractive and safe neighborhood commercial centers which compliment adjacent residential areas through the use of landscaped buffers.
- Promote the development of commercial areas that are attractive to the motoring public, also through the use of landscaping and buffers, and by adopting on-premise sign regulations which promote safety and prevent sign proliferation.
- Strengthen performance and design standards to ensure that all industrial development provides adequate safeguards to protect the environment and to guard against incompatible adjacent uses.

### Circulation System Objectives -

- Provide a road network which separates through traffic from local traffic and directs through traffic to the regional roadway network.
- Prevent the transformation and disruption of the Township's residential and historic centers from their existing character by providing for alternative routes for through traffic.

- Provide for the connection of new subdivisions by the extension of collector streets and local roadways to promote the development of neighborhoods and to promote social interaction within the Township.
- Prevent hazardous traffic patterns and high congestion by limiting roadway connections and driveways accessing onto State and County roadways.
- Require street trees and open space buffers to enhance visual quality and to protect adjacent land uses from the noise, dirt and glare of traffic.
- Provide for the development of a walkway and/or bikeway system that will provide connections throughout residential neighborhoods of the Township by utilizing separated pedestrian walkways and bike paths along primary roadways and along the stream corridors, greenways and open space areas where possible.

#### Natural Resource Objectives -

- Preserve and enhance Upper Township's natural environmental qualities such as marshes, floodplains and wetlands, streams, woodland and farmland, and other unique features.
- Continue to permanently preserve environmentally sensitive land as open space, to the greatest extent practicable. Limit the clearing of woodlands that are not wetlands and protected by those development provisions.
- Provide access to open space, stream corridors, and woodlands through a system of pedestrian paths and greenways.
- Manage surface drainage to minimize the danger of flooding and to preserve the water quality.
- Preserve the rural scenic nature of Upper Township's roadways, enhance natural vegetation along these roadways, and maintain large areas of open land.
- Help to protect the Tuckahoe River which is part of the Great Egg Harbor Scenic and Recreational River System by preparing a Model Local River Management Plan.

#### Utility System Objectives -

- In the Strathmere area, provide for the establishment of public sanitary sewers to promote the health and safety of the existing residences and businesses. Also, encourage existing properties to tie into new utility extensions, whether public water or sewer.
- Outside of the Strathmere area, carefully consider the costs and benefits of any public utility service. In general, provide for such utilities (especially public water) where new development can afford the costs of extending these services and where such extensions promote the logical and orderly extension of development adjacent to existing development.

- Encourage the maximum recycling effort from all Township residents as well as from all businesses in the Township.

#### Recreation Objectives -

- Create an Open Space/Recreation Fund to be used to purchase, construct, and maintain central, more extensive recreational lands and facilities.
- Develop a few large municipal recreation areas for the establishment of sufficient athletic fields to serve both existing and future residents.
- Maintain existing neighborhood park sites to serve the recreational needs of the community.
- Help to expand the Cape May National Wildlife Refuge by revising the land use classification and zoning district designation of the proposed refuge acquisition boundary, and by encouraging the private sale of tracts under consideration by the Federal government.

#### Historic Preservation Objectives -

- Preserve the Township's historic resources through the creation of historic districts, an historical commission, and implementation of an Historic Preservation Resource Ordinance.

## III. Land Use Plan

The Municipal Land Use Law requires that the Land Use Plan show the existing and proposed location, extent, and intensity of development of land to be used in the future for varying types of residential, commercial, industrial, agricultural, recreational, educational and other public and private purposes or combination of purposes. To determine future land use, it is imperative to analyze the Master Plan elements which follow the Land Use Plan, including the existing circulation system, utility services, community facilities, recreational lands and facilities, historic sites, and natural features.

### A. Existing Development

An analysis of current land use patterns provides one of the bases for future land use and planning decisions. Land use determines, in large part, the appearance and character of the community.

The existing land use pattern of Upper Township shows the following general characteristics, namely: a high density area of single family homes on relatively small lots within Strathmere; a suburban setting of single family homes on lot sizes of 1/2 to 1 acre of land throughout the eastern corridor, along with commercial uses, mobile home parks and campgrounds on the major roadways; a rural setting of single family homes on lot sizes of 1/4 to 1 acre of land, mainly fronting existing heavily travelled roadways, through the central area; sand extraction operations also in the central area, near Woodbine; older, established village centers including Tuckahoe and Marshallville in the northwestern area; and a rural setting of homes, farmfields, and forests throughout the western area.

Traditional settlement patterns in Upper Township focused on the distinct villages of Tuckahoe, Marshallville, Petersburg, Beesleys Point, Marmora, Palermo, and Seaville. In more recent decades, the Route 9/Old Stagecoach Road corridor has experienced the majority of development within the Township, creating new, relatively small subdivisions from Beesley's Point south to Seaville. Additionally, there have been a number of residential subdivisions in Petersburg. The population of the Township has grown from a 1970 total of 3,413 persons to a 1990 figure of 10,681 persons, more than tripling the number of residents in two decades. The same dramatic increase was witnessed in the number of housing units, growing from 1,701 units in 1970 to 5,285 housing units in 1990.

Due to the substantial increase in the number of dwelling units and residents, there have been corresponding changes to the land use patterns in the Township as well, when comparing land use patterns of today with those shown in the 1975 Master Plan. The existing land use patterns are shown on Map 2 - Existing Land Use Plan. This information was derived by a windshield survey of each property in the Township, a review of the Township's tax maps and records, and interviews with Township officials. Additionally, Figure 1 - Existing Land Use Distribution - 1992, tabulates the various land use classifications, providing both total acreage and the corresponding percentage of total Township land.

Figure 1 : Existing Land Use Distribution -1992

	<u>Acreage</u>	<u>Percentage</u>
<u>Residential (total)</u>	3,426.1	8.4%
Dwellings	3,375.6	
Mobile Home Parks	50.5	
<u>Commercial (total)</u>	538.7	1.3%
Retail/Office	210.0	
Campground	328.7	
<u>Semi-Public/Institutional (total)</u>	174.0	0.4%
<u>Local/Municipal (total)</u>	1,655.8	4.1%
Lands (much tax foreclosure)	1,467.4	
Facilities	188.4	
<u>Federal, State, County (total)</u>	12,400.9	30.4%
Lands	12,373.4	
Facilities	27.5	
<u>Industrial (total)</u>	710.0	1.7%
<u>Solid Waste Landfill (total)</u>	73.5	0.1%
<u>Agriculturally-Assessed (total)</u>	1,655.6	4.1%
<u>Road Rights-of-Way (total)</u>	590.0	1.4%
<u>Vacant/Undeveloped (total)</u>	<u>19,543.4</u>	<u>47.9%</u>
TOTAL	40,768.0	100.0% (error due to rounding)

Residential -

At 3,426.1 acres, residential uses take up 8.4% of the Township area, located mainly along Route 9. This compares to 1,367 residential acres in 1974, representing 3.4% of total Township area. Although population has fully tripled, residential land uses have increased at two and one-half times in area. The majority of residential land is composed of single family detached homes, with mobile home parks taking up 50.5 acres, just 1.5% of total residential land use.

Commercial -

Relatively little land overall is devoted to commercial use. Only 538.7 acres, or 1.3% of the Township, is dedicated to commercial activity. Of this, 210 acres are devoted to office and retail space, while the remaining 328.7 acres is made up of campgrounds. This compares to a total of 231 acres (0.5%) in 1974, split between 129 acres of office and retail space and 102 acres of campgrounds.

Industrial -

Sand extraction operations in Petersburg and Seaville make up the bulk of the industrial land use category in the Township, at 710 acres. Also included is the B.L. England Power Plant in Beesley's Point. This represents a significant change from the 1974 figure of 54 acres, however, this earlier figure did not include sand and gravel operations under the industrial category.

Semi-Public/Institutional -

This category is made up of uses that are privately owned but publicly used, such as churches, cemeteries, and research facilities such as the Marine Science Consortium. In Upper Township, 174.0 acres are designated as semi-public/institutional.

Local/Municipal -

A total of 1,655.8 acres, or 4% of the Township, are in local or municipal use or ownership, including schools. Properties with facilities and buildings make up 188.4 acres of this total, while the remaining 1,467.4 acres are in open land, however, much of this land is noted as tax foreclosed land.

Federal, State, County -

At 12,400.9 acres, the federal-, state-, and county-controlled land use category constitutes the second largest land use in the Township, equalling 30.4% of the Township area, exceeding the 1974 figure of 9,268.4 acres by one-third. The majority of this land is open, with only 27.5 acres containing some facility or structure. This includes, among other lands, the Peaslee Wildlife Management Area, Belleplain State Forest, MacNamara State Lands, Corsons Inlet, and Fish and Wildlife Service lands, including the Cape May National Wildlife Refuge.

### Agricultural -

At a time when most communities are struggling against encroaching development to retain active farmland, Upper Township has actually slightly increased the amount of land under farmland assessment. The 1,655.6 acres noted as farmland assessed based on Township Tax records represents a 60.6 acre increase over the figure reported in the 1975 Master Plan.

### Road Rights-of Way -

Various Township, County and State roadway rights-of way take up approximately 600 acres in Upper Township. This category was not included in the 1975 Master Plan.

### Other - Vacant and/or Undeveloped -

Comprising a full 47.9% (19,543.4 acres) of Township lands, this designation is the largest land use category. It appears, however, that a full 69% of Township land was so classified in the 1975 Master Plan, a reduction of 8,500 acres. The title of "vacant and/or undeveloped land" for this 1992 figure is misleading, however, after reviewing the wetlands map and this land use designation. The percentage of how much of this 19,543 acres can actually be developed is drastically reduced to about only 10,200 acres, of which 8,000 acres (78%) is in the western part of the Township which is governed by the Pinelands Comprehensive Management Plan. The main Pineland District in this area is the F-25 District which presently permits one dwelling on 25 acres. This "developable" acreage will be further analyzed in the Future Land Use portion of this Plan.

### **Natural Features**

As a low-lying community bordering on the Atlantic Ocean and Tuckahoe River, Upper Township is situated in the geologic area known as the Atlantic Coastal Plain. This region has intrinsic characteristics that impact the potential for community development. Elevations in the Township range from sea level up to 50 feet at the western border with Dennis Township. A large portion of the Township remains undeveloped. The natural constraints, reviewed in detail in the Conservation Plan Element, preclude development on much of this undeveloped land. In analyzing the natural features of the Township, a better understanding of the development potential of the area may be reached. Map 2a - Wetlands and 100 Year Floodplain shows areas of the Township within the 100-year floodplain, and constrained by wetlands, while Map 2b - Septic Suitability shows the general location of the soils within each septic field suitability category.

### **Demographics**

In order to plan for its future, Upper Township requires an understanding of its people. The best source of this information is the decennial Census, last taken in 1990. It is able to give a description of the makeup of the residents, how old or young they are, whether the population is growing or declining, and other characteristics. This information helps in discovering what the needs of the community are. Much of the information provided by the Census is based on a sample; 13% of the population, and a 14% sample for housing data. While the Census provides the best and most available information, errors may occur either in gathering information or in its tabulation. However, it does represent the best available source of data.

### Population -

The 1990 Census revealed a population of 10,681 residents in Upper Township. Figure 2 - 1950 - 1990 Population Trend Comparisons compares population trends from 1950 to the present, including Upper Township, Cape May County, and New Jersey as a whole. The Township is clearly revealed as a rapidly growing community. Although by percentages the Township's fastest growth occurred from 1970 to 1980 with an increase of 97%; this represented an increase of 3,300 residents which is slightly less than the 3,968 new residents witnessed from 1980 to 1990, this growth rate of the 1980's, however, represented an increase of 59%. In the twenty years since 1970, the population of the Township has more than tripled (at a rate of 213%). The Township has far outpaced the strong growth seen in Cape May County (a growth rate of 60%), and was significantly higher than the growth rate which the State as a whole experienced during the two decades (8%).

Figure 3 - 1990 Sex, Race, Hispanic Origin, and Age Comparisons shows the percentages and number of persons in the Township, County and State by sex, race, Hispanic origin and age, and Figure 4 - Cape May County Census Data Comparisons - Population shows a demographic comparison between each municipality in the County.

### Age Cohorts -

The Census data reveals a high percentage (29%) of children under the age of 17 in the Township, relative to the County (22%) and the State of New Jersey (23%). Similarly, the percentage of persons over the age of 65 in the Township is comparatively low at 11.67%, while County-wide 20.12% of the population falls in the category. Also, the median age for the Township is 34.3 years, younger than the County median age of 37.7, but roughly equal to the State median age of 34.5. These figures point out the relatively young population of the Township and its attendant needs for schooling and other community services.

### Race, Ethnicity, and Gender -

The population of Upper Township shows very little racial diversity. At 98.32%, whites are by far the majority, with Asians making up only 0.75%, and with Blacks, still smaller, only constituting 0.55% of the Township population. Countywide, all minorities represent slightly over 7% of the total population, while statewide, representing 20%.

Persons of Spanish origin represent slightly over 1% of the Township's 1990 population. Racially, persons of Spanish descent may come from any of several groups; white, black, or Native Indian. Further, Spanish origin may be based on ancestry, language, nationality group, or country of origin prior to immigration to the United States.

The breakdown of population by gender, typically shows females slightly outnumbering males. This is the case in Upper Township, with females making up 51.53% of the population to the male figure of 48.47%.

Figure 2

## 1950 - 1990 Population Trend Comparisons

Year	Upper Township			Cape May County			New Jersey		
	Population	Change from previous decade		Population	Change from previous decade		Population	Change from previous decade	
		increase	%		increase	%		increase	%
1950	1,922	n/a	n/a	37,131	n/a	n/a	4,835,329	n/a	n/a
1960	2,539	617	32%	48,555	11,424	31%	6,060,782	1,225,453	25%
1970	3,413	874	34%	59,554	10,999	23%	7,168,164	1,107,382	18%
1980	6,713	3,300	97%	82,266	22,712	38%	7,364,823	196,659	3%
1990	10,681	3,968	59%	95,089	12,823	16%	7,730,188	365,365	5%

Source: 1990 Census of Population and Housing, Summary Population and Housing Characteristics, New Jersey; Upper Township 1975 Master Plan.

Figure 3

## 1990 Sex, Race, Hispanic Origin, and Age Comparisons

		Upper Township		Cape May County		New Jersey	
		persons	percent	persons	percent	persons	percent
<b>Total</b>		10,681	100.00%	95,089	100.00%	7,730,188	100.00%
<b>Sex</b>	<b>Female</b>	5,504	51.53%	49,414	51.97%	3,994,503	51.67%
	<b>Male</b>	5,177	48.47%	45,675	48.03%	3,735,685	48.33%
<b>Race</b>	<b>White</b>	10,502	98.32%	88,097	92.65%	6,130,465	79.31%
	<b>Black</b>	59	0.55%	5,334	5.61%	1,036,825	13.41%
	<b>Asian</b>	80	0.75%	607	0.64%	272,521	3.53%
	<b>Other</b>	40	0.37%	1,051	1.11%	290,377	3.76%
<b>Hispanic Orig.</b>	<b>(any race)</b>	109	1.02%	1,855	1.95%	739,861	9.57%
<b>Age</b>	<b>&lt; 5 years</b>	868	8.13%	6,377	6.71%	532,637	6.89%
	<b>6-17 years</b>	2,192	20.52%	14,685	15.44%	1,266,825	16.39%
	<b>18-64 years</b>	6,375	59.69%	54,896	57.73%	4,898,701	63.37%
	<b>65 years &gt;</b>	1,246	11.67%	19,131	20.12%	1,032,025	13.35%
	<b>Median Age</b>	34.3	n/a	37.7	n/a	34.5	n/a

Source: 1990 Census of Population and Housing, Summary Population and Housing Characteristics, New Jersey.

Figure 4

## Cape May County Census Data Comparisons - Population

	Population		Age			Race			% Hispanic
			% 6-17 yrs	% >65 yrs	Median	% White	% Black	% Asian	
Avalon borough	1,809		8%	29%	51.3	99.61%	0.05%	0.16%	0.44%
Cape May city	4,668		11%	25%	37.4	89.37%	7.97%	0.92%	2.20%
Cape May Pt. bor.	248		4%	45%	63.6	99.60%	0.00%	0.00%	0.40%
Dennis township	5,574		20%	13%	32.5	98.58%	0.39%	0.55%	0.73%
Lower township	20,820		16%	22%	38.8	97.90%	1.51%	0.61%	1.16%
Middle township	14,771		17%	18%	35.9	84.92%	13.08%	1.10%	1.50%
N. Wildwood city	5,017		13%	22%	40.1	98.26%	0.64%	0.39%	1.09%
Ocean City city	15,512		12%	23%	39.5	93.96%	4.92%	0.49%	1.30%
Sea Isle City city	2,692		13%	24%	42.5	99.03%	0.26%	0.48%	0.66%
Stone Harbor bor.	1,025		8%	41%	60.4	99.12%	0.87%	0.00%	0.29%
Upper Township	10,681		21%	12%	34.3	98.32%	0.55%	0.74%	1.02%
W. Cape May bor.	1,026		12%	24%	41.7	75.04%	23.68%	0.09%	2.43%
W. Wildwood bor.	453		11%	25%	44.1	98.67%	0.22%	1.10%	0.44%
Wildwood city	4,484		16%	19%	34.5	77.29%	19.04%	0.38%	7.09%
Wildwood Crest bor.	3,631		13%	26%	45.7	98.56%	0.38%	0.27%	1.76%
Woodbine borough	2,678		17%	10%	33.2	56.05%	30.00%	0.67%	16.46%

Source: 1990 Census of Population and Housing, Summary Population and Housing Characteristics, New Jersey.

### Households and Families -

A distinction is made in the Census data between households and families. All families are a part of a household but not all households are families. Families consist of a head of household and all related members of that head of household, including adoptive members. Persons living in group quarters (dormitories, prison, congregate care, etc.) are counted in a separate category.

Upper Township shows a higher percentage of family households (80%) than both the County (68%) and State (72%), and fewer nonfamily households, see Figure 5 - 1990 Household and Family Comparisons. The Township is thus going against the national trend away from the traditional family structure. Of the family households, 87% are married couple families. Only 609 persons live alone in the Township. The Township shows a higher average number of persons in households(2.88) than either Cape May County (2.44) or the State of New Jersey (2.7).

### Education -

School enrollment for persons 3 years and over totals 2,794 persons in the Township. This figure includes those in preprimary school (220), elementary or high school (2,016) and college (558). Private school enrollment makes up 8.8% of the total enrollment.

The educational attainment for persons over age 25 is also detailed by the Census. In Upper Township, 85% have at least a high school diploma and 27% have a Bachelor's college degree, with slightly over 8% having a graduate or professional degree. Similar Cape May County figures show 74% of persons over age 25 with a high school diploma, 17% have a Bachelor's college degree, and 5% having a graduate or professional degree. Statewide figures show 76% of persons over age 25 with a high school diploma, 25% have a Bachelor's college degree, and 9% having a graduate or professional degree.

Figure 5

## 1990 Household and Family Comparisons

	Upper Township		Cape May County		New Jersey		
	number	percent	number	percent	number	percent	
<b>Households</b>	Family	2,974	80%	25,667	68%	2,021,346	72%
	Nonfamily	734	20%	12,189	32%	773,365	28%
3,708							
<b>Family Households</b>	Married Couple	2,595	87%	20,592	80%	1,578,702	78%
	Female Head	272	9%	3,882	15%	338,455	17%
3,708							
<b>Nonfamily Households</b>	Living Alone	609	83%	10,406	85%	646,171	84%
	65 years >	283	46%	5,510	53%	273,736	42%
	Female & 65 years >	218	77%	4,206	76%	213,511	78%
3,708							
<b>Persons per -</b>	Household	2.88	n/a	2.44	n/a	2.70	n/a
	Family	3.25	n/a	2.98	n/a	3.21	n/a

Source: 1990 Census of Population and Housing, Summary Population and Housing Characteristics, New Jersey.

## B. Future Land Use

The Land Use Plan is a comprehensive expression of municipal goals and objectives regarding the present and future physical development of Upper Township. The plan is being prepared to assist in the daily land use decision-making process of the Township and to guide the future well being of the community.

The Land Use Plan is a descriptive plan which affects many of the regulatory provisions of the Township, such as the Zoning Ordinance, Land Subdivision Ordinance, and Site Plan Ordinances which are all part of the Township Code. Although land use changes are recommended within the Master Plan, they must ultimately become ordinance revisions proposed by the Planning Board for adoption by the Township Committee.

Upper Township's Master Plan seeks to promote the variety of goals and objectives previously expressed. The Land Use Plan will balance the various elements of the overall Plan with the important underlying recognition that land development must be coordinated with the opportunities and constraints of the land to support various activities. For instance, good access and well-drained soils on flat topography generally represents the best development opportunities. Development constraints typically include inadequate transportation access and environmental factors such as wetlands and floodplains, groundwater resources, and inadequate septic capability. Additionally, the Plan recognizes land use principals which seek to ensure compatibility of uses.

### Development Potential

#### Historical Building Permit Comparisons -

The increase in residential growth in the Township was shown by the construction of new dwelling units as noted by the New Jersey Department of Labor in the number of dwelling units authorized by building permits, see Figure 6 - 1980-1991 Building Permit Comparisons. Statewide, building permits for new dwelling units peaked in the years of 1985 through 1987 with over 50,000 permits authorized per year, as did Cape May County which experienced its boom years the same years when over 1,850 building permits for new dwelling units were authorized per year.

As part of the growing County, Upper Township experienced considerable residential growth during the mid 1980's, with a high year of 231 building permits issued in 1986. The first three years of the decade witnessed the issuance of 272 building permits, while 1,009 building permits for new dwelling unit were authorized between 1983 and 1988, and then dramatically dropping to only 164 building permits for new dwelling units authorized between 1989 - 1991, with a very low figure of 27 permits issued in 1991. Preliminary figures had shown that building permits had slightly increased in 1992 to a total of 67.

Figure 6

## 1980 - 1991 Building Permit Comparisons

Year	Upper Township		Cape May County		New Jersey	
	building permits	% change from previous year	building permits	% change from previous year	building permits	% change from previous year
<b>1980</b>	152	n/a	1,564	n/a	22,257	n/a
<b>1981</b>	65	-57%	1,651	6%	21,293	-4%
<b>1982</b>	55	-15%	1,059	-36%	21,404	1%
<b>1983</b>	108	96%	1,247	18%	36,791	72%
<b>1984</b>	140	30%	1,599	28%	43,925	19%
<b>1985</b>	167	19%	1,938	21%	55,015	25%
<b>1986</b>	231	38%	1,851	-4%	57,074	4%
<b>1987</b>	178	-23%	2,072	12%	50,325	-12%
<b>1988</b>	185	4%	1,690	-18%	40,268	-20%
<b>1989</b>	86	-54%	1,007	-40%	29,929	-26%
<b>1990</b>	51	-41%	598	-41%	18,008	-40%
<b>1991</b>	27	-47%	334	-44%	14,777	-18%

Source: New Jersey Building Permits, Labor Market & Demographic Research, New Jersey Department of Labor.

### Future Land Use

In many respects, the most important changes to take place in the Township over the past 20 years have resulted from the advent of various environmental regulatory agencies and policies, including the addition of the Pinelands Commission and its control over much of the western half of the Township, the State and Federal wetland's legislation, the Coastal Areas Facility Review Act (CAFRA), more stringent on-site sewerage laws and policies, and more stringent development and redevelopment policies affecting the barrier island community of Strathmere. Although it is still unclear as to the full affect that the State Plan will have on the Township, it seems unlikely that it will have any drastic impact on development patterns in the Township, but more likely will act to further hold the Township to its limited future development potential due to the many environmental constraints existing in the Township and the unavailability of public sewage systems through the bulk of the Township.

### **Development Potential**

Of the approximately 2,400 acres which are possibly developable (unconstrained by wetlands, etc.) outside of the F-25 Forest District and the C Conservation District, it is roughly estimated that 820 acres remain in areas presently zoned R Residential, 110 acres in areas presently zoned AR Residential, 1,000 acres in the RD Rural Development Pinelands District and 170 acres in the PV Pinelands Village District, 180 acres remain in commercial designation throughout the Township, and 120 acres remain in the Mining District. As noted above, these are rough estimates and do not suggest that all of this acreage is perfectly suited for land development whether due to land ownership, existing substantial frontage development, or tract access. Excluded from the acreage calculation, for example, was the stretch of vacant land along the north side of Route 49, west of Marshallville, which will not be extensively developed in the future, but which may likely be developed with single family homes directly fronting the existing highway as is similarly developed. Additionally, it is estimated that minor residential and commercial infill development capability remains in Strathmere. The developable acreages are noted simply to provide an estimate of future development potential, realizing that it may take many years before any of the land is developed, if it is developed at all to its full potential under the applicable zoning district regulations.

Although the Township experienced a growth rate of 59% in the 1980's, the Cape May County Planning Board projects that Upper Township will have growth rate of 26% in the 1990's, equaling a total population of 13,500 people by the year 2000. By the year 2010, the County projects that the Township will grow to 16,000 people, at a growth rate in the 2000's of 18.5%, and is projected to grow to 18,000 people by the year 2020, a growth rate of 12.5%. Clearly, the population projections for the Township are to increase at a declining level of growth.

### Land Use Proposals

As shown on Map 3: Future Land Use, generalized land use categories have been proposed for the Township. These land use proposals reflect the existing development of the Township and also reflect the proposed goals and objectives of the Master Plan. As discussed below, there are some changes in the recommended land use pattern of the Township, currently as reflected on the existing Zoning Map of the Township, which will serve to guide development in the Township for the next five to ten years.

The **Residential (RES)** land use category has been established to permit a full range of housing opportunities and is intended to support the R, AR, and RR zoning classifications of 40,000 sq.ft. and 120,000 sq.ft. minimum residential lot sizes on the mainland and 8,000 sq.ft. minimum lot sizes on Strathmere.

**Commercial (C)** development has been provided for in separate districts which generally coincide with the historical patterns of commercial development within existing neighborhoods and along major thoroughfares, including the present zoning classifications of NC, HC, CC and RC. There have been changes to some of the commercial designations from what was previously permitted by the Township's existing zoning ordinance: expanding the commercial district both north and south along the east side of Route 9 in Seaville; expanding the commercial designation along the rear of lots off of the west side of Route 50 in Seaville; adding a commercial land use designation along the west side of Route 50 from Sunset Drive to Perry Road; adding a commercial land use designation to both the west and east sides of Route 610, south of the intersection with Route 631; removing the commercial designation along New Bridge Road, off of Route 50; slightly extending the commercial district designation north, along the west side of Route 50, and also slightly south along the east side of Route 9, across from Church Road.

The **Industrial (IND)** category is intended to reflect the existing limited industrial-type uses in the Township, as well as the Atlantic Electric Power Plant. There is proposed to be limited expansion for future industrial development in the Mining District along the west side of Mt. Pleasant-Tuckahoe Road, north of the existing Tuckahoe Sand & Gravel operation. In addition, there is proposed to be a minor reduction to the industrial land use category along the east side of Mt. Pleasant-Tuckahoe Road, north of lands controlled by the Tuckahoe Sand & Gravel operation. It is proposed that the future Industrial land use limit will coincide with the existing access road from Mt. Pleasant-Tuckahoe Road to the Sunset Acres residential development. It will be up to the Township to actually survey the access road before placing the new Industrial land use limit at least 25' to the south of this road. The Utility Zoning District classification as presently exists, will remain.

The **Conservation (CON)** land use category reflects both the existing or proposed portions of the Township under either Federal, State, or County land management policies, or areas of extreme environmental sensitivity. The proposed acquisition area of the Cape May National Wildlife Refuge has been included in this future land use Conservation category.

The **Pinelands (P)** category reflects the existing areas of residential land uses within the Township. Proposed changes to the land use regulations permitted by the Pinelands Comprehensive Management Plan is an addition of a commercial land use designation within the Petersburg Pinelands Village area, along Route 50, from Sunset Drive to Perry Road, and an industrial land use designation within the F-25 Pinelands Forest area, on the west side of Mt. Pleasant-Tuckahoe Road, north of the existing Tuckahoe Sand & Gravel operation.

## IV. Housing Plan

### Housing Plan Element and Fair Share Plan

In May of 1986, the Council on Affordable Housing (COAH) published Upper Township's affordable housing need as 401 units. The methodology in determining affordable housing needs used by COAH is based on a combination of the past, present, and anticipated future affordable housing needs, and is adjusted by factors such as demolitions, conversions, and rehabilitations. The Township sought to eliminate the reallocated present need or prospective need requirements for the Township based on factors such as the lack of public sewer, and the impact of the Pinelands Comprehensive Management Plan and CAFRA restrictions on development. COAH considered adjusting the number to a total of 105 indigenous units requiring rehabilitation, although did not formally revise their figures.

A Housing Plan Element and Fair Share Plan was prepared in 1989 for Upper Township by the planning firm of James Rutala, P.P., AICP. The Upper Township Planning Board officially adopted the Housing and Fair Share Plan on November 16, 1989 and the Township Committee requested substantive certification of its Housing Element and Fair Share Plan from COAH in 1990. On October 28, 1991, the Township Committee adopted a Resolution withdrawing its petition for substantive certification from COAH due to a lack of resources to fund the required rehabilitation of 105 indigenous housing units. The appropriate rehabilitation program was estimated to cost one million fifty thousand dollars (\$1,050,000.00) over a six-year period. The Resolution stated that there were no reasonable expectations for the acquisition of such funding from any grant program implemented by the State or Federal government.

COAH has recently adopted revised procedural rules (November, 1992) and is revising its substantive rules along with establishing new affordable housing numbers for the time period 1987 - 1999 for municipalities throughout all of New Jersey. A draft set of substantive rules and a technical appendix has been issued by COAH, although it has yet to be formally adopted. COAH is presently receiving public comments on the revisions and the Council tentatively anticipates adopting the revisions in late Summer or in the Fall of 1993. Depending on the adopted rule changes, there may be an opportunity for the Township to once again request substantive certification.

It is important to note, that a municipality is required to only prepare a housing element and fair share plan in accordance with the Municipal Land Use Law and the Fair Housing Act so as to ensure a valid Master Plan and therefore valid zoning regulations. Having the housing element and fair share plan substantively certified from COAH would give the housing element and fair share plan a presumption of validity against any future exclusionary legal challenges. Regardless as to whether or not COAH certification is requested, the Township should continue to implement strategies for the provision of affordable housing within the Township, including applying for any available grants for housing rehabilitation or to possibly allocate Township funds for such rehabilitation. As noted below, according to the 1990 Census data, there are a number of existing dwellings in the Township without complete plumbing or kitchen facilities. Realizing that a commitment of over \$1 million for a housing rehabilitation program is out of reach currently for the Township, it may be more appropriate to start a small-scale rehabilitation program within the municipality or work with the County Planning

Department if a county-wide housing rehabilitation initiative is reestablished. If a housing rehabilitation program is implemented within the Township, the program's procedures should follow COAH's rules so as to ensure rehabilitation credit if substantive certification is requested.

As the existing Housing Plan prepared by James Rutala, P.P., AICP, is currently valid for a six-year period, the following information will update the Plan's housing characteristics, which were from the 1980 Census, with 1990 Census data.

### **Housing Characteristics - 1990 Census**

The Township's increase in population during the 1980's was matched by an increase in the number of housing units within the Township. The 1980 figure of 3,131 housing units increased to 5,285 units by 1990, representing 2,154 new housing units, a 69% increase. The Township had previously witnessed 1,430 new housing units built in the 1970's, an increase of 84%. Tellingly, just over two-thirds, or 68%, of all the housing units in the Township have been built since 1970. However, the population rose by only 59%, revealing a lower average number of persons per unit, reflecting a national trend toward smaller households and an increasing tendency toward single living.

Figure 7 - 1990 Structural and Vacancy Characteristic Comparisons compares the characteristics of the housing stock of Upper Township with that of Cape May County and New Jersey as a whole. Of the 5,285 total units, 3,744 units or just over 70% were single family detached homes. Only 69 units were single family attached units. Multiple units totaled 244 units, representing only one additional multi-family unit over the 1980 figure of 243, which represented a tripling of the 1970 total of 82 units. Multiple units, however, only represent 5% of the total housing stock, down from 9% in 1980. Rates of multiple units in the County and State were far greater, approximately 35% of the County housing stock and 37% of the State housing stock.

Of the 5,285 total units, 3,708 or 70% are occupied and 1,577 are vacant. Only 24 of the occupied units are considered overcrowded by Census indicators. Of the 1,577 vacant units, 84% are for seasonal use. In the Township, homeowner occupied units have a 2.2% vacancy rate, while rental units have 7.3% vacancy rate, compared with a 38% vacancy rate for rentals within Cape May County.

The median value of an owner-occupied house in Upper Township was \$143,600 in 1990 representing a 219% increase over 1980 median values. Median values in Upper were also higher by 27% in 1990 than for Cape May County as a whole. The median value of homes statewide was \$162,300, higher than that in Upper Township, but not particularly higher when taking into account the higher housing values associated in northern New Jersey. It should be noted that over 81% of the owner-occupied units in Upper Township were valued at \$100,000, while only 57% of the owner-occupied units in Cape May County were valued at \$100,000. The 1990 median monthly rent of \$542 was also a significant 231% increase over the \$234 average rent for 1980. Figure 8 - 1990 Occupied Housing Units: Value and Contract Rent Comparisons shows comparisons for rent and housing value for occupied housing within Upper Township, Cape May County, and New Jersey.

According to the 1990 Census, slightly over 98% of the housing units in the Township are served by on-site septic disposal and 88% get water from individual on-site wells.

Although, in all of Cape May County, only 19% are served by on-site septic disposal and 24% get water from individual on-site wells.

The 1990 Census of Housing indicators of housing quality suggest that Upper Township's housing stock is well maintained. Far less than 1% of the Township's housing units lack any of the basic household facilities such as complete plumbing and kitchen facilities. Although a small number, the 31 units lacking complete plumbing facilities and the 24 units lacking complete kitchen facilities should be rehabilitated to be brought up to current standards.

Figure 9 - Cape May County Census Data Comparisons - Housing compares types of housing and vacancy rates for the various municipalities within Cape May County.

Figure 7

1990 Structural and Vacancy Characteristic Comparisons

Housing Units	Upper Township		Cape May County		New Jersey	
	number	percent	number	percent	number	percent
<b>Total</b>	<b>5,285</b>	n/a	<b>85,537</b>	n/a	<b>3,075,310</b>	n/a
<b>Type</b>						
1 unit detached	3,744	70.84%	43,309	50.63%	1,637,129	53.23%
1 unit attached	69	1.31%	6,149	7.19%	234,829	7.64%
2-4 units	244	4.62%	21,260	24.85%	526,997	17.14%
5-9 units	0	0.00%	3,319	3.88%	146,396	4.76%
10 or more units	1	0.02%	5,599	6.55%	453,254	14.74%
mobile/trailer	1,227	23.22%	5,901	6.90%	76,705	2.49%
<b>Occupied</b>						
total	3,708	70.16%	37,856	44.26%	2,794,711	90.88%
overcrowded	24	0.65%	750	1.98%	108,771	3.89%
<b>Vacant</b>						
total	1,577	29.84%	47,681	55.74%	280,599	9.12%
seasonal	1,320	83.70%	36,448	76.44%	100,591	35.85%
<b>homeowner vacancy rate</b>	<b>2.2</b>	n/a	<b>5.3</b>	n/a	<b>2.5</b>	n/a
<b>rental vacancy rate</b>	<b>7.3</b>	n/a	<b>37.6</b>	n/a	<b>7.4</b>	n/a

Source: 1990 Census of Population and Housing, Summary Population and Housing Characteristics, New Jersey.

Figure 8

## 1990 Occupied Housing Units: Value and Contract Rent Comparisons

Occupied Housing Units	Upper Township		Cape May County		New Jersey	
	number	percent	number	percent	number	percent
<b>Owner-Occupied</b>	3,266	n/a	27,242	n/a	1,813,381	n/a
<b>Value</b>	2,766	n/a	20,981	n/a	1,466,270	n/a
Total Specified Units	61	2.21%	1,245	5.93%	45,471	3.10%
< \$50,000	460	16.63%	7,755	36.96%	241,369	16.46%
\$50,000 - \$99,999	1,004	36.30%	5,315	25.33%	348,781	23.79%
\$100,000 - \$149,999	718	25.96%	3,174	15.13%	367,285	25.05%
\$150,000 - \$199,999	405	14.64%	2,154	10.27%	301,468	20.56%
\$200,000 - \$299,999	118	4.27%	1,338	6.38%	161,896	11.04%
\$300,000 >	\$143,600	n/a	\$112,800	n/a	\$162,300	n/a
Median						
<b>Renter-Occupied</b>	442	n/a	10,614	n/a	981,330	n/a
<b>Contract Rent</b>	385	n/a	9,637	n/a	942,141	n/a
Total Specified Units	30	7.79%	946	9.82%	106,627	11.32%
< \$250	123	31.95%	4,498	46.67%	321,775.00	34.15%
\$250 - \$499	177	45.97%	3,737	38.78%	381,923	40.54%
\$500 - \$749	49	12.73%	368	3.82%	92,517	9.82%
\$750 - \$999	6	1.56%	88	0.91%	39,299	4.17%
\$1,000 >	\$542	n/a	\$474	n/a	\$521	n/a
Median						

Source: 1990 Census of Population and Housing, Summary Population and Housing Characteristics, New Jersey.

Figure 9

## Cape May County Census Data Comparisons - Housing

	<b>Housing Units</b>												
	<b>Total</b>	<b>% 1 unit, detached</b>	<b>% 1 unit, attached</b>	<b>% 2-4 units</b>	<b>% 5-9 units</b>	<b>% 10+ units</b>	<b>% mobile homes/trailers</b>	<b>% occupied</b>	<b>% vacant for seasonal use</b>	<b>Homeowner Vacancy Rate</b>	<b>Rental Vacancy Rate</b>		
Avalon borough	5,026	67%	8%	18%	3%	3%	1%	17%	71%	13.3	64.8		
Cape May city	4,052	37%	20%	18%	5%	14%	6%	46%	28%	7.7	30.4		
Cape May Pt. bor.	578	83%	2%	15%	0%	0%	1%	25%	58%	6.7	80.5		
Dennis township	1,960	97%	1%	1%	0%	0%	2%	91%	3%	1.5	4.2		
Lower township	12,740	85%	5%	2%	0%	3%	4%	66%	28%	4.1	7.8		
Middle township	6,970	72%	2%	5%	1%	0%	20%	77%	15%	2.8	8.6		
N. Wildwood city	7,209	31%	4%	37%	5%	9%	15%	30%	55%	10.3	38.2		
Ocean City city	18,880	31%	9%	46%	4%	8%	3%	37%	48%	5.9	41.1		
Sea Isle City city	5,991	24%	25%	34%	3%	11%	2%	20%	72%	12.2	45.5		
Stone Harbor bor.	3,173	56%	5%	23%	4%	9%	3%	17%	62%	18.3	82.7		
Upper Township	5,285	71%	1%	5%	0%	0%	23%	70%	25%	2.2	7.3		
W. Cape May bor.	913	70%	5%	15%	1%	0%	9%	51%	38%	6.6	16.8		
W. Wildwood bor.	774	64%	1%	31%	3%	0%	1%	27%	72%	4.7	0		
Wildwood city	6,269	24%	4%	38%	15%	17%	2%	30%	40%	11.7	57.8		
Wildwood Crest bor.	4,772	40%	3%	39%	10%	5%	3%	34%	52%	4.5	46.1		
Woodbine borough	945	53%	1%	7%	0%	10%	28%	72%	23%	3.8	2.4		

Source: 1990 Census of Population and Housing, Summary Population and Housing Characteristics, New Jersey.

## V. Circulation Plan

State Law requires showing the location, condition, and availability of existing and proposed road systems and transportation facilities in the preparation of a circulation plan.

The community's circulation system (vehicular, bicycle, and pedestrian) provides the framework upon which the location and extent of private development and community facilities can be determined. Because Upper Township is part of a larger, regional transportation network, it is not only important to understand the community's circulation system, but also the impact the surrounding region places on the Township's system.

### Community Character

Upper Township's character is derived from many sources; the nature of its residences and businesses, the style of its buildings, its economic activity, the character of the land, and not least, the patterns of its streets and the views from them. What can be seen from the street either by walking, or more commonly, travelling by vehicle, establishes much of the character of Upper in people's minds. The residents of Upper Township currently enjoy open vistas across cultivated fields, meadowland, and marshland, the definition created by hedgerows along property boundaries, wooded stream corridors, and the historic nature of its town villages.

### Efficiency of the Present Street Network

The circulation element is concerned not only with the issues of the character of the community as it relates to the road network, but with its efficiency and safety in the movement of pedestrians, bicyclists and motorists. The road and pedestrian network that worked efficiently in the past will not do so in the future because of the increasing pattern of suburbanization in the Township. Roads that efficiently brought people and goods to the community are now congested. In the last decade, traffic volume has increased 60% nationally and has far outstripped the rise in population. New Jersey has also experienced this phenomenon, attributed to the shift of new jobs from the central cities to the suburbs, the increase in two-earner households, and the stabilization of fuel prices. For an efficient system in the future, new routes must be explored and constructed for pedestrians, bicyclists and motorists as new development occurs.

The ability of Upper Township's road system to continue functioning safely and efficiently is determined, in part, by the regional road network, as well as the road system throughout the Township. Both parts of the transportation network are reviewed herein. The traffic circulation system in the Township is displayed on Map 4: Circulation Plan.

## Existing Conditions

A significant amount of development in the Township is located along Routes 9 and 50. Other than the limited access Garden State Parkway, these two corridors are the main connections to the Cape May County beaches and resort areas, as well as serving as local residential and commercial focal points. Many new residents also travel these roadways to work within the Atlantic City employment region. These factors place tremendous pressures on these roads as they try to serve multiple purposes. This is borne out in the traffic jams, slow travel times, and the general worsening conditions experienced by drivers on these roads, especially in the summer months.

### Roadway Jurisdiction/ Classification -

The State of New Jersey has jurisdiction over four roadways in Upper Township; Routes 9, 49, 50, and the Garden State Parkway. The Parkway is the only limited access highway in the Township and is designed for high speed and high volume traffic for inter-regional transportation, running the length of the State from Cape May and north beyond the New York City area.

The State classification system is based on traffic volume, although this is tempered by a requirement that a certain percentage of roads fall into each category. The system designates Route 9 as a principal arterial, and Routes 49 and 50 as rural minor arterials. The State Department of Transportation (DOT) is undertaking a functional reclassification of all roads. It is anticipated that this process will change the Upper Township designations by removing the "rural" label, with no other changes anticipated.

Cape May County roads fall into a three-tiered classification system based on definitions given in a 1975 County Planning report. Primary roads are those acting as connectors to large population centers in and out of the County and service high traffic counts. They have an ultimate right-of-way of 86 feet. Secondary roads are those acting as minor links between County population centers and they have smaller traffic counts with an ultimate right-of-way of 66 feet. Local roads are those whose purpose is to give access to private residential property and which have an ultimate right-of-way of 50 feet. County primary roadways in Upper Township include Routes 623 and 631. Secondary roadways include Routes 557, 617, 619, 605, 628, and 610. County roadways designated as local include Routes 662, 602, 637, 616, 669, 632, 659, and 548.

All other roadways in Upper Township are under Township jurisdiction. These are designated as local roads, serving as access to residential property with an ultimate right-of-way of 54 feet. One exception is Hope Corson Road which runs between, and connects, Routes 9 and 50. Classified as a secondary road, this road is currently in the process of being turned over to the jurisdiction of Cape May County.

## Problem Intersections

Increasing development along the Route 9 corridor within the Township as well as within the entire County, combined with increased traffic to various shore points, has led to a decrease in level of service along the Township's roadways and at major intersections. The intersections of heavily traveled roads are points of particular difficulty.

Four areas in particular have severe traffic problems. The New Jersey Department of Transportation (DOT) reports a 1991 traffic count at the intersection of Routes 49 and 50 in Tuckahoe of 10,100 cars in a 24-hour period, traveling in both directions. A second intersection, in Marmora at Routes 9 and 662 (Roosevelt Boulevard), had a 1989 traffic count of 17,100 cars in a 24-hour period. This area of Route 9 is heavily traveled since many Township residents commute north to work and because of the access to the Garden State Parkway and Ocean City via the Roosevelt Boulevard.

The most congested intersection in the Township is the meeting of Routes 9 and 50 in Seaville, which is the convergence of the two main roadways in the Township. They serve to connect Cape May and points south with the rest of the State, while the intersection also gives access to another main north-south travel route, the Garden State Parkway. Additionally, a shopping center is located next to the entrance to the Parkway, further increasing the traffic to the area.

The intersection of Route 50 and Dennisville-Petersburg Road (C.R. 610) is a congested and hazardous roadway intersection, scene of many automobile accidents and long delays in attempting to cross Route 50. The Township has requested that the State Department of Transportation, in conjunction with Cape May County, install a traffic signal at the intersection to alleviate the problems of traffic both crossing and turning off of Route 50.

### **Proposed Circulation Changes**

NJDOT has begun the process of a bridge replacement project in Upper Township. The bridge to be replaced lies over a New Jersey Transit rail line, on Route 50 between Route 631 and Perry Road. Fully funded by the Federal government, the \$4.5 million project will begin work in the summer of 1993 and is expected to be completed by the fall of 1994. With the traffic load which Route 50 must bear, this project can be expected to lower its level of service still further, especially during the summer season, although only for one year. While the completion of the bridge replacement will not alleviate the current traffic congestion on Route 50, a major safety issue will have been resolved.

According to a representative of the New Jersey Highway Administration, there are long term plans to complete the Seaville interchange of the Garden State Parkway to a full interchange. Although it is not in the next five year budget, it is in the Highway Administration's long term capital budget.

### **Transit Facilities**

New Jersey Transit services Upper Township via Bus Route 552. This Route connects Cape May and Atlantic City, and runs along the Garden State Parkway through the Township. It is serviced by a Park and Ride facility at Seaville. Connections for further service by train and bus are available in Atlantic City.

## VI. Utility Service Plan

In preparing a Utility Service Plan, the Municipal Land Use Law requires analyzing the need for and showing the future general location of water supply and distribution facilities, drainage and flood control facilities, sewerage and waste treatment, solid waste disposal and provision for other related utilities, including a storm water management plan.

### Water

The Township lies above the 800' Cohansey sand aquifer. Currently, most of the Township gets its water supply from private wells, either dug or, preferably, drilled. Only Strathmere is supplied by a public water system, operated by New Jersey American Water Company. This system operates two wells, supplying Strathmere with approximately 80,000 gallons per day. New Jersey American is also in the process of beginning the operation of two new wells approved by NJDEPE, located on Old Stagecoach Road in Marmora. With a capacity of 600 gallons per minute (gpm), this well is intended to function as a backup for the Ocean City system (which experiences seasonal water shortages) and also as a source for fire fighting services at the present time and possible future public water service to Upper Township. The New Jersey American Water Company estimates that it would take approximately 1 million gallons per day to serve the Marmora area of the Township, although plans to formally serve the mainland have not been finalized. Construction of the wells will be completed and service available by the end of 1994. In 1986, Upper Township approved granting the franchise rights to supply the Township with water to the New Jersey American Water Company. The franchise agreement stipulates that New Jersey American may require all properties to hook up to the new system; however, a company representative noted that the company does not anticipate exercising this requirement.

The problems of salt water intrusion that much of Cape May County is experiencing is not a major concern in Upper Township, as the southern portion of the County lies over a different aquifer. In an attempt to respond to the growing concerns over water availability and quality, New Jersey American has recently begun a de-salination study, in which old abandoned wells are utilized and the water made potable. Additionally, the Cape May County Freeholders have recently passed a resolution creating the Water Supply Advisory Committee. This committee will take over responsibility for decision making from the Municipal Utilities Authority.

Water problems in the Township are not systematic, and occur only occasionally in scattered areas. In discussions with the Chief Inspector of the County's Division of Environmental Health (Department of Health), the incidences of benzene-tainted well water at homes and a church near the intersection of Route 9 and Roosevelt Boulevard appear to be isolated cases, possibly occurring due to an old gasoline station at the intersection. The County's Division of Environmental Health has tested well water from samples surrounding the entire area. Landowner's with well water that has been found to have been tainted by benzene have had to drill deeper wells. According to the Chief Inspector, there have been no problems within the last 1-2 years.

## Sanitary Sewerage

Currently there is no public sanitary sewer service within Upper, as the entire Township is serviced by individual septic systems and a treatment package plant at the Cedar Square Shopping Center off of Route 9, in Seaville. While some scattered properties experience septic backup problems, these are spread throughout the Township and are not concentrated in any one particular area of the Township. Care must be given, however, in the location of septic fields. Suitable areas must have soils with enough but not excessive drainage. The areas of slight, moderate, and severe soil limitations for septic fields are as shown on Map 2b. Septic Suitability, located in Section III, Land Use Plan.

The Cape May County Board of Health certifies and inspects the development of on-site septic systems, using stricter standards than Chapter 199 of the State Laws regulating individual on-site septic systems. The County requires a minimum lot area of 35,000 sq.ft. for the installation of a septic system. However, on Strathmere, a smaller lot size is permitted for existing, undersized lots. Regarding campgrounds in the Township, NJDEPE has required that each campground apply for a NJPDES permit, to help the State in its monitoring program of each campground's septic disposal system.

The Township has begun conceptually looking at the introduction of sanitary sewers into the Strathmere area. The Township Engineer has been charged with the preliminary analysis of the cost of such a venture. Public sanitary sewers would connect into the Sea Isle City sewer system and eventually be processed by the County sewer plant in Middle Township. Years ago, the County had reserved space in the ultimate capacity of the Middle Township plant to handle the possible future flows of Strathmere.

For health and safety reasons, it appears that the installation of public sewers into Strathmere would be a reasonable course of action for the Township to take. There is some community opposition to the sewers, fearing that the island community will be overrun with development. The introduction of sewers does not have to bring a corresponding development push, greatly increasing the allowable densities of Strathmere. Presently, the minimum lot requirement of 4,000 square feet, equals a gross density of almost 11 dwellings per acre. There is a concern that the character of the community will be lost if more intense development is permitted on the barrier island, similar to the intense development of surrounding ocean front communities along portions of the Cape May and Atlantic County shore line. As noted in the Master Plan's Future Land Use Plan, keeping a similar relatively small lot size in Strathmere would be in keeping with the provisions of other environmental regulations, including those of CAFRA and other regulations which limit land development on the barrier islands due to flooding and stormwater control problems, as recently witnessed many times by most of the New Jersey shore communities.

## Solid Waste

Total waste generated in the Township totaled 16,474 tons in 1989. Of this, 35% was either recycled or composted, leaving 65% or 10,670 tons disposed of at the County landfill. The landfill has a tipping fee of \$49 per ton, costing the Township over \$520,000 in 1989. This is significantly higher than the \$210,000 needed to operate the recycling program that same year. Reducing the cost of solid waste disposal should focus on increasing the participation rates in the recycling program.

**Storm Water Management Plan; Drainage and Flood Control Facilities -**

The State Municipal Land Use Law requires each municipality to prepare a storm water management plan and storm water control ordinance only at such time as there are grants available from the department of Environmental Protection and Energy (DEPE) to provide 90% of the cost of preparing such plans. As of the adoption date of this Master Plan document, there had been no funding available from the DEPE.

At such time as funding becomes available from the DEPE, Upper Township will proceed with the preparation of a storm water management plan and storm water control ordinance conforming to all relevant Federal and State statutes, rules and regulations concerning storm water management or flood control.

## VII. Community Facilities Plan

In preparation of a Community Facilities Plan, the Municipal Land Use Law requires showing the existing and proposed location and type of educational or cultural facilities, historic sites, libraries, firehouses, police stations and other related facilities, as well as their relation to the surrounding area. (See Map 5 - Historic, Community, and Recreation Facilities Plan.)

### Police Protection

To date, Upper Township has had no police force of its own, due to its relatively small population and low crime rate. The duties of a police force are provided for the Township by the New Jersey State Police, out of the State Police barracks in Woodbine. The State Police provide this service to municipalities with populations under 7,500. When a municipality's population rises above this figure, the State Police may exercise the option of charging a fee for continued service, or may possibly demand the municipality to entirely take over the service. Beginning a new police force is extremely expensive, requiring the hiring and training of an entire staff, providing a police station, and purchasing the necessary equipment.

Crime in Upper Township does not pose an overwhelming concern. The crime rate (incidents of crime per 1,000 residents) in the Township dropped from 21.1 in 1990 to 15.2 in 1991. This is the lowest crime rate in Cape May County, which witnessed an increase in its overall crime rate from 75.3 in 1990 to 81.9 in 1991. In 1991, 12 incidents of violent crime occurred in the Township, which represented 4% of the violent crimes committed throughout the County. The crimes of larceny (89), burglary (52) and domestic violence (33) were most often committed in the Township in 1991.

As noted in the survey of Township Planning Board members, all agreed that the police services provided by the State Police were sufficient. It is recommended that the Township continue to avail itself of these services.

### Emergency - 911 System

In 1989, a law was signed into enactment requiring the implementation of a statewide enhanced 911 emergency telephone system within three years. Cape May County was among the first counties in the State to fully implement the system.

Upper Township has a municipal services contract with Middle Township to serve as the Public Safety Answering Point and Dispatch Point for Township residents on the mainland. Sea Isle City serves as the Answering and Dispatch Center for the residents of Strathmere.

## Fire Protection

Fire protection in Upper Township is provided by four volunteer fire companies, located in Strathmere, Marmora, Tuckahoe, and Seaville. (See Map 5 - Historic, Community, and Recreation Facilities Plan.) The four fire companies serve separate districts in the Township and each company has their own taxing authority, granted by the State, to raise funding for the purchase and maintenance of their own fire fighting equipment. These funds are tax monies which are actually collected by the Township's Tax Collector and distributed to each fire company. Also, new developments within the Township, either residential or non-residential, are required to contribute funds in lieu of providing on-site fire safety water supply facilities. This monetary contribution has been set at either \$500 per lot for a residential development or \$0.50 per square foot for a non-residential development. Additional funding is raised by each fire company through fund raising events such as bingo nights and the Township Committee of Upper has voluntarily contributed monies to each volunteer fire company. According to a survey of the members of the Planning Board, the fire fighting services provided throughout the Township by the four volunteer fire companies were regarded as very good.

### Strathmere Volunteer Fire Company -

The volunteer fire company in Strathmere has a six-year old fire hall located on Commonwealth Avenue, between Whittier and Williard Avenues. Operating on a current budget (1993) of \$42,500, the fire company has 12 volunteers and serves the Strathmere Fire District which encompasses 290 homes and a number of commercial structures. The fire district is connected to the public water system throughout Strathmere and has a mutual aid agreement with neighboring communities of Ocean City and Sea Isle City. According to the Strathmere Fire Company Chief, the fire company's main areas of concern are

1. the permitted height of structures on the barrier island,
2. the dwindling volunteer staff, and
3. the lack of space in the current fire hall.

Most importantly, the Strathmere Fire Company is concerned with the maximum permitted building height of 35'. The Company's existing fire fighting equipment can not reach beyond a height of 28' and as the District does not have the funds to purchase a ladder truck, nor the space to house the equipment, it has requested that the Township's Zoning Ordinance be amended to lower the permitted height throughout the zoning districts which encompass Strathmere. There is concern that although the fire companies in the adjoining communities of Ocean City and Sea Isle City have ladder trucks, the time delay in reaching a fire may be critical.

### Tuckahoe Volunteer Fire Company -

Serving the largest region of the Township, although the least densely populated, the Tuckahoe Volunteer Fire Company is located at the Tuckahoe Fire Hall on Route 50 in the heart of Tuckahoe, just south of the intersection of Mt. Pleasant-Tuckahoe Road and Route 50. The Tuckahoe Fire District encompasses Marshallville, Steelmantown, Middletown, Petersburg, and Tuckahoe, as well as the Belleplain State Forest within the Township and other wooded areas of the Pinelands. The Fire Company operates on a budget of \$156,000 and mainly services its District by the use of fire equipment with on-board water tanks. Additionally, a small portion of the District is served by fire hydrants which are connected to an

underground water supply from the water tower on Mill Road to the Township Garage on Mt.Pleasant-Tuckahoe Road, by way of Reading Avenue. The water tank was purchased from the old Railroad back in the 1950's and its present capacity is approximately 100,000 gallons.

According to the Tuckahoe Fire Company Chief, the fire company's main area of concern is the establishment of a substation to serve the Petersburg section of the Township. This would encompass identifying and purchasing land, constructing a fire hall, as well as purchasing additional fire fighting equipment. Additionally, the Tuckahoe Fire Company would like to see water main extensions for fire fighting purposes from the existing mains in the Tuckahoe area as described above.

#### Marmora Volunteer Fire Company -

Located on Old Tuckahoe Road, near the Township's Elementary and Primary Schools, the Marmora Fire Hall provides fire protection services to the Marmora Fire District, the most densely populated district in the Township, on a current budget of \$325,000 (1993). The Marmora Fire District includes Miramar and Beesleys Point to the north, Marmora, and parts of Palermo to the south. The Fire Company has ample space in its building as well as sufficient volunteers.

Due to the installation of a two wells in Marmora by the New Jersey/American Water Company to serve Ocean City, a looped area within the Marmora Fire District will soon be connected to fire hydrants. The looped, 24" water main system will cross the bridge from Ocean City into Upper Township along the Roosevelt Boulevard, head south along Route 9 to Route 631, head west along Route 631 to Old Stagecoach Road at which time it will detour south along Old Stagecoach Road approximately 1,000' to the wells on the west side of the street. The water main system continues north on Old Stagecoach Road to Route 623 (extension of Roosevelt Boulevard) and loops back to the system at the intersection of Roosevelt Boulevard and Route 9. At the intersection of Old Stagecoach Road and Route 623, the system does make one additional detour west along Route 623 to Old Tuckahoe Road where it connects with the Marmora Fire Hall.

Along the looped water main system, fire hydrants will be spaced approximately 900' apart, serving a large area of commercial uses in the Marmora Fire District. The Fire Company will continue to serve the remainder of the District by way of fire equipment with on-board water tanks. Generally, an area of concern within the Marmora Fire District, according to the Fire Company Chief, is the incidence of vacant, boarded up buildings which are prime targets for vandals, possibly arsonists. The Marmora Volunteer Fire Company encourages the Township to take all necessary steps to ensure that all vacant buildings be summarily demolished, with the cost of demolition placed as a tax lien against the property, as permitted by Township statute.

#### Seaville Volunteer Fire Company -

Also serving a fairly dense area of the Township, the Seaville Volunteer Fire Company operates out of the Seaville Fire Hall located on Route 50, just north of Somers Avenue. The Seaville Fire District includes Greenfield, Seaville, and parts of Palermo to the north. The Fire Company operates on a budget of \$125,000 (1993) and has 38 volunteers. According to the Seaville Fire Company Chief, building space and the volunteer staff is sufficient. The Seaville Fire Company serves the District by way of fire equipment with on-board water tanks,

although it has usage of a 150,000 gallon water tank for fire protection services of the Cedar Square Shopping Center.

### **Rescue Squad**

The Township's Rescue Squad is located on Tuckahoe Road, near the Township's Middle School and the County Library. The Squad has consolidated its previous operations at each fire hall into one building built in 1982, serving the entire Township. On a 1993 budget of \$128,000 (\$35,000 allocation from the Township with the remainder raised through donations), the Rescue Squad operates three ambulances, one rescue truck, and one rescue boat. The Squad consist of two, paid full-time employees who cover 8 A.M. to 4:30 P.M., Monday through Friday and 24 volunteers who cover 6 P.M. to 8 A.M. each weekday night, as well as all day on the weekend. The Rescue Squad has a mutual aid agreement with the Sea Isle City Ambulance Squad to provide emergency rescue service to Strathmere.

According to the Rescue Squad Coordinator, the Rescue Squad will need to hire possibly two more full-time employees to better cover the weekday shifts, as well as the time period between 4:30 P.M. and 6 P.M., when the shift for volunteers start. Presently, the full-time employees of the Rescue Squad are Township employees and it is imperative that it remain as such. Also, the Squad is presently working out an agreement with the Township to have the cost of new equipment covered by the Township. The Township has recently agreed to fund \$90,000 to purchase a new vehicle, and the proposed agreement would stipulate that one new vehicle would be purchased every three years. Additionally, the Township presently pays for the training of volunteers.

### **Administrative Facilities**

The Municipal Building on Mt. Pleasant-Tuckahoe Road, south of the intersection of Mt. Pleasant-Tuckahoe Road and Route 50, houses all of Upper Township's administrative offices including Township Clerk, Township Treasurer, Tax Assessor and Collector, Construction Offices, and Planning Board and Zoning Board of Adjustment Secretaries. The building consists of only 3,600 square feet and is utilized at capacity. Also, the structure is not presently in compliance with the public space requirements of the Americans with Disabilities Act (ADA). As noted, this is no longer adequate space and expansion/refurbishing is necessary. Additionally, the possibility of relocating the municipal court facilities, currently located in Woodbine, back to the Township has been discussed and would add to the space needs at the existing Municipal Building.

Conceptual plans for the expansion of the Upper Township Municipal Building have been developed, although further indepth studies or plans have been postponed due to financial constraints. Nevertheless, the existing needs of the Township, combined with the continued growth of the Township, will eventually require additional administrative office space. It is recommended that a space-needs assessment and options analysis be prepared to evaluate the best way of providing more space for the municipal government functions, possible municipal court facilities, as well as bringing the structure into compliance with the ADA.

### **Community Center**

As a response to the need for an indoor community center to provide various services (cultural and athletic) to Township residents of all ages, as well as possibly include municipal administrative functions, a citizen's group began the process of analyzing the possibility of

establishing a Township community center. Begun in the late 1980's, the group was known as the Upper Township Community Center, Inc., and by December, 1990, had begun to look for professional design help to bring their ideas before the Upper Township Committee. Under the auspices of the citizen's group, a site selection and feasibility report for the proposed Township community center was prepared by a private firm, The Design Collaborative, in June, 1992.

In summary, the report looked at three sites, the Middle School, a site on Tuckahoe Road (just next to the Middle School), and a site on Old Stagecoach Road. The Middle School site was dropped from the analysis due to future plans by the School District to expand the school, the higher building costs associated with constructing a building to State Education standards, and the need for an expensive sewage treatment facility at the site. The 18-acre Tuckahoe Road site was dropped from consideration due to its smaller size and its location away from established or future residential neighborhoods. The Old Stagecoach Road site (on the west side, between Linda and Evergreen Lane) was more extensively analyzed and a community center program was developed.

A site built, full-service community center and a pre-fabricated, smaller-scale community center were proposed. It appears that due to the high estimated costs (over \$6 million) of the full-service center and the vocal opposition from area neighbors, the full-service center proposal has been dropped at this time. Further analysis of a reduced community center program, combined with full community participation, is recommended to provide the needed services to all Township residents.

### **Library**

Upper Township is served by a main branch of the Cape May County library system, located on Tuckahoe Road, near the Township Middle School and adjacent to property occupied by the Township Rescue Squad. The entire County system consists of six libraries: the main library located in Cape May Court House; two large branches, one in Upper Township and one in Lower Township; and three smaller branches on the barrier islands.

The branch in Upper Township opened in October, 1985 and, according to the Library System's Assistant Executive Director, usage has increased each year since its opening. In 1992, the library circulated approximately 55,000 volumes. The Township-based library has an estimated collection of 40,000 volumes within its adult, reference, and children collections. Due to its fairly recent construction, there are no immediate plans for expansion to the actual library building, although there is the capability for expansion in the future.

The library serves Upper Township as well as the surrounding communities of Woodbine and Dennis Township. Programs at the library include a story hour and summer reading club. Additionally, the library system provides a bookmobile which serves the entire County as well as various points in Upper Township, including Marmora and Strathmere.

### **School System**

The Upper Township School District currently operates three schools divided into grades K - 2 (primary school), 3 - 5 (elementary school), and 6 - 8 (middle school). Both the primary school and the elementary school (opened in September of 1991) are located in Marmora, along Old Tuckahoe Road. The middle school is located in the Petersburg area, along Tuckahoe Road (Route 631). The three schools had a combined enrollment of 1,405

students in 1989-90, and projected enrollments of 1,542 students in 1990-91 and 1,687 students in 1991-92. According to the School District's most recent Five-Year Facility Plan, a 40% increase in enrollment is expected for grades K-8 between the 1989-90 and 1994-5 school years. Including students in special education programs, this would equal a total enrollment of 2,070 students in the 1994-95 school year. However, the functional capacity of the District infrastructure is only 2,074 students. Additional room must also be found to take into account the effect programmatic changes have upon each school's capacity. State mandates for special education, basic skills programs and other programs such as gifted and talented exacerbate the capacity situation as such programs require that fewer students be assigned to a teaching station thereby reducing room availability and utilization. Plans of the Upper Township School District to increase capacity within the District are focused on the expansion of the Middle School.

There is no high school (grades 9 - 12) within the Township. High school students, numbering 561 during the 1991-92 school year, are sent to Ocean City High School where they make up approximately half of the total school enrollment. The Ocean City School District currently charges Upper Township \$7,220 per student (\$8,529 for special education students). These amounts will not change for the 1992-1993 school year. The Ocean City School Board does not anticipate any expansion of its high school facilities or foresee any changes that would impact students from Upper Township.

Although there was a mixed sense from the Planning Board members as to the satisfaction with the high school facility arrangement, there does not appear to be a major push at this time towards creating a high school district to serve Upper Township itself. There may be merit in approximately six to seven years to analyze creating a regional high school within the Township. Due to State Board of Education policy, such a regional school would have to include high school students from both Dennis Township and Woodbine Borough.

The Planning Board should provide the Boards of Education of both the Township School District and the Ocean City School District with updates of housing starts in the community. Each District's ability to predict future school enrollments, especially short-range, will be greatly enhanced. Also, all land use policies that may effect the enrollment picture should be monitored and the impacts these enrollments have on school facilities should be evaluated.

## VIII. Recreation Plan

The Land Use Law directs a municipality to prepare a recreation element showing a comprehensive system of areas and public sites for recreation. Opportunities for recreational activities in the Township are numerous. A variety of these recreational activities focus on the open spaces ensured by publicly-owned lands (Belleplain State Park, MacNamara Wildlife Management Area, and the Cape May National Wildlife Refuge (surrounding the Great Cedar Swamp), wetlands and stream corridors, and the public beach in Strathmere. In addition to the generally passive activities afforded by these resources, Upper Township citizens have access to numerous facilities for active recreation as well. The major Township facility is the 23-acre Caldwell Park, located in Palermo. Additionally, several recreational facilities are owned by the School Board and several area churches, and are generally available to the public.

The bulk of the land and facilities for active recreation, however, are found scattered throughout the Township in the form of many smaller recreational areas, typically based in newer residential developments, as a result of land dedications for open space through the existing development process. Although providing a necessary element to a small neighborhood, the numerous small recreational areas have been found by the Township's Recreation Committee to be too difficult to properly maintain and schedule for various league play throughout the year. Additionally, to meet the requirements of the organized sport's leagues within the Township, there is a need to provide additional multi-purpose fields at central locations. Also, many of the parks within small residential neighborhoods were not properly established with off-street parking for players and fans. Therefore, to meet the needs of a growing resident population and the attendant requirements for recreational fields and facilities, the Township should concentrate on the development of fewer, more centrally located tracts of land, which would house a number of fields and activities, including proper off-street parking facilities.

### Existing Recreational Sites and Facilities

A listing of all recreation facilities within the Township is provided below on Figure 10 - Township Recreational Facilities and shown on Map 5 - Historic, Community, and Recreation Facilities Plan within Section VII, Community Facilities Plan.

### Recreation Needs

In attempting to determine the amount of recreational space and facilities necessary for the Township, standards set by the National Recreation and Park Association (NRPA) were reviewed. The NRPA standards recommend a range of developed open space from 6.25 to 10.5 acres per 1,000 population. With a 1990 population of 10,681 residents, Upper Township thus has a need of 66 to 112 total acres devoted to recreational use. However, these standards include passive open space as well as active recreation, with passive open space making up the majority. The Township has more than adequate passive open space, provided by the MacNamara Fish and Wildlife Area, Belleplain State Forest, the Great Cedar Swamp lands, and the Township's beaches and marinas.

**Figure 10 - Township Recreational Facilities**• Tuckahoe -

Municipal Park - Baseball field, playground, 2 tennis courts, picnic area, 2 basketball courts, deck hockey rink.

Methodist Church - Soccer fields.

• Petersburg -

Residential Developments -

Sunset Acres - Soccer field, tot lot, volleyball court, picnic area.

California Road - 2 Softball fields, tot lot, soccer field, picnic area.

Wintertour Development - Tot lot and picnic area.

Southwoods development - Tot lot, basketball court, tennis court, picnic table

Wyncroft - Tot lot and picnic area.

Township Middle School - Softball field, field hockey field, baseball field, soccer field, basketball court, and indoor gymnasium.

• Seaville -

Residential Developments -

Windward Shores - 3 Softball fields, batting cage, tot lot, 2 picnic tables.

Lauradell Drive - Tot lot and picnic area.

Brewhaus Road - Basketball court, tot lot, picnic area.

Elizabeth Lane - Tot lot.

Luke Court - Tot lot (proposed).

Huntington Woods - Tot lot (proposed).

Marine Science Consortium - 2 Tee-ball fields.

• Beesley's Point -

Municipal Marina - Boat ramp and beach.

Golden Oak Road - Playground, basketball court, picnic area, shuffleboard court.

**Figure 10 - Township Recreational Facilities (Continued)**• Marmora -

Elementary School - Playground, soccer field, baseball field, indoor gymnasium.

Methodist Church - Soccer fields.

Marla's Hill - Tot lot (proposed).

Gandy's Pit (inactive).

• Palermo -

Caldwell Park - 3 Little League and 1 Babe Ruth baseball fields, football field, deck hockey rink, 4 Tennis courts, 2 basketball courts, fitness trail, playground, pavilion.

Chadwyck development - Tot lot and picnic table, proposed tennis or basketball court.

• Strathmere -

Webster Road - Boat ramp, tot lot, picnic tables, beaches

Municipal Beach

For active neighborhood parks and playgrounds, the NRPA recommends two (2) acres per 1,000 persons, giving the Township a present need of 21.4 acres of active recreational space. With an estimated 48 acres of active recreational space in Upper, the size of the neighborhood parks appear to easily meet this need, as well as the future needs of the growing population, estimated to require 27 acres by the turn of the century and 32 acres by the year 2010. (Cape May County Planning department estimates the Township will grow to 13,500 residents by the year 2000 and will reach 16,000 residents by the year 2010.) While the acreage may be adequate according to published recommendations and standards, the usable facilities for league play of both men's and women's sports such as baseball (adult and Little League), softball, soccer, basketball, field hockey is presently inadequate. In addition, the church-owned recreation fields, presently used by various leagues in the Township, are restricted from Sunday use. Although not impacting useable fields for the Township, expansion of the B.L. England Power Plant at Beesleys Point has caused the reduction in some of the recreational facilities open to Township residents.

The Township's Recreation Committee is made up of one member from each of the organized sport's teams. As such, the following needs for fields or courts were noted by the Committee:

Baseball - 14 ballfields exist with a need for an additional 4 fields. (In 1992, there were 24 Little League teams and 12 T-ball teams.)

Soccer - Five soccer fields are provided by the area churches and the Township has six soccer fields, however, 3 of the fields are lost in the summer when they are

turned into baseball fields. An additional 6 soccer fields are necessary to accommodate the 700 children playing per season.

Football - The Recreation Committee has no plans to go past the midget league (serving 8 - 14 year boys), therefore additional football fields are not required at this time.

Field Hockey - The Recreation Committee would like to establish a field hockey program for young girls and would need additional fields.

Softball - The three existing fields for softball are sufficient at this time.

Basketball - Both outdoor (Caldwell Park) and indoor (Middle School) basketball are played in the Township. Due to the limited number of lighted basketball courts at Caldwell park for evening play, additional courts are needed for teen and adult leagues.

Volleyball - A coed volleyball league plays at the Middle School. No additional facilities are necessary at this time.

Partially as a response to the need for additional recreational fields and facilities, but mainly the need for an indoor community center to provide various services to Township residents of all ages, Upper Township Community Center, Inc. looked at establishing a Township community center. As further discussed in the Community Facility Plan, the plans for the community center are presently on hold and will probably have to be reanalyzed before going further. The Township has begun to develop conceptual plans for additional recreational fields along Mt. Pleasant-Tuckahoe Road, including fields for soccer and baseball, and possibly including a concession stand. Also, the New Jersey Marine Consortium tract along Route 9 in Seaville has been put up for sale and the Township is investigating working with the County to purchase the tract for recreational fields. The Recreation Committee is also investigating a site in Seaville which would include 4 baseball fields and 6 soccer fields

### **Recreational Plan Recommendations**

1. Create an Open Space/Recreation Fund to be used to purchase, construct, and maintain central, more extensive recreational lands and facilities. This would require revising the land development regulations within major subdivisions so as to require a recreation fee in lieu of land dedication.

2. Establish additional recreational fields in a central location, preferably outside of the service area of Caldwell Park. Further analyze parcels of municipal lands (as shown on the Existing Land Use Map in Section III.) to provide the required soccer, baseball and field hockey fields, or use recreation funds generated by land development to purchase private land. Due to the slow down in the economy and therefore the drop in development activity, the Township should consider existing municipally-owned lands at this time.

## IX. Historic Preservation Plan

In preparing an Historic Preservation Plan, the Land Use Law requires that the Master Plan indicate the location, significance, proposed utilization and means for the preservation of historic sites and districts. The Plan must also identify the standards used to assess worthiness for historic site or district designation.

### Significance of Upper's Historic Sites and Districts

A comprehensive inventory of historic sites and structures within Cape May County was undertaken in 1977 by the County Planning Board and has been occasionally updated since. It now includes over 50 sites including the Marshallville Historic District within Upper Township. (See Figure 11 - Historic Sites in Upper Township and Map 5 - Historic, Community, and Recreation Facilities Plan, in Section VII, the Community Facilities Plan.)

The Marshallville Historic District, just to the west of Tuckahoe, received State Historic Register designation in 1988 and National Historic Register designation in 1989, through the efforts of the Historical Preservation Society of Upper Township, working with the Office of New Jersey Heritage. Founded in 1814 by Randall Marshall, Marshallville was once a center of the glass-making industry. Today it contains approximately 25 houses dating from the 1830's. These are in the Georgian and Federal style and constructed of brick which was an unusual material for the region.

### Growth and Development Challenges of the 1990's

Today, the historic village center, as well as the individual historic sites, are beginning to be surrounded by late 20th century development which is taking a decidedly different physical form. This new form has at its center the need to accommodate the automobile as the predominant form of transportation. This is true for homes as well as commercial, office, and other employment activities. Suburban families of today generally have two vehicles and often three or four. Thus within the village areas there is a conflict between historic forms of development (such as narrow, uncurbed, tree lined streets with homes and businesses located relatively close to each other and the street) and the modern demands for wide roadways and the expansive parking areas which accompany new commercial and residential development.

The village centers in Upper Township have developed over several periods of style and have survived periods of economic strength as well as depression. The economic boom of the later part of the 1980's has now reached into these village centers in the form of development applications for the development of vacant land and applications for the redevelopment of existing sites.

Many individual sites have significance derived from their unique representation of a particular style of building within the agricultural landscape of a previous time. For many of these buildings or farm complexes, their continued use as a single family home is threatened when the farm is sold and becomes the site of a subdivision development. It has been found that many of these buildings can not be economically maintained by the single family owner and thus the developers often tear down good structures which have an extended useful life, but for some other use.

Figure 11 - Historic Sites in Upper Township

	<u>Name</u>	<u>Location</u>	<u>Date</u>
1.	Roger Test House	Rt. 585 & Tyler Rd.	1810
2.	Thomas Beesley House	Rt. 9, Beesley's Point	1803
3.	Second Baptist Church	Rt. 9, Palermo	1790
4.	Dr. Randolph Marshall House	Marshallville	1835
5.	Curlew Bay Club	Rt. 9, Seaville	1876
6.	Hewitt (Somerset) House	252 Shore Rd., Seaville	1800
7.	Seaville Methodist Church	Shore Rd.	1857
8.	Seaville Friends Meeting	Shore Rd.	1716
9.	John Townsend House	Rt. 9, Seaville	1820
10.	Jesse Gandy House	Rt. 9, Seaville	1852
11.	John Stites House	Rt. 9, Beesley's Point	1851
12.	Young's Plantation (Burnell House)	Rt. 9, Beesley's Point	1740
13.	Enos Corson House	616 S. Shore Rd., Palermo	1800
14.	Dr. Jacob Willets House	Marmora	1840
15.	Charles Ashmead Mansion	715 Shore Rd., Beesley's Point	1845
16.	Townsend Stites House	Rt. 9, Beesley's Point	1812
17.	Isiah (Howard) Stites House	Rt. 9, Beesley's Point	1742
18.	Captain Corson House	Rt. 9 & Delores Ave., Palermo	1865
19.	Corson's Tavern	Rts. 9 & 50, Seaville	1750
20.	Philip Godfrey House	3097 Shore Rd., Seaville	1740
21.	J. Stille House (Burley)	Marshallville	1834
22.	Thomas C. Marshall House	Marshallville	1815
23.	Captain Belford Smith House	Marshallville Rd.	1862
25.	Corson-Westcott House	Rt. 610, Petersburg	1799
26.	Randall Marshall House	Marshallville	1840
27.	Tuckahoe Railroad Station	Tuckahoe	1893
28.	First National Bank of Tuckahoe	Rt. 50, Tuckahoe	1900
29.	Old Presbyterian Church	Rt. 50, Tuckahoe	1851
30.	Petersburg Wesley Methodist Church	Rt. 610, Petersburg	1853
31.	Capt. Allen Corson House	Rt. 631, Petersburg	1817
32.	Van Guilder House	Old Tuckahoe Rd., Petersburg	1773
33.	Henry Young General Store	Rt. 631, Petersburg	1812
34.	Henry Young House	Tyler Rd., Petersburg	1813
35.	Gandy House	Tyler Rd., Greenfield	1840
36.	Ella Rubin House	Rt. 9, Seaville	1770
37.	John Gandy House	Rt. 9, Seaville	1800
38.	Godfrey House Dependency	Rt. 9, Seaville	1795
40.	Friendship School	Rt. 9, & Ocean Ave.	1831
41.	Fendall Smith House	Stagecoach Rd., Marmora	1750
42.	Trinity Methodist Church	Rt. 9, Marmora	1869
43.	Henry Clay House, Inn, Fishing Club	Rt. 9, Beesley's Point	1732

**Figure 11 - Historic Sites in Upper Township (Continued)**

<u>Name</u>	<u>Location</u>	<u>Date</u>
44. Beesley's Point (2nd) School	Rt. 9, Beesley's Point	1889
45. U.S. Coast Guard Station #32	Strathmere	1917
46. U.S. Coast Guard Sta. #32, Boathouse	Strathmere	1917
47. Strathmere Methodist Church	Ocean Drive, Strathmere	1922
48. William Boone (Boon) House	Rt. 50, Petersburg	1740
49. Dr. Randolph Marshall Pharmacy	Rt. 50, Tuckahoe	1880
50. Old Godfrey House	Rt. 9, Marmora	1800
51. Ward Stille House	Rt. 50 & Station Rd., Tuckahoe	1875
52. Dr. Leaming House (Joe Morris -Artist)	Rt. 9, Seaville	1800
53. Old Corson House (Daugherty)	Rt. 9, Seaville	1800
54. Godfrey (Arthur Sutton) House	Rt. 9, Seaville	1865

Upper Township has no official historic commission, but does have a volunteer group, the Historical Preservation Society of Upper Township. This organization actively seeks to preserve the heritage of the Township both through the preservation of significant historic sites. Additionally, its Architectural Guidance Committee offers input, on an informal basis, to the development review process.

It is recommended that the Township consider adopting zoning and subdivision regulations that will permit and perhaps promote the preservation of such historic farm homes and structures by allowing them to be used for appropriate uses other than single family homes. This might include the dedication of particularly appropriate historic buildings to the Township or non-profit organizations for educational, historic, or recreational sites.

The Township, in adopting an Historic Preservation Element to its Master Plan, has the goal of blending new developments into the existing community without destroying that character and quality which makes the historic areas and settings desirable and viable. Likewise it is a goal of the Master Plan to promote the preservation and restoration of those significant individual historic buildings and structures located outside of the historic areas.

The Historical Preservation Society of Upper Township may be requested to review development projects which may affect an historical site within Upper. If during the development plan review process, it is found that the proposed plans would negatively impact an historical site, an alternative proposal may be discussed with the applicant.

### **Historic Preservation Policies**

It is important to be aware of the historical significance of the many historic buildings, settings and streetscapes within Upper Township and to help in their preservation. Accordingly, the following policies should be instituted:

A. The Historical Preservation Society should be added to the list of agencies which receive notice of all development applications to be heard by the Township Planning Board or

Zoning Board of Adjustment. During the development plan review process, the applicant as well as the Planning or Zoning Board and Historical Preservation Society should reference Map 5 of this Master Plan to determine if the proposed plan impacts upon an historic site or district. The applicant should address any such impacts and, if the development negatively impacts a significant historic site, the applicant may be required to provide alternative plans.

B. Promote a favorable community image through the preservation of historic resources and their environments.

C. Support the position that historic preservation is in the public interest by:

1. Adopting the Historic Preservation Element of the Master Plan which recognizes the Township's diversity and rich heritage of historic resources;
2. Informing owners of historic properties about funding for preservation that may be available as well as about economic and social benefits of preservation;
3. Increasing the public education aspect of historic preservation through means such as school programs; and
4. Encouraging the public ownership and community use of historic properties.

D. Use historic preservation as one means to promote revitalization of historic buildings and countryside conservation by:

1. Encouraging the private sector to make adaptive reuse of historic buildings in order to prolong or reestablish their useful life.

E. Support local private efforts to preserve historic resources by working with private groups to promote preservation.

F. Recommend that the Historical Preservation Society begin the research and planning process to determine if additional historic districts should be established in other areas of the Township. This process would include the historic district concept presentation to existing residents of any proposed areas for consideration.

## X. Conservation Plan

The Conservation Plan Element should provide for the preservation, conservation, and utilization of natural resources, including energy, open space, water supply, forests, soil, marshes, wetlands, rivers, fisheries, endangered or threatened wildlife species and other resources.

### Geology, Topography and Hydrology

As a low-lying community bordering on the Atlantic Ocean and Tuckahoe River, Upper Township is situated in the geologic area known as the Atlantic Coastal Plain. Like most areas of the Atlantic Coastal Plain not formed by glaciation, Upper Township's surface geologic materials are made up of unconsolidated deposits. Dominant materials are sand, gravel, clay, and silt. These are very porous and allow rainwater to quickly sink to underground aquifers, except in areas in which clay lenses lie between the surface and the aquifer. When this is the case, deep aquifers used for the community water supply cannot be recharged adequately by rainfall. Consequently, seawater may begin to seep into the aquifer, so that the aquifer begins to lose its usefulness as a source of fresh water.

Elevations in the Township range from sea level up to 50 feet at the western border with Dennis Township. The Cedar Swamp Creek area is a large depression which drains north into Egg Harbor.

### Floodplains

As a coastal community, Upper Township is subject to occasional flooding. Floodplains are commonly understood to make up those areas along a river or stream that are subject to flooding at least once every 100 years. However, this is an average expected frequency and may occur several years in succession. Upper Township has the added concern of the flood hazards of a coastal community. Flooding on the coastline occurs by a combination of rising tides, wind and surf, normally during a hurricane or other coastal storm. The greatest occurrence of flooding in Upper Township was during a 1944 hurricane. The greatest flood that is expected for the southern coast of New Jersey (although not the greatest *possible* flooding), from a combination of meteorological forces, is known as the Standard Project Tide. As fragile areas subject to damage by natural forces, development in coastal areas of New Jersey is managed by the Coastal Area Facilities Review Act (CAFRA). Most of the Township lies within the area of CAFRA's review jurisdiction. Only the area south and west of Routes 49, 50, and 610 are exempt. Map 2a - Wetlands and 100-year Floodplain in Section III, Existing Land Use, shows areas of the Township within the 100-year floodplain as delineated by FEMA.

### Wetlands

A large percentage of the Township is made up of tidal marshland and other swamplands. These areas include the marshlands between the Garden State Parkway and Strathmere, the Tuckahoe River marshes, and the Great Cedar Swamp. Wetlands act as a buffer from storms and flooding, absorbing excess water and holding it until it can slowly drain. Filling wetlands so as to build on them destroys this ability, making the land even more prone to flooding. Wetlands also function as a habitat for a large number of animal and plant

species. The New Jersey Wetlands Act of 1970 controls all development activity within wetlands by requiring a review and permitting process. Wetland areas within the Township are also shown on Map 2a - Wetlands and 100-year Floodplain in Section III, Existing Land Use.

Large areas of wetlands and tidal areas within the Township are presently, or are proposed to be, under federal or state control as part of the MacNamara Fish and Wildlife Lands, the Cape May National Wildlife Refuge, Belleplain State Forests, or other federal or state programs.

### Soils and Septic Suitability

As Upper Township has no sanitary sewer system and must therefore depend on septic systems and sewage treatment plants, soils take on an added significance. The septic suitability of soils requires that there be adequate but not excessive drainage. Too much drainage will not allow time for natural bacteria in the soil to break down fecal material, thus endangering the water supply; not enough drainage, and the soil may become oversaturated with effluent. On-site percolation tests are needed for specific placements of buildings. Criteria used for septic suitability of soils include its permeability, depth to water table, and slope, and hazard of flooding.

Figure 12 - Soil Suitability classifies each soil found in Upper Township for its suitability for septic tank absorption fields. There is a three-tier classification system with categories of Slight Limitations, Moderate Limitations, and Severe Limitations. Map 2b - Septic Suitability, in Section III, Existing Land Use, shows the general location of the soils of Upper Township within each suitability category. Although it is not intended that the classifications eliminate the need for on-site percolation tests, the soils information and locations give a basis for making and interpreting the percolation tests. Additionally, the Septic Suitability Map provides one more piece of information to help in evaluating the possible future use of land.

According to the Soil Survey of Cape May County, published jointly by the Soil Conservation Services (SCS) of the federal and state governments, the rating of Slight means that there are few or no significant limitations, Moderate means that there is one limitation or more that can normally be overcome at moderate cost by careful design and construction, and Severe means that there is one limitation or more that cannot be overcome without considerable cost.

### Figure 12 - Soil Suitability

#### Slight Limitations -

DoA	Downer loamy sand, 0 to 5% slopes
DrA	Downer sandy loam, 0 to 2% slopes
DrB	Downer sandy loam, 2 to 5% slopes
DsB	Downer sandy loam, gravel substratum, 0 to 5% slopes
EvB	Evesboro sand, 0 to 5% slopes
FrB	Fort Mott sand, 0 to 5% slopes
SaA	Sassafras sandy loam, 0 to 2% slopes
SaB	Sassafras sandy loam, 2 to 5% slopes

Moderate Limitations - Generally, due to slow permeability or moderately high seasonal water table.

ArB	Aura sandy loam, 0 to 5%
DpA	Downer loamy sand, water table, 0 to 2% slopes
HaA	Hammonton loamy sand, 0 to 3% slopes
HbA	Hammonton sandy loam, 0 to 3% slopes
KmA	Klej loamy sand, 0 to 3% slopes
SbA	Sassafras sandy loam, water table, 0 to 2% slopes
WmA	Woodstown sandy loam, 0 to 2% slopes

Severe Limitations - Generally, due to seasonal high water table at the surface, rapid permeability, and subject to tidal flooding.

Bp	Berryland, sand
CU	Coastal Beach-Urban Land complex
FL	Fill land, sandy
FM	Fill land, sandy organic substratum
MU	Muck
Ps	Pocomoke sandy loam, water table
TD	Tidal Marsh, deep
TM	Tidal Marsh, moderately deep
TS	Tidal Marsh, shallow

## Wildlife

Different habitats in the Township support various wildlife species. Open land areas support rabbit, fox, and woodchuck, as well as pheasant, quail, and dove. In woodland areas may be found deer, raccoon, fox, grouse, vireos, and thrushes. The wetlands are prolific habitats, supporting ducks, geese, herons, shore birds, and muskrat, and the various shellfish and crustaceans upon which they live. A listing of endangered species is not available at the Township level. However, endangered species found within Cape May County include the piping plover, bald eagle, peregrine falcon, and helonius, or swamp pink. The Great Cedar Swamp area is a historic nesting site for bald eagles.

The U.S. Fish and Wildlife Service has approved the creation of the 15,300 acre Cape May National Wildlife Refuge which will attempt to ensure the protection of wildlife habitat which is critical to a diversity of migratory birds including waterfowl, shorebirds, raptors, and passerines. Specific species that would benefit include wintering black ducks and woodcock. The full northern portion of the Refuge will be located within Upper Township, equaling approximately 4,000 acres, of which some 2,325 acres have been purchased as of this Master Plan. The entire Wildlife Refuge acreage involves approximately 700 individual ownerships, of which the majority are small lots located within salt marsh, barrier beach, or wooded swamp environs. Preliminary acquisition costs, based on full fee acquisition, are estimated at \$20 million, although the Federal government expects that this estimate will be reduced due to donations, exchanges, and bargain sales. Inclusion within the approved acquisition boundary will not place any additional regulatory controls on the affected landowners in the Township, other than the existing local, State and Federal regulations. In acquiring the remaining tracts within Upper Township, the Federal government will continue its policy to acquire lands from willing sellers as funds become available.

## Vegetation

The principle trees growing in wooded areas include various oaks, hickory, sweetgum, red cedar, and Atlantic white cedar. Coastal beach areas support plants such as beachgrass, saltmeadow cordgrass, sandbur, beach heather, and bayberry. The tidal marshes are dominated by saltwater grasses and sedges such as salt hay, which was once extensively harvested.

Salt meadow cordgrass and spike grass dominate at the frequently brackish, higher elevations above normal high tide of the Cedar Swamp Creek area. Marsh elder occurs in clumps on the higher elevations of the marsh and flowering plants such as salt marsh fleabane and sea lavender are scattered throughout. As the influence of tidal water diminishes upstream from the Creek inlet, the estuarine habitats gradually change to entirely freshwater habitats, primarily wooded swamp composed of flood tolerant trees and shrubs or to upland forest/shrub lands. The upland Cedar Swamp Creek area consists of large undisturbed stands of Atlantic white cedar along with exceptionally large old growth oak, black gum, sweet gum, red maple, swamp magnolia, and American holly. The upland edges of the swamp are overgrown with catbrier, southern arrowwood, highbush blueberry, tall gallberry, and sweet pepper bush.

## Noise

The regulation of noise disturbances is currently regulated by State Law (NJAC 7:29-1.) This law prohibits persons from producing sound levels greater than 65 decibels from 7 A.M. to 10 P.M. and 50 decibels from 10 P.M. to 7 A.M. This law protects residents from noise made by industrial, commercial, and public service facilities. It does not regulate sound produced by vehicles, residents, pets and other disturbances. Noise control ordinances written by the Department of Environmental Protection and Energy (DEPE) may be considered for adoption by the Township.

## Energy Conservation

The conservation of energy within the Township can be addressed in a number of ways. These include changes on a Township-wide basis, as well as at the level of individual households. One of the central concerns within the Township is traffic, especially along the Route 9 corridor. Much of this has been a result of development, both commercial and residential. Future development should be managed with an emphasis toward clustered and mixed use patterns of land use, as well as infill development, in order to reduce car dependency as much as possible.

Reduction of heating and cooling costs for individual buildings can be achieved via site plan requirements and construction standards. Ensuring the correct building orientation for maximum access to sunlight will aid in the management of winter heating costs. This requires that streets be oriented, to the extent possible, in an essentially east-west manner, to allow buildings to be oriented appropriately. The long axis of a building should face south to gain maximum sun exposure. Reduction of winter heating costs may be aided by the planting of trees and shrubs, especially along the north face of buildings, to act as wind breaks. Construction standards may include the installation of extra insulation, heat pumps, and solar hot water systems.

## XI. Economic Plan

State Law requires that an economic plan consider all aspects of economic development and sustained economic vitality. Comparisons should be made of the types of employment expected to be provided by the economic development to be promoted with the characteristics of the labor pool resident in the municipality and nearby areas. Also, an analysis of the stability and diversity of the economic development to be promoted.

### Employment Characteristics -

The labor force is made up of all persons over 16 years of age, which in Upper Township totals 7,957 persons. Of this number, 5,520 persons are in the labor force (69.37%), compared with 59.7% in the County and 67.4% in the State. Of all 5,520 workers in the Township, 5,177 commute to work (94%). Those driving alone equal 84.5% of all commuters; 10.3% carpool, 4% walk or work at home, while only 0.2% use public transportation. Countywide, 90% of all workers commute to work, of which 76% drive alone, 13% drive as part of a carpool, 8% walked or worked at home, and 1.6% used public transportation. The largest change on the statewide level is the 8% of commuters taking public transportation due to its availability in more urban settings.

Professional specialty occupations make up 17.7% of all occupations in Upper Township. Following this are executive, administrative and managerial positions (17%), sales (13.8%), administrative support and clerical (12.8%), and service occupations (11.8%). The largest employers by industry are retail trade (15.4%), educational services (12.7%), and construction (9.5%). Of the total employed persons (5,254) over age 16, most (68%) work in the private sector as wage and salary workers. Public sector or government workers (at any level of government) total 1,198 persons or 22.8% of the workforce. There are 424 self-employed persons in Upper Township.

### Income Information -

Based on the 1989 Income and Poverty Status data prepared by the Census, the median household income in Upper Township was \$44,962, significantly more than the County median of \$30,435, and slightly more than the State median of \$40,927. Township households who received wage and salary income reported a mean annual income of \$47,636, while those who were self-employed (non-farm) reported an income of \$26,116, and those who were self-employed through farm activities reported an income of \$8,240. Social Security income recipients had a mean income of \$8,973, while the income of public assistance recipients was only \$3,833. Mean retirement income for Township residents was noted at an annual level of \$9,993.

The poverty status of residents in the Township was noted as 457 individuals, representing 4% of the Township, compared to a County and State rate of 8%. The percentage of children under the age of 18 in the Township falling under the poverty level was 35%, compared to 8% under the poverty level for those over the age of 65.

### Economic Base -

Historically, Upper Township had a rural and agricultural economic base. This has been in decline for a number of years, and can be expected to continue to decline in the eastern portion of the Township which has and will continue to bear the brunt of the development pressures facing the Township. Large tracts of farmland remain in the Pinelands and Conservation areas of the Township and their future is less threatened due to the compatibility of the surrounding land uses and the lower land values.

The past decades have seen a continual rise in tourism and seasonal resort recreation throughout the oceanfront communities of the State, including Upper Township. To meet the needs of the resort economy, commercial uses have developed along the Route 9 and Roosevelt Boulevard corridor, and to a smaller extent, along Route 50 in Seaville. The existing, small commercial uses located in the traditional villages of Tuckahoe, Seaville, Marmora and Beesley's Point also cater to the tourist industry.

Another aspect of the resort industry in the Township are the 11 private campgrounds, mainly located off of Route 9, Old Stagecoach Road and Corsons Tavern Road, in Marmora, Palermo, and Seaville, with one campground located along Route 49 in the northwestern portion of the Township. As noted in the Cape May County Master Plan, a 1976 survey determined that campers have the same recreational interests as other tourists and, with the exception of the cost of accommodations, spend a similar amount of money when compared to other tourists. Recent trends in the campground industry have shown an annual decline in the number of new campsites and the conversion of some existing campgrounds to condominium or lease type arrangements. The condominium/lease trend, however, poses several problems with regard to zoning regulations and long-term use conflicts. Through proper Township land use and zoning regulations, such problems can be effectively controlled.

In addition to the businesses related to recreation and tourism, the Township industry rests on the Atlantic Electric Power Plant (B.L. England) and sand and gravel extraction operations. Although 30 sand and gravel mining operations were noted in the 1975 Township Master Plan, many had already been abandoned and the Plan noted that some had been used as landfill sites and as areas for the storage of fly ash. The bulk of the sand and gravel extraction operations today are located in the south central portion of the Township, along the border with Woodbine, and extending east along Mt. Pleasant-Tuckahoe Road. A second area of extraction operations is located on Old Stagecoach Road, just south of Evergreen Lane. The Tuckahoe Sand and Gravel operation, along Dennisville-Petersburg Road, has a limited future area to mine as much of its remaining land holdings are constrained by wetlands. The old Morie Pit along Dennisville-Petersburg Road is slated to be purchased by the County as part of the Cape May National Wildlife Refuge within a few years, at the end of its useful lifetime. The non-conforming extraction operations along Old Stagecoach Road have become problematic as many new, non-conforming, industrial and commercial uses are being established at the site of the old or existing sand pits, uses such as the retail or wholesale selling of cement and sand, as well as the establishment of a recycling center.

Due to the limited industrial and commercial development potential of much of the Township due to the lack of a public sewerage system, as well as the environmental constraints of the Township, the vast majority of Township residents have found employment outside of the Township, commuting to surrounding employment centers, including the Atlantic City regional area. While this provides employment for Upper residents, it does not contribute to the economic base of Upper Township.

The Township has both small scale municipal and educational employment opportunities, although not to the degree of other Cape May municipalities which offer full services including public water and sewer, all schooling levels, a police force and paid fire fighters.

### **Municipal Government**

The Township operates by revenue received from the following sources: the Gross Receipts and Franchise Tax which is a 13% tax collected on each resident's monthly utility bills, in lieu of property taxes; interest on investments; user fees; and host town fees from the Cape May Municipal Utilities Authority. It costs approximately \$6 million yearly to operate the municipality.

One local economic issue which appears to have been satisfactorily resolved was an issue regarding the disbursement of the Township's Gross Receipts and Franchise Taxes by the State for the year 1991. Periodically throughout the year, Atlantic Electric, South Jersey Gas, and other utility companies forward those taxes collected to the State of New Jersey who then disperses those monies to the municipality. In late 1992, the balance of the 1991 monies due fell short of the Township's estimate by \$800,000. However, in the intervening year, the amount received by the Township has approximated the estimate used by the municipality.

## XII. Recycling Plan

State law requires the preparation of a recycling plan element which incorporates the State Recycling Plan goals, including the provisions for the collection, disposition and recycling of recyclable materials, as well as the requirement for certain developments in the Township to provide for the collection, disposition and recycling of recyclable materials.

Under the title, "Beyond 40 Percent: Record-Setting Recycling and Composting Programs," a report describing the recycling program of Upper Township was published by the Institute for Local Self-Reliance, a non-profit organization headquartered in Washington, D.C. A voluntary curbside recycling program was begun in 1984 in Upper Township. It became mandatory in June of 1988, in response to the New Jersey Mandatory Source Separation and Recycling Act (P.L. 1987 c. 102). The recycling program includes all residences and 222 of the 260 businesses in the Township (the remaining 38 use private haulers). Recyclables and leaves are collected weekly, while large appliances are collected on a monthly basis. Residents also have the option of bringing recyclables (other than appliances) to the drop-off center at the Road Department. Mandatory recyclable materials include glass, plastic (HDPE and PET) soda and detergent bottles, aluminum and tin food and beverage containers, newspaper, cardboard and other non-waxed papers, appliances, leaves, grass clippings, and other lawn waste. Used motor oil must be sealed in a container. Enforcement for businesses includes a \$250 fine for a first offense and \$500 fine thereafter, and for residences, failure to comply results in a loss of trash removal service.

The Township's Roads Department provides the recycling service, under the auspices of the Township's Recycling Coordinator. It uses four vehicles to reach the entire Township: two trucks pulling Eager Beaver compartment trailers, a compactor truck for mixed paper, and a dump truck for large appliances. Once picked up, the materials are taken to the recycling center at the Cape May County Municipal Utilities Authority facility, where there is no tipping fee. There, a private firm, Empire Returns Corporation, processes and markets the materials. Yard waste is collected during the Fall from curbside by trucks pulling large vacuum machines. The yard waste is then chipped and composted by the Township's Road Department and the material is used in parks and is made available to the public at no charge.

Upper Township mails out fliers to all residents and businesses informing them of collection days and explaining the proper separation of materials collected. This information is in addition to the *Cape May County Recycler* which is distributed free to all residents in the County. It reports on the recovery rates of each municipality, highlighting the most successful communities.

The recycling and composting program has met with good success in the Township, of the 3,800 households and 222 businesses served, 85% set materials out each week for recycling, of which 60% of these separate the materials correctly. Overall in 1989, Upper Township either recycled or composted 35% of all of the solid waste generated Township-wide. The Township's Recycling Coordinator estimated that these percentages still hold for the present time, however, in order to increase the rate of participation, stiffer enforcement is recommended by imposing appropriate fines on violators.