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PERIODIC REEXAMINATION REPORT OF THE MASTER PLAN & LAND USE PLAN & OPEN SPACE PLAN TOWNSHIP OF ROCKAWAY MORRIS COUNTY, NEW JERSEY

PREPARED FOR:

**TOWNSHIP OF ROCKAWAY PLANNING BOARD
BA# 1485.09**

August 7, 2006
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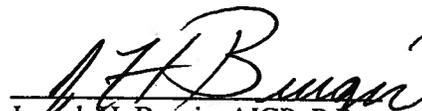


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The original document was appropriately signed and sealed on August 7, 2006 in accordance with Chapter 41 of the State Board of Professional Planners.


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"A hundred years after we are gone and forgotten, those who never heard of us will be living with the results of our actions."
Oliver Wendell Homes,
U.S. Supreme Court justice

TABLE OF CONTENTS

Introduction

Overview	1
Legal Requirements for Master Plan	2
Legal Requirements for Master Plan Reexamination Report.....	2
Previous Master Plan Efforts Undertaken by the Township	3

Section I – Periodic Reexamination

I. Major Problems and Objectives Relating to Land Development in the Municipality at the time of the Adoption of the Last Reexamination Report.....	5
II. Extent to Which Problems and Objectives Have Been Reduced or Have Increased Subsequent to the Last Reexamination.....	8
III. Extent to Which There Have Been Significant Changes in the Assumptions, Policies and Objectives Forming the Basis for the Master Plan or Developmental Regulations as Last Revised, With Particular Regard to Specific Planning Issues and Government Policy	13
IV. Specific Changes Recommended for the Master Plan or Development Regulations, if any, Including Underlying Objectives, Policies and Standards, or Whether a New Plan or Regulation Should be Prepared.....	27
V. Recommendations Concerning the Incorporation of Redevelopment Plans Into the Land Use Plan Element and Recommended Changes in The Local Development Regulations Necessary to Effectuate The Redevelopment Plans of The Municipality	28

Section II – Land Use Plan Element

I. Goals, Objectives and Policy Statements.....	31
II. Land Use Plan	37
III. Implementation	48

Section III – Open Space Plan Element

I. Introduction.....	76
II. Goals and Policies	78
III. Environmental Resource Database	80
IV. Inventory of Existing Open Space	80
V. Open Space Plan	94
A-1 Property Evaluation System	105
A-2 Prioritized Project Recommendations	117

LIST OF TABLES

Table	Title	Page
1	Population Growth	13
2	Births and Deaths, 1990-2003	14
3	Average Household Size, 1970-2000	15
4	Age Distribution: 1990 and 2000	15
5	Place of Residence in 1995 (Population 5 Years and Over)	16
6	Household Income, 1989 and 1999	17
7	Year-Round Housing Units by Tenure and Occupancy Status, 1990 and 2000	17
8	Year Structure Built For All Housing Units: 2000	18
9	Units in Structure, 2000	18
10	Specified Owner-Occupied Housing Units by Value, 1990 and 2000	19
11	Specified Renter-Occupied Housing units, 1990 and 2000	19
12	Employment Status, Population 16 and Over (2000)	20
13	Employed Residents Age 16 and Over, By Occupation (2000)	20
14	Employed Residents Age 16 and Over, By Industry (2000)	21
15	Place of Work, Residents 16 and Over	21
16	Journey to Work, 2000	22
17	Means of Transportation to Work, 2000	22
18	Number of Residential Building and Demolition Permits Issued, 1995-2005	23
19	Non-Residential Certificates of Occupancy Issued (Square Feet), 1995-2005	23
20	Dedicated Open Space and Associated Zone Districts	45-47
21	Sites Recommended for Rezoning	48
22	Natural Heritage Priority Site Descriptions	84
23	Septic Limitation By Category	84
24	Inventory of Dedicated Open Space and Public Properties	91-93
25	Properties Removed from Open Space Candidate Inventory	95
26	Inventory of Existing Open Space Candidates (by Block & Lot)	97-100
27	Inventory of Existing Open Space Candidates (by Priority Ranking)	101-104

LIST OF MAPS

Map	Title	
1	Existing Zoning	
2	Land Use Plan 1	
3	Land Use Plan 2	
4	Recommended Zoning	
5	Topography and Steep Slopes	
6	Environmental Constraints	
7	Watersheds	
8	Primary Aquifers and Groundwater Recharge Areas	
9	New Jersey Landscape Project	
10	Locations of Abandoned Mines	
11	Natural Heritage Priority Sites	
12	Septic Limitations	
13	Highlands Boundaries	
14	Dedicated Open Space and Public Properties	
15	Properties Identified as Open Space Candidates in 1998 Open Space Plan	
16	Open Space Plan	

INTRODUCTION

Overview

The 2006 Rockaway Township master plan reexamination report and master plan update is part of a continuing comprehensive planning tradition initiated by the township more than fifty years ago. The planning board has adopted a number of master plan reports and documents since the adoption of the township's first master plan document in 1956, adopting eight separate master plan reports, from the first comprehensive plan in 1956 to a 1999 reexamination report. Each of these reports had been designed to guide the future development of the community, in a manner consistent with sound planning criteria and the applicable statutory requirements.

This 2006 endeavor represents a reexamination of the community's most recent 1999 reexamination report and an update of the master plan. It incorporates previous plan documents and updates the goals and policy statements that the township has set forth in the previously adopted plans. It also includes an update, and incorporation of, the Open Space Plan that was prepared by the township Open Space Committee in 1998, thereby ensuring that the township open space planning is made a part of the formal master plan process as contemplated by the Municipal Land Use Law.

This report recognizes that Rockaway is a microcosm of northern New Jersey. It is comprised of a variety of residential areas that range from older established lake communities on small lots, to conventional subdivision developments on large lots. It also includes a number of townhouse and multi-family residential developments, neighborhood shopping areas, regional malls and substantial office and light industrial activity. In addition, the township is comprised of large areas of woodlands, open space, steep slopes, wetlands, and streams. These factors, plus the township's location in the Highlands region, affirm the need for an appropriate planning response that ensures that any future development respects the township's environmental features. It necessitates a planning response that focuses on a broad variety of issues, which range from the protection of the attractive physical features which typify the area, maintaining and enhancing the established character of the developed sections of the community, and identifying those areas warranting an upgraded planning and zoning approach to development, while establishing a prioritized procedure to preserve, protect, and acquire valued open space properties.

This report is comprised of three basic sections. One section provides the background data for the statutory reexamination report, including demographic information on the community. A second section presents the master plan's land use element. It includes an enumeration of goals and objectives, the land use plan, and associated implementation mechanisms. A third section presents the open space plan. This section presents information that will form the basis for the open space plan. This report contains a wealth of data regarding environmental issues and open space inventories, and a prioritized list of open space properties and prioritized project recommendations.

Legal Requirements for Master Plan

The Municipal Land Use Law establishes the legal requirement and criteria for the preparation of a master plan and reexamination report. The planning board is responsible for the preparation of these documents, which may be adopted or amended by the board only after a public hearing. The board is required to prepare a review of the master plan at least once every six years.

The MLUL identifies the required contents of a master plan and the master plan reexamination reports. The statute requires that the master plan include the following:

- A statement of goals, objectives and policies upon which the proposals for the physical, economic and social development of the municipality are based.
- A land use element that takes into account physical features, identify the existing and proposed location, extent and intensity of development for residential and non-residential purposes, and states the relationship of the plan to any proposed zone plan and zoning ordinance.
- The preparation of a housing plan and recycling plan by the municipality.

In addition, the MLUL identifies a number of other plan elements that may be incorporated into a comprehensive master plan document, such as circulation, open space, recreation, community facilities, and historic plan elements, but these are not obligatory elements.

The master plan gives the community the legal basis to control development in the municipality. This is accomplished through the adoption of development ordinances that are designed to implement the plan's recommendations.

Legal Requirements For Master Plan Reexamination Report

The following section details the statutory master plan periodic reexamination report provisions, as prescribed in Section 40:55D-89 of the MLUL. This section of the statute mandates that the report must identify, at a minimum, the following:

1. The major problems and objectives relating to land development in the municipality at the time of the adoption of the 1999 reexamination report;
2. The extent to which such problems and objectives have been reduced or have increased subsequent to such date;
3. The extent to which there have been significant changes in the assumptions, policies and objectives forming the basis for the master plan or development regulations as last revised, with particular regard to the density and distribution of population and land use, housing conditions, circulation, conservation of natural features, energy conservation, collection, disposition and recycling of designated recyclable materials, and changes in

State, County and municipal policies and objectives;

4. The specific changes recommended for the master plan or development regulations, if any, including underlying objectives, policies and standards, or whether a new plan or regulation should be prepared;
5. The recommendations of the planning board concerning the incorporation of redevelopment plans adopted pursuant to the "Local Redevelopment and Housing Law", into the land use plan element of the municipal master plan, and recommended changes, if any, in the local development regulations necessary to effectuate the redevelopment plans of the municipality.

Previous Master Plan Efforts Undertaken By the Township

The township adopted its most recent comprehensive revision of its original 1956 master plan in 1992. The 1992 master plan included a land use plan element as well as circulation, community facilities, and municipal service plan elements. A reexamination report was adopted in 1999.

The Township of Rockaway has addressed its fair share affordable housing obligation for the second round of the COAH housing-need numbers. On July 17, 1996, the township received substantive certification of its second-round fair share plan. This plan addressed the township's 1987 to 1999 cumulative obligation of 412 units of affordable housing. The township's fair share plan included 142 credits for previous affordable housing activity including 19 credits for rehabilitation efforts, inclusionary development designed to provide an additional 200 units of affordable housing, 37 units of affordable housing that were transferred via a regional contribution agreement (RCA), 23 units of additional rehabilitation units, 10 accessory apartments, and a development fee to assist in the community's efforts to address its housing obligation and fund various components of the plan. The township filed its third round housing plan in December 2005 and is awaiting COAH's response to the plan.

This 2006 reexamination report is a continuation of the recent efforts by the township to establish a comprehensive plan to guide the future growth and development of Rockaway. It builds upon the prior planning activities described above and is designed to ensure that the township's master plan remains current and is consistent with the applicable statutory criteria.

SECTION I

PERIODIC REEXAMINATION REPORT

This section of the report addresses the following statutory provisions:

- I. Major problems and objectives relating to development at the time of the adoption of the last master plan reexamination report.
- II. Extent to which such problems and objectives have since been reduced or have increased.
- III. Significant changes in assumptions, policies, and objectives.
- IV. Specific changes recommended for the master plan or development regulations.
- V. Statutory provisions regarding the Local Redevelopment and Housing Law.

MAJOR PROBLEMS AND OBJECTIVES RELATING TO LAND DEVELOPMENT IN THE MUNICIPALITY AT THE TIME OF THE ADOPTION OF THE LAST REEXAMINATION REPORT

The MLUL initially requires a reexamination report to identify the major land use problems and planning objectives that were enumerated in the most recently adopted master plan or reexamination report. The following principal problems and objectives were identified in the 1999 reexamination report.

Summary of Major Problems Identified in the 1999 Reexamination Report

1. Development Along Green Pond Road Corridor. The development character of the Green Pond Road corridor in the area immediately to the north of Route 80 was a significant issue at the time of the 1999 reexamination report. The township's boards were being inundated with numerous development applications for properties along the corridor. The boards were concerned with such issues as the distribution of uses, allowable intensities-of-use, traffic-generating potential, and building heights of proposed projects.

One particular property that merited special attention was a 53-acre parcel on Green Pond Road immediately north of Sanders Road. The majority of this site was in a PED Planned Economic Development Zone, with a small portion in the R-13 Zone. The township's concern was heightened due to the site's particular physical features, which included a varied terrain, ridgelines, and some wetlands, as well as its location near a variety of land uses including industrial, business, single-family and multi-family residential use.

2. Development Along Mt. Hope Road Corridor. The township had long maintained a position that discouraged non-residential development to the north of Route 80. However, the rezoning of the Foxhills adult community resulted in a few small lots that were physically isolated between the adult community and the Route 80 right of way. The propriety of the detached residential zoning of these few lots was called into question in the reexamination report.
3. Cali Tract. The Cali tract, a large site in the south-central portion of the municipality, was designated for attached residential development in the master plan, including a required affordable housing setaside. At the time of the 1999 reexamination report, the township had obtained certification of a new housing plan that did not include this tract in its affordable housing efforts, thus negating the need for higher density housing at this location. The reexamination report thus questioned the propriety of the site's zoned density.
4. Development Along Route 46. The reexamination report identified the Route 46 corridor as being characterized by a variety of retail and service commercial land uses that were typified by discordant land use arrangements and nominal design elements. The report indicated that it was appropriate to reassess the regulatory controls for this area to determine if they foster the type, scale, and character of development that complements

the township's planning goals and objectives for this section of the community.

5. White Meadow Lake. The 1999 reexamination report indicated that the planning board was often confronted with subdivision applications for undersized lots in the White Meadow Lake area. These subdivisions were often nonconforming as to lot size, but were similar in size to the area's established development pattern. The report suggested the need for an explicit pronounced approach as to how the boards should handle these types of development applications.
6. Mt. Hope/Mt. Pleasant Avenues. The reexamination report identified the need to assess the propriety of the zoning of a 20+ acre tract located at this intersection. The property was zoned for multi-family dwellings. The reexamination report suggested consideration should be given to rezoning the area to permit such uses as assisted living, associated medical office use, etc.
7. Hotel Development. At the time of the reexamination report, the township had received a number of hotel applications for properties along the Green Pond Road corridor and around the Rockaway Townsquare Mall. Surrounding municipalities had also recently approved hotel applications in the vicinity of the township's borders. The report indicated that the township's regulatory approach toward hotel development needed to be re-examined in light of this recent activity.
8. Environmentally Sensitive Lands. The 1999 report stated that it was appropriate to reassess the township's regulatory controls with respect to its considerable environmentally sensitive lands to ensure that they were adequate to effectively protect these features.
9. Subdivisions in Green Pond Area. Rockaway historically permitted lot owners in this area to place septic systems on a lot that is across the street from the lot on which the dwelling is situated. The 1999 report indicated the master plan should include a specific policy statement identifying the basis for this practice.

Major Goals and Objectives Set Forth in the 1999 Reexamination Report

The 1999 Reexamination Report included fourteen goals and objectives, as well as associated policy statements intended to implement these goals. The goals are as follows:

1. To maintain and enhance the existing areas of stability in the community; to encourage a proper distribution of land uses by designating areas which have their own uniform development characteristics. A principal goal of this plan is to preserve and protect the residential character and existing density of the community by restricting incompatible land uses from established residential areas, and limiting intensities of use to the levels, and locations, prescribed herein.
2. To enhance the development pattern and land use arrangement in White Meadow Lake and reinforce the minimum 0.3 acre lot area requirement for this portion of the

municipality.

3. To concentrate higher density development in the southerly portion of the township.
4. To include all of Rockaway Township in the sewer service area, while ensuring that public sewers and water supply be initially provided in those areas serving the greatest number of residences at a minimum cost to taxpayers.
5. To ensure that any prospective development is responsive to the township's environmental features, and can be accommodated while preserving these physical characteristics.
6. To encourage the design of open space features in cluster developments to abut the open space of open space elements of adjacent properties.
7. To provide a variety of housing types, densities and a balanced housing supply, in appropriate locations, to serve the township.
8. To encourage and provide buffer zones to separate incompatible land uses.
9. To discourage the creation of flag lots in the township.
10. To preserve and enhance the township's retail commercial areas by defining their functional role in the community.
11. To enable planned village center development in the southerly end of the Green Pond Road corridor, in the township's Planned Economic District.
12. To establish conservation easements around abandoned mine shafts and primary aquifer areas.
13. To support Picatinny Arsenal's retention as an armament research, development and engineering center, and participate in its efforts to establish a development plan to utilize its underdeveloped and underutilized assets to create a public/private partnership to provide development within the Arsenal, provided that such development complements and reinforces the township's overall approach to land use, environmental, traffic, and related planning issues.
14. To support the overall philosophy of the State Development and Redevelopment Plan (SDRP) as a means of providing growth management on a state-wide basis while retaining the principles of home-rule.

**EXTENT TO WHICH PROBLEMS AND OBJECTIVES HAVE BEEN REDUCED OR HAVE INCREASED
SUBSEQUENT TO THE LAST REEXAMINATION**

While some of the township's goals and objectives, as well as the planning problems highlighted in the 1999 Reexamination Report, have been addressed, others remain relatively static. A discussion on the status of the previous planning issues and goals is included below.

Major Planning Issues:

1. Issue: Development character of Green Pond Road corridor, and the particular concern pertaining to the 53 acre property on Green Pond Road north of Sanders Road.

Comment: The township undertook a detailed analysis of the above noted 53 acre tract and prepared sketches and concept plans to indicate the manner in which the site could be developed as a mixed use development with at-grade retail and second floor office space. The resultant rezoning called for a planned village center design for the property emphasizing a strong pedestrian element, public space which serves as a gathering place for people, and physical and visual linkages integrating the overall design of the commercial development into a unified whole.

The only other zone change affecting the corridor was the elimination of hotels as a permitted use in this portion of the township.

2. Issue: The need to evaluate the detached residential zoning of properties along the Mt. Hope Road corridor that were physically isolated as a result of the Foxhills rezoning.

Comment: The township examined the issue following the adoption of the reexamination report, and rezoned a small area at the intersection of Route 80 and Mt. Hope Road to permit commercial development.

3. Issue: Zoning of the Cali tract (Block 20001 Lot 5).

Comment: The township amended its zoning ordinance by eliminating this site from its affordable housing site inventory. The property was subsequently rezoned R-20 Acre. At present, the Cali tract is vacant and, as detailed in the Open Space Plan Element of this document, is included as a priority candidate for open space acquisition and preservation. It is also noted that Block 20001 Lot 5.05 was subdivided from the original Cali tract and is now earmarked for open space. This open space designation is contingent, however, on the planned development of an underground hydroelectric power plant, which would generate electricity for the township during peak hours. If this project fails to go through, the property will be returned to its present owner.

4. Issue: The reexamination report recommended that the township assess its regulatory controls for the Route 46 corridor to determine if they foster the type, scale, and character of development that complements the township's planning goals and objectives for this section of the community.

Comment: The Route 46 zoning has not been changed since the adoption of the 1999 reexamination report.

5. Issue: The report suggested that the master plan include an explicit policy statement identifying the planning issues associated with subdivision applications in the White Meadow Lake area.

Comment: The township adopted a specific policy statement stating that the policy of the community was to reinforce the minimum 0.3 acre lot area requirement for this portion of the municipality.

6. Issue: The 1999 report indicated that alternative zoning options, such as assisted living, should be considered for a 20-acre tract located at the intersection of Mt. Hope and Mt. Pleasant Avenues.

Comment: This recommendation has not been implemented to date.

7. Issue: The report identified a need to examine the township's regulatory approach to hotel development in light of recent applications.

Comment: As noted above, the township amended its zoning ordinance and hotels are no longer permitted along the Green Pond Road corridor.

8. Issue: The 1999 report stated that it was necessary to reassess the township's environmental regulatory controls to ensure that they adequately protect the township's resources.

Comment: The township, as part of the 2006 master plan update, includes a detailed environmental component which shall result in the preparation of a comprehensive set of environmental-based regulatory controls.

9. Issue: The report indicated that the master plan should include a policy statement regarding the placement of septic systems in the Green Pond area.

Comment: A specific policy associated with this issue was not included in the 1999 reexamination report.

Goals and Objectives:

In addition to the major planning issues, it is necessary to identify the manner in which the township's goals and objectives have been addressed since the time of the previous master plan.

1. Goal: To maintain and enhance the existing areas of stability in the community; to encourage a proper distribution of land uses by designating areas which have their own uniform development characteristics. A principal goal of this plan is to preserve and

protect the residential character and existing density of the community by restricting incompatible land uses from established residential areas, and limiting intensities of use to the levels, and locations, prescribed herein.

Comment: The township refined its zoning regulations to ensure the integrity of its residential and non-residential areas, and continues to ensure that these areas maintain their own uniformity, intensity of use and unique character that is devoid of incompatible land use arrangements.

2. Goal: To enhance the development pattern and land use arrangement in White Meadow Lake and reinforce the minimum 0.3 acre lot area requirement for this portion of the municipality.

Comment: The township planning board has, in many instances, reviewed development applications for this area since the adoption of the 1999 document, and has been cognizant of the master plan goal that reaffirms the minimum 0.3 acre lot area requirement for this portion of the municipality.

3. Goal: To concentrate higher density development in the southerly portion of the township.

Comment: The township has not zoned any property north of Route 80 for higher density housing since the adoption of the 1999 reexamination report.

4. Goal: To include all of Rockaway Township in the sewer service area, while ensuring that public sewers and water supply be initially provided in those areas serving the greatest number of residences at a minimum cost to taxpayers.

Comment: The issues pertaining to this item remain unchanged.

5. Goal: To ensure that any prospective development is responsive to the township's environmental features, and can be accommodated while preserving these physical characteristics.

Comment: The township has continued to affirmatively address issues associated with environmentally sensitive properties as part of the site plan and subdivision review process. Additionally, as noted above, the township, as part of this 2006 master plan update, has included a detailed environmental component which shall result in the preparation of a comprehensive set of updated environmental-based regulatory controls.

6. Goal: To encourage the design of open space features in cluster developments to abut the open space of open space elements of adjacent properties.

Comment: As part of the subdivision review process, the planning board has reviewed the location of adjoining open space properties to determine the manner in which a proposed development's open space amenity may be linked to adjacent open space

features.

7. **Goal:** To provide a variety of housing types, densities and a balanced housing supply, in appropriate locations, to serve the township.

Comment: The township has received substantive certification of its housing element and fair share plan, wherein the manner in which the township's affordable housing obligation is to be addressed. The township ordinance and master plan provide for a variety of single family and attached residential zones that ensures a variety of housing types, densities and a balanced housing supply in the community.

8. **Goal:** To encourage and provide buffer zones to separate incompatible land uses.

Comment: The township zoning ordinance incorporates requirements mandating a variety of buffer dimensions, depending on zone and location, that ensures the provision of a physical separation between incompatible land uses.

9. **Goal:** To discourage the creation of flag lots in the township.

Comment: The zoning ordinance has not been amended to specifically prohibit flag lots in the township.

10. **Goal:** To preserve and enhance the township's retail commercial areas by defining their functional role in the community.

Comment: The zoning regulations provide a clear and definitive demarcation identifying the various neighborhood business and regional commercial zones that are distributed throughout the community, identifying appropriate use, area and bulk provisions associated with each type of commercial zone.

11. **Goal:** To enable planned village center development in the southerly end of the Green Pond Road corridor, in the township's Planned Economic District.

Comment: The township has amended its zoning ordinance to permit a planned village center development on the 53 acre tract that was recommended for this use.

12. **Goal:** To establish conservation easements around abandoned mine shafts and primary aquifer areas.

Comment: Appropriate setbacks have been imposed between mine shafts during the course of subdivision and site plan review. Conservation easements, however, have not always been required.

13. **Goal:** To support Picatinny Arsenal's retention as an armament research, development and engineering center, and participate in its efforts to establish a development plan to utilize its underdeveloped and underutilized assets to create a public/private partnership

to provide development within the Arsenal, provided that such development complements and reinforces the township's overall approach to land use, environmental, traffic, and related planning issues.

Comment: The township has held a number of meetings with Picatinny representatives and supported their efforts to create a public/private partnership to provide development within the Arsenal.

14. Goal: To support the overall philosophy of the State Development and Redevelopment Plan (SDRP) as a means of providing growth management on a state-wide basis while retaining the principles of home-rule.

Comment: The township plan incorporates the growth management principles of the State Plan.

EXTENT TO WHICH THERE HAS BEEN SIGNIFICANT CHANGES IN THE ASSUMPTIONS, POLICIES AND OBJECTIVES FORMING THE BASIS FOR THE MASTER PLAN OR DEVELOPMENT REGULATIONS AS LAST REVISED, WITH PARTICULAR REGARD TO SPECIFIC PLANNING ISSUES AND GOVERNMENT POLICY

The Municipal Land Use Law requires, as part of the overall reexamination analysis, an assessment of the changes that have taken place in the community since the adoption of the last master plan. There are a number of substantive changes at the state and local level that were not contemplated at the time of the preparation and adoption of the 1999 reexamination report which require the township's attention. Additionally, the township has experienced notable changes resulting from growth and development.

Changes at the Local Level

1. Population Size.

As shown in the table below, the township experienced its greatest population growth in the three decades between 1940 and 1970, the period where the population increased from 2,423 persons to 18,955. Since 1970, growth has been more modest. In fact, the population dropped for the first time between 1980 and 1990.

However, in 2000, the township's population rose above 20,000 for the first time, rising 17.2 percent to 22,930. This rate of growth far exceeded the State and County growth rates of 8.9 and 11.6 percent, respectively. Moreover, the 2004 population estimate of 25,244, provided by the NJ Department of Labor, suggests continued population growth in the early years of this decade.

The accompanying table outlines the community's population growth since 1920.

**Table 1
Population Growth
Rockaway Township, New Jersey**

Year	Population	Population Change	Percent Change
1920	3,100	---	---
1930	3,178	+78	+2.5
1940	2,423	-755	-23.8
1950	4,418	+1,995	+82.3
1960	10,356	+5,938	+134.4
1970	18,955	+8,599	+83.0
1980	19,850	+895	+4.7
1990	19,572	-278	-1.4
2000	22,930	+3,358	+17.2
2004*	25,244	+2,314	+10.1

* denotes population estimate, New Jersey Department of Labor.

Source: 1999 Rockaway Township Master Plan and U.S. Bureau of the Census, 1990 & 2000.

2. Births and Deaths Statistics.

Data on the number of births helps a community to assess its future needs for community facilities and services, particularly with respect to the school system and recreational facilities. Table 2 identifies the birth and death statistics for Rockaway Township between 1990 and 2003. Death statistics are only available through 1997.

Table 2
Births and Deaths, 1990 – 2003
Rockaway Township, New Jersey

Year	Births	Deaths	Change in Births/Deaths
1990	260	99	161
1991	223	93	130
1992	249	88	161
1993	248	100	148
1994	249	55	194
1995	323	128	195
1996	310	115	195
1997	319	124	195
Total	2,181	802	1,379
1998	364	n/a	
1999	337	n.a.	---
2000	357	n.a.	---
2001	305	n.a.	---
2002	299	n.a.	---
2003	308	n.a.	---

Source: State of New Jersey Department of Health and Senior Services,
Bergen County Department of Planning and Economic Development.
n.a. denotes not available.

Over the fourteen year period noted in the table, births consistently outpaced deaths, indicating that a portion of the population growth is applicable to natural increase. While there was an average of 297 births per year over the entire period, in the years since 1995 the number of births consistently met or exceeded 300 annually. In fact, the number of births in 2000 was 37 percent higher than the number of births in 1990. This increase is likely to impact the public school system and demand for other municipal services, such as recreation.

3. Household Size.

Between 1970 and 2000, the township experienced a decrease in average household size of

almost 25 percent, falling to 2.82 persons per household in 2000. This downward trend mirrors trends at the national, state and county levels. However, the township's household size continues to be larger than that of the County as a whole. Table 3 details the average household house for both the township and the county between 1970 and 2000.

Table 3
Average Household Size, 1970 - 2000
Rockaway Township, New Jersey

Year	Population	Number of Households	Household Size: Rockaway Township	Household Size: Morris County
1970	18,955	5,841	3.68	3.40
1980	19,850	6,794	3.17	3.02
1990	19,572	7,477	2.83	2.78
2000	22,930	8,108	2.82	2.72

Source: U.S. Bureau of the Census and 1999 Rockaway Township Reexamination Report.

4. Age Characteristics.

The township's age distribution has changed somewhat in the years between 1990 and 2000. While there was growth at the lower and upper age cohorts, there was a drop in the population between the ages of 20 and 34. As shown below, the biggest increases in population were experienced in the school-age population (5-18) and the population aged 45-54. This data comports with the previous finding that there has been an increase in the annual number of births.

The median age of township residents, at 37.0 years, represents an increase of nearly 3 years over the 1990 level. However, it is slightly below the county median of 37.8 years.

Table 4
Age Distribution, 1990 and 2000
Rockaway Township, New Jersey

Age	1990		2000		Net Change
	Number	Percent	Number	Percent	
Under 5	1462	7.5	1,771	7.7	309
5-19	3739	19.1	4,833	21.1	1,094
20-24	1301	6.6	868	3.8	-433
25-34	3601	18.4	3,088	13.5	-513
35-44	3573	18.3	4,450	19.4	877
45-54	2505	12.8	3,606	15.7	1,101
55-64	1754	9.0	2,152	9.4	398
Over 65	1637	8.4	2,162	9.4	525
Total	19572	100	22,930	100	3358
Median Age	34.1		37.0		--

Source: U.S. Bureau of the Census, 1990 & 2000.

6. Place of Residence in 1995.

Table 5 provides information on where Rockaway Township's residents resided in 1995 versus 2000. As shown below, nearly two-thirds of the population resided in the same house in 1995, which is greater than the county level of 60 percent.

Table 5
Place of Residence in 1995 (Population 5 years and over)
Rockaway Township, New Jersey

		Number	Percent
Same house in 1995		13,720	64.7
Different house in U.S. in 1995	Same county	3,773	17.8
	Different county, same state	2,246	10.6
	Different state	1,029	4.9
Elsewhere in 1995		427	2.0
Total		21,195	100.0

Source: U.S. Bureau of the Census, 2000.

7. Income Characteristics.

As shown in Table 6 below, median household income rose from \$56,713 in 1989 to \$80,939 in 1999. This increase outpaced the rate of inflation during that period. Using the consumer price index (CPI) to adjust for inflation, \$56,713 in 1989 was roughly equivalent to \$76,129 in 1999 dollars.

There has been a significant increase in the percent of households with income greater than \$100,000, tripling from approximately 12 percent of the population in 1989 to 36 percent in 1999. More than 6 percent of township households in 1999 had incomes greater than \$200,000. The township median income of \$80,939 is five percent higher than the county median of \$77,340.

Table 6
Household Income, 1989 and 1999
Rockaway Township, New Jersey

Income Category	1989		1999	
	Number	Percentage	Number	Percentage
Less than \$5,000	97	1.4		
\$5,000 to \$9,999	128	1.9	179	2.2
\$10,000 to \$14,999	190	2.8	175	2.2
\$15,000 to \$24,999	501	7.3	363	4.5
\$25,000 to \$34,999	714	10.4	418	5.2
\$35,000 to \$49,999	1126	16.4	828	10.2
\$50,000 to \$74,999	2139	31.2	1,712	21.1
\$75,000 to \$99,999	1140	16.6	1,519	18.7
\$100,000 to \$149,999	639	9.3	1,807	22.3
\$150,000 to 199,999			581	7.2
\$200,000 or more	181	2.6	525	6.5
Total	6,855	100	8,107	100
Median Household Income	\$56,713	---	\$80,939	---

Source: U.S. Bureau of the Census, 1990 & 2000.

8. Housing Characteristics.

Table 7 summarizes the occupancy status of the housing units in Rockaway Township. In 2000, there were 8,506 housing units in the township, a 14 percent increase over the number of units reported in 1990. The predominance of owner-occupied housing units grew over the period between 1990 and 2000, rising to roughly 80 percent of all housing units in 2000. The census data indicates the decrease in the percent of vacant units in 2000, reflecting the township's tightening housing market.

Table 7
Year-Round Housing Units by Tenure and Occupancy Status, 1990 and 2000
Rockaway Township, New Jersey

Characteristics	1990		2000	
	Number of Units	Percent	Number of Units	Percent
Owner Occupied	5696	76.2%	6,849	80.5%
Renter Occupied	1,212	16.2%	1,259	14.8%
Vacant Units	569	7.6%	398	4.7%
Total	7,477	100.0%	8,506	100.0%

Source: U.S. Bureau of the Census, 1990 & 2000.

As shown in Table 8 below, more than half of the township's housing stock was constructed in the years between 1940 and 1970. However, with more than 15 percent of the township's housing units constructed in the years between 1990 and 2000, the township continues to experience a significant amount of residential development. The median year for the construction of the township's housing units is 1965, which is the same as the county median.

Table 8
Year Structure Built For All Housing Units: 2000
Rockaway Township, New Jersey

Year Constructed	Number	Percent
1999 to March 2000	123	1.4
1995 to 1998	480	5.6
1990 to 1994	712	8.4
1980 to 1989	870	10.2
1970 to 1979	1,039	12.2
1960 to 1969	2,185	25.7
1940 to 1959	2,329	27.4
1939 or earlier	768	9.0
Total	8,506	100.0

Source: U.S. Bureau of the Census, 1990 & 2000.

The township's unit mix did not change significantly between 1990 and 2000. Single-family detached homes represented 80.4 percent of the entire housing stock in 2000, down slightly from 82 percent in 1990. Single-family attached and 3-4 family units experienced relative growth in the period. Table 9 details the township's unit mix.

Table 9
Units in Structure, 2000
Rockaway Township, New Jersey

Units in Structure	1990		2000	
	Number	Percent	Number	Percent
Single Family, Detached	6,130	82.0	6,835	80.4
Single Family, Attached	284	3.8	503	5.9
2 Family	93	1.2	113	1.3
3 or 4 Family	171	2.3	302	3.6
5-9 Units	192	2.6	215	2.5
More than 10 Units	470	6.3	453	5.3
Other	137	1.9	85	1.0
Total	7,477	100.0	8,506	100

Source: U.S. Bureau of the Census, 1990 & 2000.

9. Value of Housing Units

Table 10 identifies the value of the township's owner-occupied housing units in 1990 and 2000. Housing values grew by 13 percent during the decade, rising from a median value of \$182,400 in 1989 to \$206,200 in 1999. The percent of housing units valued at more than \$300,000 doubled over the decade from 7 percent to more than 14 percent. The median value for the county housing stock was \$257,400 in 1999. The area has seen a significant increase in housing values since the publication of the 2000 census data. According to the Morris County Electronic Factbook, the average sale price of homes sold in 2002 was \$282,223.

Table 10
Specified Owner-Occupied Housing Units by Value, 1990 and 2000
Rockaway Township, New Jersey

1989			1999			Numerical Change
Value	Number	Percent	Value	Number	Percent	
Less than \$75,000	98	1.9%	Less than \$99,000	132	2.1%	-129
\$75,000 to \$99,999	163	3.1%				
\$100,000 to \$149,999	834	16.0%	\$100,000 to \$149,999	658	10.2%	-176
\$150,000 to \$199,999	2361	45.2%	\$150,000 to \$199,999	2186	34.0%	-175
\$200,000 to \$249,999	1036	19.8%	\$200,000 to \$299,999	2,541	39.5%	1,140
\$250,000 to \$299,999	365	7.0%				
\$300,000 to \$399,999	183	3.5%				
400,000 to \$499,999	53	1.0%	\$300,000 to \$499,999	686	10.7%	450
\$500,000 or More	131	2.5%	\$500,000 to \$999,999	219	3.4%	95
			\$1,000,000 or more	7	0.1%	
Total	5,224	100	Total	6,429		1205
Median	\$182,400		Median	\$206,200		---

Source: U.S. Bureau of the Census, 1990 & 2000.

Table 11 summarizes renter occupied housing values in Rockaway Township. Between 1990 and 2000, the median rent increased by roughly eight percent, from \$877 to \$948.

Table 11
Specified Renter-Occupied Housing Units, 1990 and 2000
Rockaway Township, New Jersey

Rent	1990	Rent	2000	Numerical Change
Less than \$100	9	Less than \$200	20	-28
\$100 to \$149	9			
\$150 to \$199	30			
\$200 to \$299	42	\$200 to \$299	20	-22
\$300 to \$399	10	\$300 to \$499	49	-7
\$400 to \$499	46			
\$500 or \$749	173	\$500 to \$749	106	-67
\$750 or \$999	474	\$750 to \$999	495	21
\$1,000 or more	326	\$1,000 to \$1,499	320	107
		\$1,500 or more	113	
No cash Rent	89	No cash Rent	108	19
Total	1208	Total	1231	23
Median	\$877	Median	\$948	---

Source: U.S. Bureau of Census, 1990 & 2000.

10. Resident Employment Characteristics.

The 2000 census indicates that nearly three-fourths of the township's population 16 years and

over is in the labor force. In 2000, the unemployment rate was 3.3 percent.

Table 12
Employment Status, Population 16 and Over (2000)
Rockaway Township, New Jersey

Employment Status	Number	Percent
In labor force	12,804	74.0
Civilian labor force	12,706	73.4
Employed	12,287	71.0
Unemployed	419	2.4
Percent of civilian labor force	3.3%	---
Armed Forces	98	0.6
Not in labor force	4,503	26.0
Total	17,307	100.0

Source: U.S. Bureau of Census, 2000.

Tables 13 and 14 describe the employment characteristics and occupational patterns of employed Rockaway Township residents as reported in the 2000 U.S. Census. Table 13 identifies resident employment by occupation. Nearly half of employed township residents work in the management, professional and related occupations category.

Table 13
Employed Residents Age 16 and Over, By Occupation (2000)
Rockaway Township, New Jersey

Occupation	Number	Percent
Management, professional, and related occupations	5,842	47.5
Service occupations	1,209	9.8
Sales and office occupations	3,469	28.2
Farming, fishing, and forestry occupations	0	0.0
Construction, extraction, and maintenance occupations	763	6.2
Production, transportation, and material moving occupations	1,004	8.2
Total	12,287	100.0

Source: U.S. Bureau of Census, 2000.

Table 14
Employed Residents Age 16 and Over, By Industry (2000)
Rockaway Township, New Jersey

Industry	Number	Percent
Agriculture, forestry, fishing and hunting, and mining	9	0.1
Construction	657	5.3
Manufacturing	1,876	15.3
Wholesale trade	650	5.3
Retail trade	1,290	10.5
Transportation and warehousing, and utilities	549	4.5
Information	673	5.5
Finance, insurance, real estate, and rental and leasing	1,200	9.8
Professional, scientific, management, administrative, and waste management services	1,712	13.9
Educational, health and social services	2,183	17.8
Arts, entertainment, recreation, accommodation and food services	583	4.7
Other services (except public administration)	417	3.4
Public administration	488	4
Total	12,287	100.0

Source: U.S. Bureau of Census, 2000.

As shown in Table 15, approximately two-thirds of the township's employed residents work in either Rockaway Township (including at home) or elsewhere within Morris County.

Table 15
Place of Work, Residents Sixteen and Over
Rockaway Township, New Jersey

Place of Work	Number
Worked at Home	330
Worked in Rockaway Twp, not at Home	1,580
Worked elsewhere in Morris Co.	6,054
Worked In NJ, not Morris Co.	3,999
Worked outside NJ	602
Total	12,235

The following table details the most common place of employment for Rockaway Township residents, as well as the most common place of residence for those employed in Rockaway Township. Average commuting time for residents was reported at 30.7 minutes.

Table 16
Journey to Work, 2000
Rockaway Township, New Jersey

	Residents of Rockaway Township		Employees Working in Rockaway Township	
	Work Place	Count	Residence	Count
1	Rockaway Twp.	1,910	Rockaway Twp.	1,910
2	Parsippany-Troy Hills	1,253	Dover	840
3	Denville	480	Mount Olive	424
4	Rockaway bor.	432	Jefferson	361
5	Morristown town	399	Roxbury	357
6	Newark	358	Hopatcong	303
7	Hanover	340	Wharton	299
8	Dover	339	Parsippany-Troy Hills	272
9	Manhattan NY	330	Randolph Twp.	241
10	Morris Twp.	312	Denville	236

Source: U.S. Bureau of the Census, 2000.

Data on commuting patterns refers only to residents who were working during the particular week in which the census collected data on that topic. Therefore, residents who were sick or on vacation during the reference week are not included in the total number of workers in Tables 15 and 16. Thus, there is a slight difference in the number of residents employed in the civilian labor force in Tables 13 and 14 and the total number of workers in Tables 15 and 16.

11. Means of Transportation to Work.

Table 17 details the means of transportation to work for employed residents. As can be seen below, approximately 95 percent of residents traveled to work in a private automobile, either alone or in a carpool.

Table 17
Means of Transportation to Work, 2000
Rockaway Township, New Jersey

Means of Transportation to Work	Number	Percent
Drove Alone	10,415	85.1
Carpooled	1,137	9.3
Public transportation	248	2
Walked	93	0.8
Other means	36	0.3
Worked at home	306	2.5
Total	12,235	100

Source: U.S. Bureau of the Census, 2000.

12. Recent Development Activity.

Table 18 summarizes residential development activity in Rockaway Township since 1995. Single-family residential building permits numbered 551 since 1995. In the same period, there were 1,018 multi-family building permits issued, all in the years since 1998.

Table 18
Number of Residential Building and Demolition Permits Issued, 1995-2005
Rockaway Township, New Jersey

Year	Single Family	Multi Family	Number of Permits	Demolition Permits Issued
1995	81	0	81	6
1996	53	0	53	3
1997	42	0	42	8
1998	76	86	162	4
1999	40	0	40	3
2000	89	253	342	7
2001	34	210	244	5
2002	31	183	214	10
2003	25	42	67	6
2004	49	89	138	13
2005	31	155	186	9
Total	551	1,018	1,569	74

Source: New Jersey Department of Labor and New Jersey Department of Community Affairs.

Table 19 reports non-residential development activity in Rockaway since 1995.

Table 19
Non-Residential Certificates of Occupancy Issued (Square Feet), 1995-2005
Rockaway Township, New Jersey

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Office	0	1,947	20,680	57,489	55,362	0	8,923	16,880	930	4,989	896
Retail	0	0	0	0	0	5,750	0	0	44,471	145,499	258,357
A-2	0	0	0	0	0	0	0	0	0	0	8,113
A-3	7,806	0	0	0	0	720	27,871	0	0	7,500	0
A-4	5,020	0	3,703	0	0	21,252	884	0	0	1,425	0
A-5	458	0	0	0	0	0	0	0	0	0	0
Hotel/Motel	0	0	0	0	0	0	93,848	0	0	0	0
Education	0	0	0	0	0	85,048	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0	3,705	0	0
Institution	0	0	0	0	0	0	0	0	0	0	54,550
Storage	0	0	0	0	0	0	0	0	5,400	0	0
Total	13,284	1,947	24,383	57,489	55,362	112,770	131,526	16,880	54,506	159,413	321,916

Source: New Jersey Department of Community Affairs.

Changes at the State Level

State Development and Redevelopment Plan (SDRP). On March 1, 2001 the New Jersey State Planning Commission adopted the State Development and Redevelopment Plan (SDRP). The primary objective of the SDRP is to guide development to areas where infrastructure is available or can be readily extended such as along existing transportation corridors, in urban centers and in developed or developing suburban areas. The SDRP actively encourages development be located in "centers", which are "compact forms of development that, compared to 'sprawl' development, consume less land, deplete fewer natural resources and are more efficient in the delivery of public services." In order to implement its general statewide policies and objectives, the SDRP divides the state into nine land use "Planning Areas." The SDRP has adopted a set of policy objectives to guide local planning in each planning area. These policy objectives are designed to implement the statewide goals and objectives of the SDRP in the context of the unique qualities and conditions in each of the planning areas. The goal of this project is to implement land use policies on the local level that will be consistent with the State Plan policies.

The township contains six different land use designations. Most of the township is in either the metropolitan (central portion of the township) or environmentally sensitive (northerly half of the community) designations. The area north of Route 80 and generally between Mt. Hope Ave and Picatinny Arsenal is in a suburban designation, while the northeast area is in a fringe land use category. Picatinny has its own 'military' category. There are also some 'park and recreation' lands distributed throughout the community. The accompanying map identifies the location of each Planning Area. The accompanying narrative describes the goals associated with each area.

Metropolitan Planning Area (PA) encompasses large urban centers and developed suburban areas. These areas are fully developed with significant investment in existing, but aging, infrastructure systems. There is little vacant land available for development and, as such, much of the development activity is infill development or redevelopment. The SDRP states that public and private investment in PA-1 should be the "principle priority" of state, regional and local planning agencies, with the intent being to direct development and redevelopment into these portions of the State.

The Suburban Planning Area (PA-2) also has available infrastructure but is distinguished from PA-1 by the fact that there is more available vacant land for development and a less dense development pattern. PA-2 also offers an opportunity to extend infrastructure efficiently from PA-1 if no existing infrastructure is in place. The SDRP recommends that new development in PA-2 be designed to discourage sprawl development patterns. While recognizing that the land use pattern in PA-2 may be fixed by existing and approved development, the SDRP recommends that new development be in mixed-use centers.

The Fringe Planning Areas are at the edges of the developing Suburban Areas. In Rockaway this area encompasses a portion of the Green Pond Road corridor north of the more developed sections of this roadway. This category does not have and is not planned to have urban level infrastructure.

The Environmentally Sensitive Planning Area (PA-5) has large contiguous areas of land that

contain valuable ecosystems, natural resources and wildlife habitats. These areas are either undeveloped or have limited development that is rural in character. The primary policy objective for PA-5 is the protection of environmentally sensitive areas through the promotion of center development with clear boundaries and buffer areas separating the center from the surrounding "environs." Natural resources should be protected and preserved in large contiguous tracts of open space. The SDRP suggests that these areas may be appropriate for recreational facilities, and infrastructure should only be provided to support linkages between centers or to promote recreational and other activities.

Currently the township's master plan is consistent with the statewide goals and objectives of the SDRP and the policy objectives of the various planning areas. The goal of this project is to enhance the land use policies and regulations to further promote the protection of lands located in the Environmentally Sensitive Planning Area (PA-5).

Cross-Acceptance / SDRP. On April 28, 2004, the New Jersey State Planning Commission (SPC) approved the release of the Preliminary 2004 SDRP and the Preliminary State Plan Policy Map. This action launched the third round of Cross-Acceptance.

Cross-acceptance is defined by the SPC as a bottom-up approach to planning, designed to encourage consistency between municipal, county, regional, and state plans to create a meaningful, up-to-date and viable State Plan (N.J.S.A. 52:18A-202.b.). This process ensures that all New Jersey residents and levels of government have the opportunity to participate and shape the goals, strategies and policies of the State Plan.

Through cross-acceptance, negotiating entities work with local governments and residents to compare their local master plans with the State Plan and to identify potential changes to achieve a greater level of consistency with statewide planning policy. Cross-acceptance concludes with written Statements of Agreements and Disagreements supported by each negotiating entity and the SPC. The State Planning Commission will incorporate the negotiated agreements into the Draft Final State Plan.

A significant aspect of the Cross-Acceptance process, and what distinguishes it from past years, is the State's intent to rely upon this process, and the final adopted State Plan, as the basis for determining funding allocations for a variety of programs.

Council on Affordable Housing (COAH). As indicated previously the township received substantive certification of its second-round fair share plan in July 1996. This plan addressed the township's fair share housing obligation, identified by COAH for the 1987-1999 housing need cycle.

COAH adopted its third round methodology and rules in December of 2004. As the adopted methodology differs substantively from the prior round, it requires the township to undertake a new review of the housing element and fair share plan by December 20, 2005. The township adopted a new housing element and fair share plan and filed it with COAH. See the plan, which is under separate cover.

Residential Site Improvement Standards (RSIS). RSIS went into effect on June 3, 1997. The adopted rules establish technical standards for streets and parking, water supply, sanitary sewers and stormwater management relating to residential development. The standards are the minimum requirements for site improvements that must be adhered to by all applicants for residential subdivision and site plans before planning boards and zoning boards of adjustment. They also represent the maximum that such boards can require of an applicant. These adopted standards supersede any local standards established for these systems.

Since 1997, there have been several amendments to the RSIS standards. The changes that most significantly affect planning issues and current developments in the township are:

- New regulations for access streets to multi-family development have been added. The RSIS standards now include regulations for cul-de-sacs and multi-family cul-de-sacs, which differentiate between the higher density developments and single-family neighborhoods.
- The RSIS standards have been recently revised as a result of the changes to the stormwater regulations as required by the New Jersey Department of Environmental Protection (NJDEP). These standards will require greater infiltration of stormwater, where feasible, and stormwater quality treatment through bioremediation techniques.
- The RSIS standards have been revised to acknowledge the impacts of two-family dwellings. Trip generation and parking requirements for two-family dwellings have been added to the RSIS.

The township should continue to implement the adopted RSIS as required by the statute. It should also be noted that these standards govern residential development only. Township requirements governing non-residential development are not affected by RSIS.

Highlands Act. (see Open Space Plan Element within this document).

SPECIFIC CHANGES RECOMMENDED FOR THE MASTER PLAN OR DEVELOPMENT REGULATIONS, IF ANY, INCLUDING UNDERLYING OBJECTIVES, POLICIES AND STANDARDS, OR WHETHER A NEW PLAN OR REGULATION SHOULD BE PREPARED

See the Plan sections of this document for details concerning master plan recommendations and implementing ordinances.

RECOMMENDATIONS CONCERNING THE INCORPORATION OF REDEVELOPMENT PLANS INTO THE LAND USE PLAN ELEMENT AND RECOMMENDED CHANGES IN THE LOCAL DEVELOPMENT REGULATIONS NECESSARY TO EFFECTUATE THE REDEVELOPMENT PLANS OF THE MUNICIPALITY

In 1992, the Local Redevelopment and Housing Law (LRHL) was enacted into law. The LRHL replaced a number of former redevelopment statutes, including the Redevelopment Agencies Law, Local Housing and Redevelopment Corporation Law, Blighted Area Act, and Local Housing Authorities Law, with a single comprehensive statute. At the same time, the MLUL was also amended to require, as part of a master plan reexamination, that the issues raised in the LRHL be addressed.

The LRHL provides the statutory authority for municipalities to designate areas in need or “redevelopment,” prepare and adopt redevelopment plans, and implement redevelopment projects. Specifically, the governing body has the power to initially cause a preliminary investigation to determine if an area is in need of redevelopment, determine that an area is in need of redevelopment, adopt a redevelopment plan, and/or determine that an area is in need of rehabilitation.

A planning board has the power to conduct, when authorized by the governing body, a preliminary investigation and hearing and make a recommendation as to whether an area is in need of redevelopment. The planning board is also authorized to make recommendations concerning a redevelopment plan, and prepare a plan as determined to be appropriate. The board may also make recommendations concerning a determination if an area is in need of rehabilitation.

The statute provides that “a delineated area may be determined to be in need of redevelopment if” after investigation, notice and hearing... the governing body of the municipality by resolution concludes that within the delineated area “any of the following conditions are found”:

- a. The generality of buildings are substandard, unsafe, unsanitary, dilapidated or obsolescent, or possess any of such characteristics, or are so lacking in light, air, or space, as to be conducive to unwholesome living or working conditions;
- b. The discontinuance of the use of buildings previously used for commercial, manufacturing, or industrial purposes; the abandonment of such buildings; or the same being allowed to fall into so great a state of disrepair as to be untenable;
- c. Land that is owned by the municipality, the county, a local housing authority, redevelopment agency or redevelopment entity, or unimproved vacant land that has remained so for a period of ten years prior to adoption of the resolution, and that by reason of its location, remoteness, lack of means of access to developed sections or portions of the municipality, or topography or nature of the soil, is not likely to be developed through the instrumentality of private capital;
- d. Areas with buildings or improvements which, by reason of dilapidation, obsolescence,

overcrowding, faulty arrangement or design, lack of ventilation, light and sanitary facilities, excessive land coverage, deleterious land use or obsolete layout, or any combination of these or other factors, are detrimental to the safety, health, morals, or welfare of the community;

- e. A growing lack or total lack of proper utilization of areas caused by the condition of the title, diverse ownership of the real property therein or other conditions, resulting in a stagnant or not fully productive condition of land potentially useful and valuable for contributing to and serving the public health, safety and welfare;
- f. Areas in excess of five contiguous acres, whereon buildings or improvements have been destroyed, consumed by fire, demolished or altered by the action of storm, fire, cyclone, tornado, earthquake or other casualty in such a way that the aggregate assessed value of the area has been materially depreciated.
- g. In any municipality in which an enterprise zone has been designated pursuant to the "New Jersey Urban Enterprise Zones Act," P.L. 19833, c.303 (C.52:27H-60 et seq.) the execution of the actions prescribed in that act for the adoption by the municipality and approved by the New Jersey Urban Enterprise Zone Authority of the zone development plan for the area of the enterprise zone shall be considered sufficient for the determination that the area is in need of redevelopment pursuant to sections 5 and 6 of P.L.1992,c79 (C.40A:12A-5 and 40A:12A-6).
- h. The designation of the delineated area is consistent with smart growth planning principles adopted pursuant to law or regulation.

The statute defines redevelopment to include "clearance, replanning, development, and redevelopment; the conservation and rehabilitation of any structure or improvement, the construction and provision for construction of residential, commercial, industrial, public or other structure and the grant or dedication of spaces as may be appropriate or necessary in the interest of general welfare for streets, parks, playgrounds, or other public purposes, including recreation and other facilities incidental or appurtenant thereto, in accordance with a redevelopment plan." It is noteworthy that the statute specifically states that a redevelopment area may include lands which of themselves are not detrimental to the public health, safety or welfare, but the inclusion of which is necessary for the effective redevelopment of an area.

At the present time, the township does not contemplate the imposition of a redevelopment designation on property in the municipality.

SECTION II

LAND USE PLAN ELEMENT

This section of the report addresses the following issues:

- I. Goals, Objectives and Policy Statements
- II. Land Use Plan
- III. Implementation

GOALS, OBJECTIVES AND POLICY STATEMENTS

The Municipal Land Use Law requires that all municipal master plans set forth a statement of objectives, principles, assumptions, policies and standards upon which the master plan recommendations are based. This section of the Rockaway land use plan update sets forth the Township's goals, objectives and supportive policy statements. Several of the items still relevant from the 1999 Reexamination Report have been repeated to restate the continued efforts needed to address these issues.

General Objectives

The master plan is predicated on the following general objectives:

1. To encourage municipal action to guide the appropriate use or development of all lands in the State, in a manner which will promote the public health, safety, morals and general welfare.
2. To secure safety from fire, flood, panic and other natural and man-made disasters.
3. To provide adequate light, air and open space.
4. To ensure that the development within Rockaway does not conflict with the development and general welfare of neighboring municipalities, Morris County, and the State as a whole.
5. To promote the establishment of appropriate population densities and concentrations that will contribute to the well being of persons, neighborhoods, communities and regions and preservation of the environment.
6. To encourage the appropriate and efficient expenditure of public funds by the coordination of public development with land use policies.
7. To provide sufficient space in appropriate locations for a variety of agricultural, residential, recreational, commercial and industrial uses and open space, both public and private, according to their respective environmental requirements in order to meet the needs of all New Jersey citizens.
8. To encourage the location and design of transportation routes that will promote the free flow of traffic while discouraging the location of such facilities and routes which would result in congestion or blight.
9. To promote a desirable visual environment through creative development techniques and good civic design and arrangements.
10. To promote the conservation of historic sites and districts, open space, energy resources and valuable natural resources, and to prevent urban sprawl and degradation of the

environment through improper use of land.

11. To encourage planned unit developments that incorporate the best features of design and relate the type, design, and layout of residential, commercial, industrial and recreational development of the particular site.
12. To encourage senior citizen community housing construction.
13. To encourage coordination of the various public and private procedures and activities shaping land development with a view of lessening the cost of such development and to the more effective use of land.
14. To promote utilization of renewable energy sources.
15. To promote the maximum practicable recovery and recycling of recyclable materials from municipal solid waste through the use of planning practices designed to incorporate the State Recycling Plan goals and to complement municipal recycling programs.

Goals and Policies

The Plan's residential and non-residential goals and planning policies are as follows:

Goal 1: *To maintain and enhance the existing areas of stability in the community; to encourage a proper distribution of land uses by designating areas which have their own uniform development characteristics. A principal goal of this plan is to preserve and protect the residential character and existing density of the community by restricting incompatible land uses from established residential areas, and limiting intensities of use to the levels, and locations, prescribed herein.*

Policy Statement: The township recognizes that one of its most significant attributes is its residential neighborhoods, with limited intrusions of non-residential development in residential neighborhoods. The Plan's land use recommendations are designed to protect and reinforce the prevailing residential development patterns (except as provided in Goal 2 below), permit attached residential development only in those areas specified in the plan and preclude them from other areas, prohibit incompatible land use arrangements, and reinforce the intensities of use recommended in this plan.

Goal 2: *To enhance the development pattern and land use arrangement in White Meadow Lake and reinforce the minimum 0.3-acre lot area requirement for this portion of the municipality.*

Policy Statement: The White Meadow Lake area is typified by a varied terrain and a modest lot size arrangement, which is often served by narrow winding streets with a poor road alignment. These characteristics necessitate a planning response that will ensure that infill development does not adversely impact the environmental character of the area, or physical features, or circulation, and does not add to the physical congestion of this neighborhood. In an effort to implement Goal 2, the Planning Board formally rejects the notion that the mere consistency of a proposed lot's

size with the surrounding area in and of itself represents a suitable basis for variance relief, concluding that such consistency does not represent a “public benefit”, nor does it address issues relating to the negative criteria that mandate a showing that there is no substantial detriment to the public good. In particular, that issue must revolve around, amongst other things, the problems associated with any additional traffic generating potential that impacts traffic movement on narrow, winding, and poorly aligned roadways.

Goal 3: *To concentrate development in the southerly portion of the township.*

Policy Statement: The township seeks to direct development to the southerly end of the community where it is most economical to serve existing and future population with full utilities and services. This also serves to complement the Highlands Act, which discourages development in the northerly half of the community.

Goal 4: *To include all of Rockaway Township that is not within the Highlands Preservation Area in the sewer service area, while ensuring that public sewers and water supply be initially provided in those areas serving the greatest number of residences at a minimum cost to taxpayers.*

Policy Statement: It is Rockaway’s policy to coordinate the location of public sewers and water supply with the activities shaping land development to ensure service to the greatest number of existing and future residents of the township, and to lessen the cost of such development on the citizenry.

Goal 5: *To ensure that any prospective development is responsive to the township’s environmental features, and can be accommodated while preserving these physical characteristics.*

Policy Statement: The township seeks to limit development to that which is sensitive to the community’s particular physical characteristics, and preserve the township’s sensitive environmental elements. In particular, the township seeks to limit development to that which preserves steeply sloped area (defined to include any slope of minimally fifteen percent grade), wetlands, and flood plains, and retains existing vegetation (particularly trees of a caliper of eight inches or more and clusters of trees which may be of lesser caliper if determined appropriate). Furthermore, the township seeks to discourage development in the Highlands Preservation Area. It is specifically noted with respect to steep slopes that the slope zoning regulations set forth in the township land development ordinance are to be applied to each individual building lot in a development application. Additionally, the township takes cognizance of the fact that there are numerous sites in the municipality that are typified by extensive environmentally sensitive features and therefore may not be able to accommodate its fully zoned development potential.

Goal 6: *To encourage the design of open space features in cluster developments to abut the open space of open space elements of adjacent properties.*

Policy Statement: The township recognizes that one of the significant attributes of the area is its rural, wooded open space character. This can best be reinforced by the linkage of open space

features throughout the community. Consequently, it is the policy of the township to seek the placement of open space features so that they abut open space features on adjoining properties, thereby establishing a series of greenbelts throughout the community.

Goal 7: *To provide a variety of housing types, densities and a balanced housing supply, in appropriate locations, to serve the township.*

Policy Statement: The township contains a broad and varied housing stock consisting of detached dwellings, townhouses, and multi-family units. Consequently, the township policy is designed to acknowledge this existing and established array of housing, but not to allow any more multi-family housing and townhouses beyond that which is prescribed for in this plan. This policy is expressed in recognition of the broad range of housing in the community, and the fact that Rockaway has affirmatively addressed its low and moderate income housing obligation, as defined by the New Jersey Council On Affordable Housing, through the preparation and adoption of a Housing Element and Fair Share Housing Plan, which received certification from COAH in 1996. The township has also submitted a housing plan to COAH in December of 2005 to address its low and moderate income housing obligation through 2014.

Goal 8: *To encourage and provide buffer zones to separate incompatible land uses.*

Policy Statement: The township recognizes the need to reinforce the delineation of boundaries separating residential and non-residential uses. Appropriate buffer/screening devices are to be encouraged to separate incompatible land uses in order to minimize adverse impacts on residential and other properties. This should be accomplished primarily within the framework of appropriate open space buffer widths containing suitable planting elements (incorporating such elements as multiple rows of staggered plant material, planting clusters, etc as a means to provide suitable buffer protection), with supplemental fencing when appropriate.

Goal 9: *To discourage the creation of flag lots in the township.*

Policy Statement: The township maintains that flag lots represent an improper land use arrangement which results in over utilization of property, and represents a development pattern which hinders emergency service access to such lots.

Goal 10: *To encourage new development, and redevelopment, to take into account the aesthetic character of the community, in an effort to enhance the visual and aesthetic appearance of the municipality.*

Policy Statement: The township recognizes that the visual and aesthetic character of a community includes the type and design of landscape elements that comprise development sites. The township's site plan review process shall actively encourage developments, and redevelopments, which incorporate the highest quality of aesthetic elements to enhance the visual character of the community. Landscaped areas are encouraged on the street frontages of commercial properties located along roadway corridors, as are landscaped features within parking lots, foundation plantings, and perimeter plantings.

Goal 11: *To preserve and enhance the township's retail commercial areas by defining their functional role in the community.*

Policy Statement: Rockaway is characterized by a variety of retail commercial districts that are clearly distinguished from each other. The community contains a regional shopping center, small neighborhood facilities serving the daily needs of the residents, and some highway commercial development. It is the policy of the community to acknowledge the regional mall and its environs as a regional center pursuant to the State Plan. It is also the township policy to encourage the consolidation of development along the Route 46 corridor to facilitate a comprehensive approach to a unified and integrated development that serves to limit the number of curb cuts and conflicting turning movements on this roadway. The community's local neighborhood commercial areas should be acknowledged to be able to accommodate limited commercial uses and levels of development, while protecting adjoining residences.

Within this framework, the Plan encourages the continued improvement of the community's commercial areas for retail and service commercial uses. This should be achieved within a manner that protects and promotes the physical and aesthetic character of the community's commercial areas. Consideration should be given to design features that enhance the physical character of the community, and encourage the integration of building, parking, landscaping and signage elements into a comprehensive and unified framework.

Goal 12: *To establish conservation easements around abandoned mine shafts and primary aquifer areas.*

Policy Statement: The township recognizes the need to establish conservation easements around mine shafts and primary aquifer areas as a means to protect these physical features and protect future development. Consequently, the township policy shall be to establish a minimum 150-foot conservation easement around these features as a means to protect the public health and safety, and to impose a reduced intensity over primary aquifer areas.

Goal 13: *To promote a sidewalk master plan in selected areas of the community.*

Policy Statement: The township recognizes the need to provide sidewalks in certain heavily traveled areas of town to improve pedestrian safety. Consequently, it is the policy of the township to identify those corridors that are appropriate for sidewalk construction. In addition, the township is encouraged to establish a sidewalk fund, which will allow developers to contribute to the fund in lieu of building sidewalks in their developments, thereby directing funds to where they are needed most.

Goal 14: *To promote the conservation of energy and the use of renewable energy sources whenever possible as the township develops.*

Policy Statement: The township recognizes the need to encourage the use of alternative energy sources as a means to conserve non-renewable resources. As such, the township policy shall be to establish an ordinance to protect the potential use of solar energy for homeowners and renters in Rockaway. This will be accomplished by permitting solar energy collectors as an accessory

use in all of the township's zone districts.

Goal 15: *To support Picatinny Arsenal's retention as an armament research, development and engineering center, and participate in its efforts to establish a development plan to utilize its underdeveloped and underutilized assets to create a public/private partnership to provide development within the Arsenal, provided that such development complements and reinforces the Township's overall approach to land use, environmental, traffic, and related planning issues.*

Policy Statement: The township recognizes that Picatinny Arsenal represents a substantial economic/employment attribute that provides a variety of benefits to the region, and consequently supports the Arsenal's efforts to reinforce its position as a necessary component of the Department of Defense. However, it is also recognized that the Arsenal's plan to use the site's underdeveloped and underutilized assets to create revenue as a means to maintain and enhance Picatinny's aging infrastructure, resulting in increased development within the Arsenal for armament-technology based uses, has significant land use implications for Rockaway Township. Picatinny's site constraints include substantial wetland and steep slope areas, endangered species, and 175 superfund sites, as well as areas set aside for unexploded ordnance and explosive safety zones. Development impacts associated with these environmental issues, overall intensities-of-use, traffic and circulation planning, as well as the impact of potentially lost ratables as prospective technologically-based uses occupy land within Picatinny instead of locating to the township's corporate office parks need to be explored with Picatinny representatives.

Goal 16: *To support the overall philosophy of the Highlands Water Protection and Planning Act.*

Policy Statement: The township supports the designation of the municipality as a planning area wherein future growth is encouraged in proximity to existing infrastructure and facilities to the extent and intensity as provided for herein. Future growth in the community is encouraged to be sensitive to environmental constraints, and existing uses that adversely affect the environment are encouraged for elimination.

Goal 17: *To support the overall philosophy of the State Development and Redevelopment Plan (SDRP) as a means of providing growth management on a state-wide basis while retaining the principles of home-rule.*

Policy Statement: The township maintains that the general intent of the SDRP, to manage growth within the framework of an assessment of needs and infrastructure capabilities, and the SDRP's specific planning area designations for Rockaway Township (except where inconsistent with the township plan), represents a reasonable approach to growth management.

LAND USE PLAN

The Rockaway Township Land Use Plan indicates the proposed location, extent and intensity of development of land to be used in the future for varying types of residential, commercial, business, office, recreational and other public and semi-public uses.

The Plan is intended to guide the future development of the community for the next six-year period in accordance with the provisions of the Municipal Land Use Law, in a manner that protects the public health, safety and general welfare. This plan is designed to serve as the basis for revisions to the township's land use ordinances.

The township plan is based on ten land use categories and two overlay designations, as shown on the accompanying land use plan maps. These classifications do not differ substantially from those designated in the community's prior master plan, although some modifications are suggested. The classifications are described as follows:

Single-Family Residential

The Single-Family Residential land use category is designed to identify the locations where detached single-family residential development may occur. This category is composed of three land use sub-categories. The first is identified as the Very Low Density Residential category, which encompasses the portion of the township which is in the R-20 Acre, R-5 Acre, and R-88 (two acre) districts. The second sub-category is the Low Density Residential land use category, which is co-terminus with the township's R-20 zones. Finally, the third sub-category is the Moderate Density Residential land use category, which is co-terminus with the township's R-13 zones. Each of these land use classifications are identified as follows:

1. Very Low Density Residential

The Very Low Density Residential land use category encompasses the northerly half of the township, roughly following the boundaries of the Highlands Preservation Area, which is shown on the accompanying map (see the Open Space Plan Element of this document for a description of the Highlands Water Protection and Planning Act). Properties in these areas are generally characterized by excessive woodland and are typically constrained by such environmental conditions as steep slopes, wetlands and stream corridors. Private wells and septic systems serve most of the properties.

This area includes property within the State Plan's Environmentally Sensitive Planning Area (PA-5), which is characterized by large contiguous areas of land that contain valuable ecosystems, natural resources and wildlife habitats. As such, much of the land located within the Very Low Density Residential category is either undeveloped or is sparsely developed with single-family residential uses that are rural in character. In addition, this area contains a large number of properties either already designated for open space/conservation use or proposed for such use in the Open Space Plan Element of this document. It is recommended that these properties be subject to the standards of the Very Low Density Residential category, as well as those of a Conservation Overlay District. This is discussed in more detail below.

The area's environmental constraints and the State Plan's complementary designation for open space use affirms the propriety of a low intensity land use designation, which protects this environmentally sensitive section of the community. The following offers a brief overview of the zone districts that comprise the Very Low Density Residential use category:

- a. *R-20 Acre Residential:* The R-20 Acre Residential Zone was established in the 1992 Master Plan in an effort to afford greater protection to those environmentally critical areas theretofore zoned for 88,000 square-foot lots. It includes watershed lands owned by Jersey City and Newark, Farney State Park, as well as various private or semi-public camp areas. In addition to permitting recreational and open space activities, this zone permits single-family detached residences on a minimum lot size of twenty acres. The R-20 Acre zone district contains approximately 5,500 acres, representing nearly twenty percent of the township's total area and a significant portion of the lands designated for conservation. This zone is situated in the Highlands Preservation area, and therefore any development must adhere to the provisions of the Highland Act.
- b. *R-5 Acre Residential:* Like the R-20 Acre zone district, the R-5 Acre Residential Zone was established in the 1992 Master Plan out of the undeveloped portions of the R-44 and R-88 zones. This zone is located in the central portion of the township, just north of the White Meadow Lake area and west of Meriden Road, and also in the northern portion of the township, to the north and east of Green Pond. It is designed for single-family detached residences with a minimum lot size of five acres and includes many existing open space/conservation areas, such as Wildcat Ridge and the Lake Denmark Road NJDEP sites. The R-5 Acre zone would allow clustering of lots on a minimum lot area of 43,750 square feet within the framework of a planned development, but with no increase in density. Open space areas created by cluster development are required to be reserved and retained as undeveloped acreage or used for recreational use consistent with an open space character. The preserved open space in cluster developments should take into account and incorporate environmentally sensitive areas in order to implement the goals of this plan regarding environmental preservation.
- c. *R-88 Residential:* The R-88 Residential Zone is located in the northern portion of the township, to the south and east of Green Pond, as well as in the eastern portion of the township, near the borders of Denville and Boonton Townships. The areas designated for R-88 Residential use contain lots that have already been developed to a large extent or have received development approval at densities consistent with the current R-88 zone regulations. The zone is designed for single-family detached residences on minimum two-acre lots. Large subdivisions are permitted to develop under a cluster option, requiring one-acre lots at no increase in density, and also requiring reservation of open space for conservation or recreational use. The preserved open space in cluster developments should take into account and incorporate environmentally sensitive areas in order to implement the goals of this plan regarding environmental preservation.

2. Low Density Residential

The areas designated for Low Density Residential development coincide with the R-20 Residential Zones. These zones are located in three areas of the township: an area extending from the north side of Route 80 to just beyond Mt. Hope Road, the Fleetwood area, and a small area along Meriden Road. The R-20 Zone is designed for single-family detached residential use on a minimum lot size of 20,000 square feet and, for the most part, these areas are already developed. Residential cluster development is also permitted on lots with a minimum area of 17,500 square feet, with no increase in density, provided that the resulting acreage is retained as a permanent open space amenity.

3. Moderate Density Residential

The areas designated for Moderate Density Residential development coincide with the R-13 Residential Zones, which are located throughout the township and include the majority of Rockaway's single-family dwellings. Specifically, the R-13 zones comprise those areas adjacent to the Town of Dover and Rockaway Borough, White Meadow Lake, Lake Telemark/Hibernia, and Green Pond. The zone is designed for single-family detached residential use on a minimum lot size of 13,125 square feet.

The planning board recognizes that, while the municipality has placed the White Meadow Lake area in the R-13 zone, many of the lots do not comply with this zone's area requirements. However, the board hereby reaffirms the need to require a minimum 13,125 square foot lot in this area – regardless of the fact that the area may be typified by a somewhat smaller lot arrangement – due to the area's congested character and narrow winding streets with poor road alignment, recognition of the fully developed nature of this area, and the realization that each new subdivision of land creates additional undersized lots which add to the congested character, adversely impacting the quality of life in this area.

The board also acknowledges that, in Green Pond, a number of dwellings are situated on the interior or lake side of the road, which extends around the lake, while their septic systems are located on the other side of the road, on a different lot. The board hereby reaffirms that this is acceptable, given the character of the lots and the environmental factors that impact development in this area.

Attached Multi-Family Residential

This land use category includes those areas in the township designated for attached residential development. It includes conventional high-density townhouse and multi-family sites, lower income housing developments, and housing specifically designed for adults and the elderly. The Attached Multi-Family Residential category consists of five zone districts, all of which are located in the southern portion of the township and described in more detail below. It is noted that the OR-3 Office Residential Zone also consists of a significant multi-family component; however, this zone is described under the Office land use category.

- a. *RMF-5 Multi-Family Residential:* The RMF-5 Zone was created in the 1992 Master Plan

in an effort to break down the township's former RMF Zone into densities that more closely reflected the variety of multi-family development patterns throughout the community. The RMF-5 Zone is designed for single-family attached and/or multi-family residential use at a maximum density of five dwelling units per acre. It includes an existing townhouse development on the southerly side of Sanders Road.

- b. *RMF-8 Multi-Family Residential:* The RMF-8 Zone was also created in the 1992 Master Plan from the former RMF Zone and is designed for single-family attached and/or multi-family residential use at a maximum density of eight dwelling units per acre. Most of the land in this zone has already been developed for townhouses and/or multi-family housing. These developments include Townsquare Village, Rustic Ridge, Mountain View Manor, The Point at Stoneview, the Morris County affordable housing development on Green Pond Road, and the senior citizen housing project on the north side of Mt. Pleasant Avenue.
- c. *RMF-15 Multi-Family Residential:* The RMF-15 Zone was the third former-RMF zone to be created in the 1992 Master Plan. The zone is comprised of three sites that have already been developed for multi-family residential use: Crestview Apartments, Rockaway Gardens, and apartments along Dover-Rockaway Road. The RMF-15 Zone, which is designed for multi-family dwellings or single-family attached dwellings at a maximum density of fifteen dwelling units per acre, is intended to recognize the existing development on these sites.
- d. *OR1-EH Office/Residential/Elder Housing:* The OR1-EH Zone was established in the 1999 Reexamination Report and is designed to encourage development of housing for residents minimally age fifty-two, senior housing and continuing care facilities to address the housing needs of the area's aging population. In addition, a limited range of ancillary commercial activities, including offices, banks, restaurants and conference centers/hotels, are permitted in this zone. The OR1-EH zone encompasses a specified area at the northeast corner of Route 80 and Mt. Hope Avenue. This tract was specifically chosen due to its particular location, which impacts its suitability for detached single-family residential use, and its extensive environmental constraints, which serve to limit the tract's overall development potential and prospective intensity of use. The Fox Hills active adult retirement community occupies the majority of this zone, while additional parcels are proposed for open space conservation.
- e. *AR-AH1 and AR-AH2 Age-Restricted Affordable Housing:* The AR-AH Zones are designed to address the township's affordable housing obligation through the provision of age-restricted housing that includes a set-aside for affordable units. It is recommended that adequate buffers to protect neighboring residences be a requirement of any development proposal in these zones. The AR-AH1 zone, which permits a maximum density of eight units per acre and requires a minimum 13.6 percent set-aside for low and moderate income households, is part of the township's 2005 Housing Element and Fair Share Plan. It encompasses Block 22401 Lot 3.06, which is located at the westerly end of Commons Way, a long cul-de-sac street extending off of Green Pond Road. The AR-AH2 zone permits a maximum density of four units per acre and requires a minimum 20

percent set-aside for low and moderate income households. It encompasses Block 22401 Lot 1.01, which is located along Green Pond Road just north of Sanders Road. This property, which was formerly designated for a commercial planned village center, contains a number of environmental constraints along its frontage and is therefore more oriented to neighboring residential properties to the rear of the site than Green Pond Road's commercial corridor. As such, low density multi-family housing is seen as a more compatible use on this site and should be designated as such.

Commercial

The Commercial land use category is designed to identify the locations where a variety of commercial developments may occur. This category is further refined into two land use sub-categories. The first is identified as the Retail and Service Commercial category, which encompasses those areas of the township located in the B-1, B-2 and RP districts. The second sub-category is the Regional Shopping category, which is co-terminus with the township's R-B zone. Each of these land use classifications are identified as follows:

1. Retail and Service Commercial

This land use category is intended to address the retail sales and services that support the local community's daily needs. The following offers a brief overview of the zones that comprise the Retail and Service Commercial category:

- a. *B-1 Neighborhood Business:* The B-1 Zone consists of small retail and service commercial establishments and small professional office uses that serve the neighborhood level. These commercial areas are characterized by small lot arrangements with modest-sized buildings, which are readily accessible to the surrounding neighborhoods. This zone encompasses several areas throughout the township, including a number of sites along Green Pond Road, small areas in the White Meadow Lake and Mt. Hope neighborhoods, and a small area at the intersection of Mt. Hope and Mt. Pleasant Avenues.

The township is cognizant of the fact that these small commercial areas are often developed in close proximity to residential development. Consequently, it is appropriate for the township to establish a planning framework within which these areas may be enhanced to ensure that any prospective developmental impacts on the surrounding neighborhoods are minimal. This plan encourages the rehabilitation and upgrading of buildings and sites including the use of enhanced landscape and buffer features to improve the physical relationship of these commercial uses and the adjoining residences, facade improvements, the adaptive reuse of older buildings to complementary land uses which minimize impacts on adjoining residences, the provision of buffer/screening elements to separate the commercial activity from adjoining residential development, the imposition of uniform signage designed to reinforce a business district identity, and common access and parking areas to improve vehicular safety and increase the availability of parking to serve customers.

- b. *B-2 Highway Business:* The B-2 Zone is designed to accommodate retail sales and services oriented to nearby neighborhoods as well as permit a broader range of business uses, such as wholesale activity, storage facilities, and lumber yards. This land use designation is applied to two areas in the southernmost portion of the township: one located along Route 15 adjacent to the Dover and Wharton municipal borders, and the other along Route 46 near the Borough of Rockaway. The plan's intent is to encourage the same physical improvements referenced for the neighborhood district, and also encourage vehicular linkages between abutting parking lots which will allow vehicular movement between stores without the need for vehicles to enter the public right-of-way, thereby reducing the number of potentially conflicting turning movements on the roadway network.

- c. *R-P Residential Professional:* The R-P Zone is designed to permit professional office development, while also allowing existing residential uses to continue within the standards of the R-20 Residential Zone as well as home occupations and the conversion of residences to professional office use. This zone encompasses areas along Green Pond Road in the vicinity of Sanders Road, as well as an area along Route 15.

2. Regional Shopping

The Regional Shopping category is intended to serve as the focal point for regional needs-type shopping in Rockaway. This land use category encompasses the Rockaway Townsquare Mall property on the south side of Route 80, which is located within the R-B Regional Business Zone district. This zone is designed for the mall operation, as well as for the various retail and office establishments that are located in close proximity to the mall, but are located outside of the mall ring road.

Office

The office land use category is designed to encourage business, professional and administrative office uses, as well as accommodate research laboratories. They include the following zone districts:

- a. *O-1, O-2 and O-3 Office:* Each of these zones is located in relatively close proximity to the regional mall, and designed to contribute to a regional town center character. They encompass two areas in the southern portion of the township near Route 80 and the Rockaway Townsquare Mall, to the east and west of the mall. The O-1 Zone is designed to accommodate development on a minimum five acre lot. A maximum fifty-foot building height is to be permitted. The O-2 Zone also requires a five acre building lot, but its building height is increased to one hundred feet in recognition of its particular position farther from residential development. Finally, the O-3 Zone also requires a five acre building lot, but its building height is reduced to a maximum of 25 feet. It is situated on the east side of Mt. Hope Avenue, opposite the Mall and adjacent to the O-1 Zone. The land use plan provides that any development of this tract require access from Mt. Hope Avenue and include a prohibition of direct vehicular access to or from Fleetwood Avenue.

- b. *OB-RL Office Building, Research Laboratory:* The OB-RL Zone extends along Green Pond Road, just north of the Denville Township border. It is designed to permit professional, executive and administrative offices, and laboratories devoted exclusively to research, design and experimentation.

- c. *OR-3 Office Residential:* The OR-3 Zone is located in the extreme southwestern corner of the township between Route 80 and Route 15. This zone, which permits multi-family residential development, office and commercial uses, is a part of the township's 1997 certified housing plan. It was also part of the township's 1985 affordable housing court settlement. The Planning Board had granted preliminary approval for this site that would have resulted in 1,600 dwelling units with a twenty percent set-aside for lower income housing, and 95,000 square feet of non-residential floor area. The 1996 housing plan called for a reduction in the number of units to be developed on-site and, through mediation, COAH approved a plan calling for 1,050 dwelling units including one hundred non-age restricted lower income units, and 95,000 square feet of commercial development. It is included in the 2005 Housing Element and Fair Share Plan. See that plan for details.

Industrial

The Industrial land use category encompasses those areas within the I Industrial Zone district, which includes sites along Route 80 in the extreme southwestern corner of the township, between Route 80 and Richard Mine Road, along Route 15, along the Rockaway River adjacent to the Randolph Township border, and at various points along Green Pond Road. This zone is designed for limited manufacturing and industrial operations, as well as office buildings, banks and restaurants. It is recommended that, where goods are made which may be sold to the public, the township development ordinance be modified to permit a limited amount of retail development as ancillary uses to the principal use. This would serve to retain the overall character of development that the 1992 Master Plan sought to achieve, while enhancing the business opportunities of the buildings' occupants and facilitating service to the public. A typical regulatory control is to require that no more than fifteen to twenty percent of a building's total floor area may be devoted to retail sales of the product manufactured on-site.

Planned Economic District

This land use category encompasses an area immediately west of Green Pond Road in the southern portion of the township. The purpose of the PED category is to permit office buildings, restricted manufacturing and industrial operations as well as warehousing and wholesale distribution centers. The designation is designed to take advantage of the close proximity of the Route 80 interchange, which facilitates vehicular movements to and from the regional highway network. This category requires a minimum lot area of two acres for these uses.

Government Reservation

The Government Reservation land use category encompasses the Picatinny Arsenal site, which is

home to the United States Army's Armament, Research, Development and Engineering Center (ARDEC). This site covers over 6,270 acres in Rockaway's westernmost section, north of Route 15 and adjacent to Jefferson Township. The majority of Picatinny Arsenal presently lies within the township's R-20 Acre zone district, however a small area in the northeast corner of the site is situated in the R-5 Acre zone district. It is recommended that the municipality establish a federal Government Reservation zone that delineates the Picatinny property and enumerates government uses and research and development activities as permitted uses, provided that in the event the property becomes privatized, it must revert back to the R-20 Acre zone regulations.

Critical Water Resource Overlay

A Critical Water Resource Overlay is applied to several areas in the southern portion of the township, as shown on the accompanying map entitled Land Use Plan 2. The purpose of this overlay is to protect the township's most valuable and vulnerable water resources. As such, the overlay restricts impervious coverage on all properties within the district to forty-five (45) percent, regardless of the property's underlying zone regulations.

Conservation Overlay

It is recommended that the municipality establish a Conservation Overlay district encompassing the township's most environmentally sensitive lands. The accompanying map entitled Land Use Plan 2 identifies these lands, including those properties that have already been acquired for permanent recreation or open space use, as well as those properties proposed for open space acquisition in the Open Space Plan element of this document. Both categories are described in more detail below:

1. Existing Conservation

In total, approximately 11,000 acres of Rockaway Township are already dedicated to open space and recreation, comprising just over 38 percent of the township's total area. As previously noted, the majority of these lands are located in the Very Low Density Residential sections of the community. The accompanying table identifies each of these properties, as well as their ownership, acreage and associated zone district, as recommended herein.

2. Proposed Conservation

The Open Space Plan Element of this document examines additional parcels throughout the township that are appropriate to be considered for open space acquisition. After assessing each parcel for such factors as environmental constraints, ease of acquisition and recreation use potential, priority rankings were assigned based on each parcel's relative desirability for open space. The reader should refer to this section for a detailed list of the included parcels.

Table 20
Dedicated Open Space and Associated Zone Districts
Rockaway Township, New Jersey

Block	Lot	Name	Ownership	Acres	Zoning
10001	2.01	Mt. Hope Pond	Township	86.83	R-5 Acre
10001	3	Mount Hope	County	362.82	R-5 Acre
10715	20	Rustic Ridge Border	Township	3.50	R-13
11101	44	Peterson Memorial Field	Township	22.60	R-20
11207	1	Park Lake Gazebo	Township	5.01	R-13
11301	77	Rt. 80 Park	Township	7.79	R-20
20001	3	Wildcat Ridge	State	440.90	R-5 Acre
20001	5.03	Faesch House	Township	2.02	R-5 Acre
20001	6	Mount Hope	County	76.96	R-5 Acre
20401	11	Vacant	Township	1.60	R-13
21401	11, 97, 98	Sherbrook at Rockaway HOA	Private/Semi-Public	12.68	R-13
21401	58	Easement to Sherman Park	Township	0.41	R-13
21401	65, 96	Sherman Park	Township	8.99	R-13
21403	9, 10, 11	Sherbrook at Rockaway HOA	Private/Semi-Public	4.06	R-13
21801	29.01	Willow Park	Township	0.21	R-13
22203	7	Trail Segment	Township	2.80	OB-RL / I
22309	1, 4, 5	Wildcat Ridge (Hibernia)	State	6.00	R-13
22310	7	Wildcat Ridge (Hibernia)	State	0.52	R-13
22311	6	Wildcat Ridge (Hibernia)	State	0.28	R-13
22312	1	Wildcat Ridge (Hibernia)	State	0.38	R-13
30001	1	Wildcat Ridge	State	998.93	R-5 Acre / B-1
30001	1.02	Public Service Elec & Gas	Utility Easement	40.50	R-5 Acre
30001	7	Wildcat Ridge	State	2.90	R-5 Acre
30001	8.02	Unknown	State	10.00	R-5 Acre
30001	9	Wildcat Ridge	State	1.13	R-5 Acre / B-1
30001	10, 11	Wildcat Ridge	State	36.92	R-5 Acre
30001	19	Morris Conservation Area	Private/Semi-Public	1.75	R-88
30001	22	Morris Conservation Area	State	294.36	R-5 Acre
30101	1	Lake Ames Park	Township	285.73	R-5 Acre
30101	3	Camp Hudsonia Park	Township	82.84	R-5 Acre / R-88
30201	1	Wildcat Ridge	State	155.93	R-5 Acre
30201	23	Unknown	State	40.71	R-5 Acre
30201	24	State Open Space	State	7.00	R-5 Acre
30201	26	State Open Space	State	14.00	R-5 Acre
30201	28	Wildcat Ridge	State	50.78	R-5 Acre
30201	29	Wildcat Ridge	State	25.74	R-5 Acre
30201	30	Wildcat Ridge	State	21.02	R-5 Acre
30201	32	Wildcat Ridge	State	4.33	R-5 Acre
30201	35	Wildcat Ridge	State	11.58	R-5 Acre
30201	36, 44	Wildcat Ridge	Township	105.00	R-5 Acre
30201	39	Wildcat Ridge	State	18.20	R-5 Acre
30201	39.01	Wildcat Ridge	Township	8.60	R-5 Acre

Block	Lot	Name	Ownership	Acres	Zoning
30201	39.02	Wildcat Ridge	Township	3.90	R-5 Acre
30201	40	Wildcat Ridge	Township	1.00	R-5 Acre
30201	41	Wildcat Ridge	State	41.75	R-5 Acre
30201	43	Wildcat Ridge	State	44.41	R-5 Acre
30201	45	Wildcat Ridge	State	0.97	R-5 Acre
30201	46	Wildcat Ridge	State	2.69	R-5 Acre
30201	47	Wildcat Ridge	State	1.08	R-5 Acre
30201	48	Wildcat Ridge	State	0.45	R-5 Acre
30201	49	Wildcat Ridge	State	0.76	R-5 Acre
30201	50	Wildcat Ridge	State	0.93	R-5 Acre
30201	51, 52	Wildcat Ridge	State	5.92	R-5 Acre
30201	53	Wildcat Ridge	State	10.00	R-5 Acre
30601	3	Passaic River Coalition	Private/Semi-Public	2.14	B-1
30605	1	Unknown	State	1.50	B-1
30605	2	Unknown	State	0.38	B-1
30701	39.11	Oak Meadows Field	Township	14.32	R-88
30701	39.36, 39.37	Sammis Donation (Oak Meadows)	Township	52.61	R-88
30701	44	Sasso	Township	69.49	R-88
30801	37, 38	World Ecosystems Inc. c/o P. Prall	Private/Semi-Public	19.00	R-88
30801	48, 48.39	Meriden Heights HOA	Private/Semi-Public	38.53	R-88
31001	7, 9	Wildcat Ridge	State	60.68	R-5 Acre
31001	8	Public Service Elec & Gas	Utility Easement	3.80	R-5 Acre
31001	12	Jersey City Division of Water	Jersey City	54.10	R-5 Acre
31001	13, 14, 27, 28, 34, 37, 38	Koehler Property	State/Township	527.92	R-5 Acre / R-88
31001	15	Morris Land Conservancy	Private/Semi-Public	60.69	R-5 Acre
31101	3-10	State Open Space	State	4.64	R-88
31101	35	Morris Land Conservancy	Private/Semi-Public	65.00	R-5 Acre
31101	63	State Open Space	State	25.00	R-5 Acre
31101	70	Wildcat Ridge	State	33.20	R-5 Acre
31101	74.03	Wildcat Ridge	State	2.52	R-5 Acre
31101	75, 18, 16	State Open Space	State	14.20	R-5 Acre
31101	76	Wildcat Ridge	State	26.95	R-5 Acre
31101	77	State Open Space	State	13.30	R-5 Acre
31101	78	State Open Space	State	7.50	R-5 Acre
31101	79	Wildcat Ridge	State	96.97	R-5 Acre
31101	80	Wildcat Ridge	State	150.45	R-5 Acre
31101	81.20, 81.21	Rockaway Hills HOA	Private/Semi-Public	22.65	R-88
40701	1, 2	Lake Denmark Rd Area	State	69.18	R-5 Acre / R-88
40701	12	State Open Space	State	33.24	R-5 Acre / R-88
40701	13	State Open Space	State	64.46	R-5 Acre
40701	15-18, 20	Lake Denmark Rd Area	State	60.86	R-5 Acre / R-88
40701	19, 19.01, 19.02	Trail Segment	County	7.92	R-5 Acre
40701	24	Unknown	State	25.00	R-5 Acre
40701	25, 26, 41, 42	Wildcat Ridge	State	228.80	R-5 Acre
40701	29, 29.01	Copperas Tract	Township	11.44	R-88
40701	60-63	Egbert's Lake	Township	76.70	R-5 Acre / R-88

Block	Lot	Name	Ownership	Acres	Zoning
40701	93	Green Pond Golf Club	Private/Semi-Public	60.00	R-5 Acre / R-88
40701	94	State Open Space	State	10.00	R-5 Acre
40701	132, 132.16, 132.25	Cypress Estates HOA	Private/Semi-Public	30.73	R-5 Acre / R-88
40701	133	Lake Denmark Rd Area	State	26.00	R-5 Acre
40701	134	Lake Denmark Rd Area	State	0.65	R-88
40701	139	Lake Denmark Rd Area	State	8.49	R-5 Acre / R-88
40701	155	Lake Denmark Rd Area	State	30.06	R-5 Acre
40801	92, 94	Rockaway Compost Site	Township	230.75	R-5 Acre
40801	93	Railroad Bed	County	8.79	R-5 Acre / R-88
40802	3	Marcella Field	Township	3.72	R-88
40901	5	Merner Property	County	64.28	R-5 Acre
40901	10	Newark Water Department	Newark	121.40	R-20 Acre / B-1
40901	10.01	Murray Property	County	40.79	R-5 Acre
40901	11, 13	Craigmeur Property	County	28.98	B-1
40901	14	Newark Water Department	Newark	6.00	R-20 Acre
40901	16	Newark Water Department	Newark	4.00	R-20 Acre
40901	27, 28	Newark Water Department	Newark	35.13	R-20 Acre
50001	1	Jersey City Division of Water	Jersey City	718.20	R-20 Acre
50001	2, 13, 14	Farney State Park	State	737.84	R-20 Acre
50001	3, 6, 7	Boy Scouts of America	Private/Semi-Public	393.00	R-20 Acre
50001	4, 9	NJ Camp for the Blind	Private/Semi-Public	163.50	R-20 Acre
50001	15, 17	Newark Water Department	Newark	583.30	R-20 Acre
50001	16	Railroad Bed	County	14.40	R-20 Acre
50001	18	Jersey City Division of Water	Jersey City	141.10	R-20 Acre
50003	19, 20	Jersey City Division of Water	Jersey City	450.62	R-20 Acre
50003	22	Newark Water Department	Newark	95.50	R-20 Acre
50101	2	Boy Scouts of America	Private/Semi-Public	7.46	R-88
50101	11	State Open Space	State	21.27	R-88
50101	21.01	Unknown	State	188.00	R-20 Acre
60001	1	Farney State Park	State	75.50	R-20 Acre
60001	2, 9, 21, 23, 24	Newark Water Department	Newark	1387.90	R-20 Acre
60001	3	Railroad Bed	Township	7.60	R-20 Acre
60001	20	Newark Water Department	Newark	19.10	R-5 Acre
60001	22	Trail Segment	Township	19.80	R-20 Acre
60101	14	NJ Camp for the Blind	Private/Semi-Public	9.50	R-5 Acre

IMPLEMENTATION

It is recommended that the township’s Development Ordinances be amended to address the modifications that result from the land use plan recommendations.

Recommended Rezoning

A number of properties are recommended for rezoning in order to implement the recommendations set forth in the land use plan. These zoning amendments are illustrated in the accompanying Recommended Zoning map and in the table below.

**Table 21
Sites Recommended for Rezoning**

Block	Lot	Existing Zone District	Proposed Zone District
10001	1	R-40	R-5 Acre
10001	2		
10001	2.01		
11403	40 (partial)		
20001	5.02		
20001	5.03		
10001	3	R-20 Acre	R-5 Acre
20001	3	B-1 (partial)	R-5 Acre
20001	5.01	M	R-5 Acre
20001	5.05 (partial)		
20001	5.06		
22104	11	PED	I
22401	1.01	PED	AR-AH2
22401	3.06	PED	AR-AH1
22401	1.02	PED	R-P
30001	13	PED	R-5 Acre
30001	14 (partial)		
30001	22	R-88	R-5 Acre
70001	1	R-20 Acre & R-5 Acre	GR
70001	2	R-20 Acre	GR
70001	3		
70001	4		
70001	4		

Recommended Ordinance Amendments

A number of ordinance amendments are proposed to protect the township’s environmentally sensitive features. The township’s current ordinances should be revised to include these recommended amendments, which are as follows:

1. Proposed steep slope ordinance (see Pages 50-56).
2. Proposed tree protection ordinance (see Pages 57-67).
3. Proposed stream corridor ordinance (see Pages 68-69).
4. Proposed wetlands ordinance (see Page 70).
5. Proposed solar energy ordinance (see Page 71).
6. Critical features ordinance. During the pendency of the plan, the township adopted a critical features ordinance in order to protect the community's most environmentally sensitive areas. For comprehensiveness, this ordinance is included herein (see Pages 72-74).

Ordinance #1 Steep Slope Ordinance

X-1 Purpose

The purpose of this article is to preserve critical slope areas in the Township of Rockaway. These regulations are necessary to minimize the adverse impacts commonly associated with disturbance of steeply sloped areas, which are defined for the purposes of this chapter as a slope of minimally 15%. Development on grades of 15% or greater generally requires additional safeguards against erosion, and other conditions such as siltation, surface water runoff and pollution of potable water supplies. The most appropriate method of alleviating such conditions is through the regulation of disturbance to soil and vegetation in critical slope areas. Such regulation promotes the public health, safety and welfare of Rockaway.

X-2 Definitions

The following definitions are applicable to this article:

Critical Slope Area- Land where the grade is 15% or greater.

Disturbance- Any alteration or change to the natural terrain (including soil and vegetation). This term includes any activity involving grading or filling of a site, but does not include restoration or stabilization of an existing condition.

Embankment- An elevated deposit of soil, rock or other materials either constructed or natural.

Grade- The percent of rise or descent of a sloping surface. For example, a grade of 15% corresponds to a fifteen-foot vertical change in elevation for every 100 feet of horizontal distance.

Groundcover- Grasses or other vegetation used in the stabilization of soils.

Retaining Wall- A structure constructed and erected between lands of different elevations to protect structures and/or to prevent erosion, and which is minimally four feet in height.

Slope- The deviation of a surface from the horizontal, usually expressed in percent.

X-3 Permit Required

A slope area permit is required for any work or disturbance affecting a slope area, except when the area of the proposed work or disturbance:

- A. Contains slopes less than 10%, nor any slope greater than 15% within 100 feet of the proposed work or disturbance, and the work or disturbance is:
 - a) Soil disturbance of 5 cubic yards or less,
 - b) Change in impervious ground cover of 200 square feet or less,
 - c) Removal of 5 trees or less, having a circumference of up to 20 inches each,

- measured at 4 feet above the ground,
- d) Removal or disturbance of vegetation covering 200 square feet or less,
- B. Contains slopes less than 15%, nor any slope greater than 20% within 100 feet of the proposed work or disturbance, and the work or disturbance is:
- a) Soil disturbance of 3 cubic yards or less,
 - b) Change in impervious ground cover of 100 square feet or less,
 - c) Removal of 3 trees or less, having a circumference of up to 20 inches each, measured at 4 feet above the ground,
 - d) Removal or disturbance of vegetation covering 100 square feet or less.
- C. Contains slopes greater than 15% and the work or disturbance is:
- a) Soil disturbance of 1 cubic yard or less,
 - b) Change in impervious ground cover of 25 square feet or less,
 - c) Removal of 1 tree, having a circumference of up to 20 inches measured at 4 feet above the ground,
 - d) Removal or disturbance of vegetation covering 25 square feet or less.
 - e) All items described in No. 3A, B and C above, represent a cumulative total per lot, per calendar year.

X-4 Inspection for Tree Trimming

In slope areas of greater than 15%, no tree topping to provide a view, protecting adjacent structures or the removal of dead or unhealthy trees shall take place prior to an inspection and a determination as to how much of the tree may be trimmed or what trees may be removed. Such determination shall be the responsibility of the person the Mayor and Council shall designate. The fee for such inspection shall be \$_____.

Where site plan or subdivision approval is also required, the slope area permit review will be performed along with that approval process, and applicant will submit copies of all required information to the Planning or Zoning Board as applicable. Although neither Board can grant or deny a slope area permit (except for an appeal under section xxx) each Board shall consider all plans submitted under this chapter in any application for site plan or subdivision approval affecting a slope area.

X-5 Additions

Additions to a single family residence shall be exempt from the lot coverage, impervious coverage and lot disturbance provisions of the Slope Ordinance if the following conditions exist:

- a) That the size of any one story addition, deck, patio or excavation is less than 200 sq. ft. Soil logs and testing for future sub-surface disposal systems shall not be exempted.
- b) That no slope greater than 10% exists within 20 feet of the area to be disturbed

- c) The Applicant provides plans or a written statement describing soil erosion and stabilization measures that will be used as part of construction.
- d) A final inspection fee of the equivalent of one hour of the Township Engineer's time is posted prior to the issuance of the permit.

X-6 Application for Permit

An application for a slope area permit shall be made to the Rockaway Construction Official. The Application shall include at least:

- A. Property description by Tax Map Block and lot, and by street address if available.
- B. Sketch of location of proposed work or disturbance.
- C. Statement of proposed work or disturbance.
- D. Any other additional information as is reasonably necessary to make an informed decision, including, but not limited to, the items listed below and in Section xxx.
- E. Where site plan or subdivision approval is required, the following exhibits shall also be submitted:
 - a) Topographic map showing existing contours at two- foot intervals.
 - b) Areas clearly identified showing the following, as measured between 10 foot contour lines. Area 1, less than 15%; Area 2, 15% but less than 20%; Area 3, 20% but less than 30%; Area 4, 30% or greater.
 - c) Calculation, in square footage and acres, of amount of area in the various slope categories listed above.
 - d) Extent and erosion potential of exposed soils.
 - e) Length and steepness of slopes.
 - f) Resistance of soil to compaction and stability of soil aggregates.
 - g) High-water table, water infiltration capacity and capacity of soil profile.
 - h) Chemical, physical and biological nature of subsurface soils.
 - i) Type and location of construction activity, including the amount of site grading, and depth of such grading.
 - j) The time period of exposure of erodible soils during construction.
 - k) The area and density of trees, woodlands and forest, within the construction site and on contiguous lands for a distance of 200 feet, or such other distance as deemed appropriate by the Municipal Engineer. All significant tree specimens 4 inches or greater in diameter, measured at 4 feet above the ground; and all other vegetation on slopes 15% or greater shall be indicated on the application plans as well as physically marked on the construction site.
 - l) The extent of impervious surface to be constructed.
 - m) Location of construction access roads.

- n) Calculation of amount of site grading, to include a cut-and-fill balance sheet, including cross sections, and indicating, where applicable, the volume of and source of off-site fill.
- o) Extent of on site erosion sediment control measures, during and after construction and until any affected area is stabilized.
- p) Any other information as is reasonably necessary to make an informed decision.

X-7 Application Review and Standards of Approval

- A. The Municipal Engineer shall review every slope area application to determine whether the proposed work or disturbance may have a detrimental impact, based on the analysis noted below, upon any slope area.
- B. The Municipal Engineer shall approve only those applications where the proposed work or disturbance will:
 - a) Control velocity and rate of water runoff so that such velocity and rate are no greater after construction and development than before, and are within tolerances deemed safe by the Municipal Engineer, and the project or site plan complies with all other provisions of the Township Chapters and Floodplain Chapter.
 - b) Minimize stream turbidity and changes in flow.
 - c) Protect environmentally vulnerable areas.
 - d) Stabilize exposed soils both during and after construction and development.
 - e) Prevent soil slippage.
 - f) Minimize number and extent of cuts to prevent groundwater discharge areas to underlying soils.
 - g) Preserve the maximum number of trees and other vegetation on the site and avoid disturbance of the critical hillside, slope and forest areas.
- C. The Municipal Engineer may impose such conditions upon any approval as said Engineer deems necessary to achieve the purposes of this Chapter. All permanent improvements necessary to achieve the purposes of this Chapter shall be bonded in the same manner as set forth in the Subdivision Chapter and Site Plan Chapter, except that a maintenance bond shall continue for 2 years after complete stabilization.
- D. Any approval may be subject to the condition that, for safety reasons, the applicant provide and adhere to a detailed construction and inspection schedule, copies of which shall be supplied to the Township Construction Official for the purpose of monitoring the progress of the work and compliance with the construction schedule. Said approval may be further conditioned upon submission of periodic certifications by the applicant as to compliance with the construction schedule, and, in the event noncompliance, written assurance as to the nature and time when steps will be taken to achieve compliance with the construction schedule.
- E. If the applicant does not comply with the construction schedule or any other

requirements or conditions attached to the approval of the application, and the Municipal Engineer or the Township Construction Official certifies such lack of compliance, the Township Construction Official shall thereupon revoke approval of the application, after notice to the applicant, and no further work may be performed on such site with the exception for temporary measures necessary to stabilize the soil and to protect the site from stormwater damage or other hazards created by construction activity on the site.

X-8 Lot Size, Development Density, Lot Coverage and Disturbance

To meet the purposes, goals and standards set forth in this Chapter, in areas of slopes greater than 15% the applicable provisions of the Zoning Chapter relating to minimum lot sizes and density of development, and maximum percentage of lot coverage shall be modified, and limitations of maximum impervious surfaces and maximum lot disturbance shall be added.

- A. The minimum lot size shall be determined by multiplying the total land area in various slope categories by the following factors and totaling the results. This modified minimum lot size shall be used as the lot size in density calculations. Slope calculations shall be based on elevation intervals of 10 feet.

<u>Slopes</u>	<u>Factor</u>
30% or greater	0.1
20% but less than 30%	0.2
15% but less than 20%	0.5
less than 15%	1.0

As the result of the computation of the total density allowed, any fractional amount shall be rounded down or truncated to the nearest whole integer. If the total density allowed is less than 1, and prior to this Chapter the lot dimensions met or exceeded the minimum lot size for its zone, than the total density allowed shall be 1.

- B. The maximum lot coverage area shall be determined by multiplying the total land area in various slope categories by the following factors, totaling the results and multiplying the result by the maximum lot coverage percentage allowed for the appropriate zone. Slope calculations shall be based on elevation intervals of 10 feet.

<u>Slopes</u>	<u>Factor</u>
30% or greater	0.25
20% but less than 30%	0.50
15% but less than 20%	0.75
less than 15%	1.00

Where the modified maximum lot coverage area is less than the minimum gross floor area required for the proposed building, the minimum gross floor area required shall be the modified maximum lot coverage area.

- C. The maximum impervious surface area permitted in slope areas shall be determined by multiplying the total land area in various slope categories by the following percentages and totaling the results.

<u>Slopes</u>	<u>Percentage</u>
30% or greater	10%
20% but less than 30%	15%
15% but less than 20%	25%
less than 15%	35%

- D. The maximum lot disturbance shall be no greater than 130% of the maximum impervious surface permitted for the lot.
- E. Setbacks of all structures necessary for slope area stabilization shall be sufficient to allow for any future maintenance that may be necessary.
- F. All land required to be maintained as permanent open space shall be indicated as such on any approved plans.

X-9 Environmental Appraisal and Applicability

- A. When site plan or subdivision is required an environmental impact report or request for waiver shall be prepared. The Municipal Engineer shall review and approve the report in accordance with specifications and procedures required by this chapter.
- B. No application for slope area permit shall be approved unless it has been affirmatively determined, after an environmental appraisal, that the proposed project:
- Will not result in a detrimental impact on the environment, and;
 - Has been conceived and designed in such a manner that it will not significantly impair natural processes.

X-10 Review and Inspections Fees

The initial application filing fee shall be \$_____ plus a review fee, estimated to be the hourly rate for one hour, as set by chapter of the Municipal Engineer. If the review by the Municipal Engineer is not completed in one hour, then the applicant shall be given an estimate of the review cost before proceeding further. The applicant shall deposit with the Township Clerk an amount equal to the estimated review fee as determined by the Municipal Engineer. If additional review fees are required, applicant shall deposit with the Township Clerk an amount equal to the new estimated review fee.

Inspections shall be required before, during stabilization and upon completion of the work or disturbance, during and for 2 years after complete stabilization, or for any other reasonable time, as determined by the Municipal Engineer, to insure the purposes of this Chapter are met. No permit will be issued until a deposit is placed with the Township Clerk equal to the estimated inspection fee, as determined by the Municipal Engineer. If additional inspection fees are required, applicant shall deposit with the Township Clerk

an amount equal to the new estimated inspection fee before any work can continue. The inspection fee deposit account shall remain for 2 years after complete stabilization.

Any deposit accounts shall be maintained at levels sufficient at all times to cover all estimated fees or work may be halted. The Township Clerk will keep the Municipal Engineer aware of account balances as necessary.

X-11 Municipal Liability

The granting of any permit or approval in any slope area shall not constitute a representation, guarantee or warranty of any kind by the Township or by any official or employee thereof of the practicability or safety of any structure, use or other plan proposed, and shall create no liability upon, or a cause of action against such public body, official or employee for any damage that may result pursuant thereto.

X-12 Penalties

In addition to penalties already provided herein, the Court may order any person convicted of violating this Chapter to pay the Township all costs for, and associated with necessary stabilization or corrective measures, as determined by the Municipal Engineer.

X-13 Appeal

The Planning Board shall have the power to hear and decide appeals where it is alleged by the applicant that there is error in any order, requirement, decision (including review and inspection fees) or refusal made by the Township Engineer based on or made in the enforcement of this Chapter. All such appeals under this Chapter from the decisions of the Township Engineer shall be taken within 20 days by filing a notice of appeal with the Township Engineer specifying the grounds of such appeal. The Township Engineer shall immediately transmit to the Planning Board all papers constituting the record upon which the action appealed from was taken. All such appeals shall be heard by the Planning Board upon notice given by the applicant as required herein. The Planning Board may permit, or require, the record on appeal to be supplemented with such documents or other evidence or information as are reasonably necessary to make an informed decision as to whether the requirements of the steep slope ordinance have been met.

Ordinance #2 Tree Protection and Removal Ordinance

X-1 Purpose

Rockaway Township, having found that indiscriminate, uncontrolled and excessive destruction, removal and clear cutting of trees upon lots and tracts of land results in increased drainage control costs, increased soil erosion and sedimentation, decreased fertility of the soil, degradation of water resources, decreased groundwater recharge, increased buildup of atmospheric carbon and increased dust and decreased property values, all of which negatively affect the character of Rockaway.

Rockaway Township, realizing that the removal of trees adversely affects the health, safety and general welfare of our residents, desires to regulate and control indiscriminate and excessive cutting of trees by preserving the maximum possible number of trees in the course of development of a site, ensuring that the health of trees preserved on a site is maintained throughout the development process, protecting larger, older specimens of trees and encouraging innovative design and grading to promote the preservation of existing trees.

It is recognized that there is a strong relationship between the integrity of Rockaway Township and the region's water resources, the development on steep slopes, tree removal, soil disturbance, stormwater management and the general use of land resources. Therefore, the appropriate management of these resources is an important health, safety and general welfare concern.

X-2 Applicability

With the exception of the exemptions set forth in Section 5 of this ordinance, no tree shall be cut or otherwise removed from any lands in Rockaway Township without a tree removal permit. All applications to the Planning Board or Zoning Board of Adjustment for approval of a major subdivision, minor subdivision or site plan requiring tree removal shall include an application for a tree removal permit. Any residential, commercial, business or industrial lot owner wishing to remove trees upon said lot must comply with the Section 8 of this ordinance. The application shall be submitted to (insert appropriate municipal office) for review and approval. No tree that was planted or preserved as part of any landscape plan or in accordance with any street tree requirements approved in conjunction with a subdivision or site plan shall be removed, except for such trees directed to be removed pursuant to Section 5, subsection F, G, H & I.

X-3 Definitions

Board - the municipal agency, either Planning Board or Zoning Board of Adjustment, to which the application for tree removal permit is submitted.

Caliper - Standard measure of tree size for trees to be newly planted. The measurement is taken 6 inches above the ground for trees 4 inches in diameter or less and 12 inches above the ground for trees over 4 inches in diameter.

Clear Cutting - the removal of all standing trees on a lot or a portion of a lot.

Diameter at Breast Height - diameter of a tree measured four and one-half (4 ½) feet (forestry method) above the ground level on the downhill side for existing trees. Diameter at Breast Height may appear as the abbreviation "DBH" (Diameter Breast Height).

Drip Line - a limiting line established by a series of perpendicular drop points marking the maximum radius of the crown of an existing tree, but not less than six (6) feet from the trunk, whichever is greater; and within which no construction or disturbance shall occur.

Replacement Tree - a nursery-grown certified tree, properly balled, marked with a durable label indicating genus, species and variety, and satisfying the standards established for nursery stock and installation thereof, set forth by the American Association of Nurseryman.

Selective Cutting - the removal of larger trees on an individual basis while leaving trees of lesser size.

Silviculture - the management of any wooded tract of land to insure its continued survival and welfare, whether for commercial or noncommercial purposes, pursuant to a plan approved by the New Jersey Bureau of Forestry.

Thinning - the removal of undesirable, competitive, diseased or damaged trees so as to cultivate and improve the development of remaining trees on the lot.

Tree - any self supporting woody plant which reaches a typical mature height of twelve (12) feet or more at maturity and has a typical DBH of four (4) inches or greater.

Tree Canopy - the top layer or crown of mature trees.

Wooded Acres Permitted for Development - means the wooded lands within a lot or tract which are not specifically excluded from development by any federal, state, county or municipal law or ordinance, deed restriction or covenant running with the lands. For purposes of this Ordinance, those lands specifically eliminated from consideration as wooded acres permitted for development include, but are not limited to, wetlands as defined by N.J.S.A. 13:9B-1 et seq.

X-4 Tree Cutting or Removal Restricted

With the exception of the exemptions set forth in Section 5, no person shall cut or remove, or cause to be cut or removed, any existing tree with a diameter at breast height (DBH) of six (6) inches or greater upon any lands within Rockaway Township unless the cutting or removal can be accomplished in accordance with the provisions of this ordinance.

X-5 Exemptions

The following shall be exempt from this ordinance:

- A. Commercial nurseries and fruit orchards.
- B. Christmas tree farms.
- C. Residential lots that are less than two (2) times the minimum required lot size where removal is no more than three (3) trees with a ten (10) inch DBH or less in any two (2) year period.
- D. Residential lots that are greater than two (2) times the required lot size and are removing no more than six (6) trees with a ten (10) inch DBH or less in any two (2) year period.
- E. Any tree which is part of a cemetery.
- F. Trees directed to be removed by municipal, county, state or federal authority pursuant to law.
- G. Removal of trees which are dead, dying or diseased, or trees which have suffered damage, or any tree whose angle of growth makes them a hazard to structures, roads, or human life.
- H. Removal of trees which appear to cause structural damage to buildings or foundations.
- I. Pruning or removal of trees within the right-of-way by utility companies for maintenance of utility wires or pipelines and the pruning of trees within sight easements.
- J. Trees removed in conjunction with farmland greater than five (5) acres in size that will be actively devoted primarily to agricultural uses and that yield a minimum annual income of five hundred dollars (\$500) from said farming activities except that where the owner desires to remove any trees for the purpose of expanding farmlands, an inventory of trees to be removed, identified by size and species, shall be prepared and filed with the (insert appropriate municipal officer) prior to any tree removal. In the event the expanded farmlands are not actively devoted primarily to farming activities for a period of seven (7) years following tree removal, the tree replacement provisions contained in Section 7 shall apply.
- K. Those projects which have received major subdivision or site plan approval prior to the effective date of this Ordinance and amended major subdivision and site plans.

X-6 Tree Removal Requirements for Major and Minor Subdivisions and Site Plans

Each application to the Planning Board or Zoning Board of Adjustment for approval of a major or minor subdivision or a site plan that requires the removal of trees shall include an application for a tree removal permit. The application and development proposal shall conform to the following provisions:

- A. **Application Form** - The application form may be obtained from the (insert appropriate municipal officer) and shall include the following information:
 - a) Name and address (street, lot and block) of the owner of the premises and status of legal entity (individual, partnership, corporation of this or any other state, etc.);
 - b) Description of the premises where removal is to take place, including lot and block numbers, street address as assigned;
 - c) A list of all trees to be removed with a DBH equal to or greater than six (6) inches identified by size and species, including total number of each species to be removed;

- d) Purpose for tree removal (new construction, street or roadway, driveway, utility easement, recreation areas, parking lot, etc);
- e) Proof that there are no delinquent property taxes or assessments due on the property for which the application is submitted; and
- f) Such other information as may be deemed necessary in order to effectively process and decide such application.

B. Landscape Plan - The following information shall be provided on a landscape plan prepared by a Certified Landscape Architect or Registered Professional Engineer and submitted with the application for tree removal. The landscape plan must be submitted prior to tree removal permit approval.

a) Base information

- 1. Location of existing tree canopy within the property boundaries.
- 2. Location of individual trees with a DBH equal to or greater than six (6) inches identified by size and species within the area of development/limit of disturbance.
- 3. Location of individual trees with a DBH equal to or greater than six (6) inches identified by size and species 25 feet beyond the area of development/limit of disturbance.
- 4. Location of individual existing trees and their drip lines noted for preservation within the area of development/limit of disturbance identified by size and species.
Where clusters of trees exist on the site or are contiguous with adjacent sites, fragmentation of the cluster shall be avoided where possible.
- 5. Location of all required replacement trees.
- 6. Clear labeling of the area(s) intended for tree/vegetation removal.
- 7. Tree protection material details and limit of disturbance line.
- 8. Location of existing and proposed buildings/structures.
- 9. All bodies of water and wetlands, including water retention and detention areas.
- 10. Location of all existing driveways and parking areas.

b) Design Requirements

- 1. Only those trees necessary to permit the construction of buildings, structures, streets, driveways, infrastructure and other authorized improvements shall be removed. Existing vegetation shall be preserved to the greatest extent feasible.
- 2. No more than ten (10) percent of existing trees with a DBH equal to or greater than ten (10) inches within the area of development/limit of disturbance shall be removed unless the applicant shall replant trees removed in accordance with Section 7.
- 3. Input from a designated subcommittee of the Board and/or the Shade Tree Committee shall be requested for recommended areas of tree preservation.
- 4. Landscape standards may be waived by the Board when trees and/or shrub masses are preserved and/or relocated on-site that duplicate or essentially

duplicate the landscape requirements contained in this section.

5. The appropriate reviewing authority shall have the option of requiring a conservation easement to protect any or all trees or tree canopy areas to remain on site.

C. Site Protection

- a) Tree protection measures and the limit of disturbance line shown on the landscape plan shall be provided in the field with snow fencing or other durable material and verified by the (insert appropriate municipal officer) or other designated official prior to soil disturbance.
- b) Protective barriers shall not be supported by the plants they are protecting, but shall be self-supporting. Barriers shall be a minimum of four (4) feet high and shall last until construction is complete.
- c) Chain link fence may be required for tree protection if warranted by site conditions and relative rarity of the plant.
- d) Snow fencing used for tree protection shall be firmly secured along the drip line, but shall be no less than six (6) feet from the trunk.
- e) The grade of the land located within the drip line shall not be raised or lowered more than six (6) inches unless compensated by welling or retaining wall methods; and in no event shall welling or retaining wall methods be less than six (6) feet from the trunk of a tree.
- f) No soil stockpiling, storage of building materials, construction equipment or vehicles shall be permitted within the drip line or within six (6) feet of any remaining trees, whichever is greater.
- g) Any clearing within the drip line, or within six (6) feet of the trunk of a remaining tree, whichever is greater, shall be done by hand-operated equipment.
- h) Where a tree that has been noted for preservation is severely damaged and unable to survive, tree replacement shall occur as provided in Section 7.

X-7 Tree Replacement and Reforestation

- A. The replacement of trees shall occur as prescribed in the following table.

Tree Replacement Schedule	
Caliper of Existing Tree Removed	Number of Replacement Trees (3" caliper)
Less than 6 inches	1
Between 6 & 10 inches	3
Between 10 & 18 inches	4
Between 18 & 24 inches	5
Between 24 & 30 inches	7
Between 30 & 36 inches	10
36 inches or greater	The equivalent of 3" caliper trees or greater needed to equal the DBH of the removed tree

- a) Replacement tree(s) shall be of nursery grade quality, balled and burlapped and located on site. Where replacement trees are required but not suitable for the particular site prescribed due to the size of the site, Rockaway Township shall deposit the trees into a community tree bank. Trees deposited into the community tree bank shall be utilized for planting on public lands or public improvement projects.
- b) The type of replacement tree(s) shall be the same as the species removed from the site or other species as approved by the (governing body or designer).
- c) The planting of all replacement trees shall be done by or supervised by a person with horticultural training in tree care and planting methods.
- d) Newly planted replacement trees shall be monitored for a period of one year to ensure the health of the trees. If the replacement trees die within the one year period, the developer/applicant shall replace the dead tree.

X-8 Tree Removal and Protection on Residential, Commercial, Industrial and Business Zoned Lots (excluding major and minor subdivisions and site plans)

- A. **Applicability** - On any residential lot that is less than two times the required lot size with a tree removal rate of five (5) or more trees with a ten (10) inch DBH or greater in a two (2) year period; or, any residential lot that is twice the required lot size or greater with a tree removal rate of more than six (6) trees with a ten (10) inch DBH or greater in a two (2) year period shall submit an application for a tree removal permit to the

(appropriate municipal officer). The application and development proposal shall conform to the provisions contained herein.

B. The provisions of this section shall also apply to all commercial, industrial and business zoned lots.

C. **Application Form** - The application form shall be available from the (appropriate municipal officer) and shall include the following information:

- a) Name and address (street and lot and block) of the owner of the premises and status of legal entity (individual, partnership, corporation of this or any other state, etc.);
- b) Description of the premises where removal is to take place, including lot and block numbers, and street address as assigned;
- c) A list of all trees to be removed with a DBH equal to or greater than ten (10) inches identified by size and species, including total number of each species to be removed;
- d) Purpose for tree removal (construction, building addition, street or roadway, driveway, utility easement, recreation area, patio, parking lot, etc.);
- e) Such other information as may be deemed necessary in order to effectively process and decide such application.

D. **Plan Information**

- a) Base information
- b) A plan shall be provided showing the location of the tree(s) to be removed with a DBH of ten (10) inches or greater.
- c) Design requirement
- d) Trees to be removed shall be those trees necessary to permit the construction of buildings or building additions, structures, driveways, septic fields, decks and lawn areas. Existing vegetation shall be preserved to the greatest extent feasible.

E. **Site Protection**

- a) Site protection measures shall be provided in accordance with Section 6C.

F. Tree Removal Criteria - In addition to the design requirements stated above, the (insert appropriate municipal officer) may grant a tree removal permit based upon one or more of the following circumstances:

- a) Where the location of an existing tree provides no other alternative but to place a structure outside the permitted building setbacks.
- b) Where the location of an existing tree negatively impacts on an existing septic field.
- c) Where no other alternative exists for the placement of a building, building addition, structure, septic field, driveway, deck, patio or lawn area for the recreational use by the inhabitants of the building or dwelling, or any other authorized improvements, but in the vicinity of an existing tree.
- d) Where the location or growth of a tree inhibits the enjoyment of any outdoor pool, patio or deck.
- e) Where the location, angle or growth of an existing tree makes it a hazard to structures or human life.

G. Review by Planning Board - If, in the opinion of the (insert appropriate municipal officer), the request for tree removal does not satisfy the above criteria, then the application may be forwarded to the Planning Board for action.

H. Tree replacement

- a) Tree replacement shall be accordance with the provisions in Section 7 of this ordinance.

X-9 Review Standards

In accordance with the design requirements provided in this ordinance, unless otherwise indicated herein, a tree removal permit may only be granted for the following reasons and under the following terms and conditions:

- A. Where the area proposed for tree removal is to be occupied by: a building or other structure; a street or roadway; a driveway; a parking area; a patio; a swimming pool; a recreation area; a power, drainage, sewerage or any other utility line, easement, or right-of-way, or to the following criteria:
 - a) Within 20 feet of a principal structure.
 - b) Within 10 feet of a pool or pool cabana.
 - c) Within five feet of a driveway or walkway.
 - d) Within five feet of a septic tank or field.
 - e) Within 10 feet of a tennis court or similar recreational facility.

- B. In areas proposed for tree removal which are not to be occupied by any of the uses or facilities set forth in part A of this Section:
- a) That the continued presence of such tree or trees is likely to cause danger to persons or property upon the property for which removal is sought, or upon adjoining or nearby property.
 - b) That the area where such tree or trees are located has a cut, depression or fill of land, or the topography of the land is of such a character as to be injurious or dangerous to such tree or trees, or to tree or trees located nearby.
 - c) That the removal of trees is for the purpose of conducting forestry activities, which activities include, but are not limited to, the harvesting of trees in accordance with a forest management plan and the thinning out of a heavily wooded area, with some trees to be removed, and other trees to remain.
- C. Upon an express finding by the appropriate decisional authority that the proposed tree removal will not result in or cause, increase or aggravate any or all of the following conditions: impaired growth or development of remaining trees or shrubs on the property of the applicant or upon adjacent property, soil erosion, sedimentation and dust, drainage or sewerage problems, dangerous or hazardous conditions, and depression in the land value of the subject property and properties in the neighboring area.
- D. The appropriate decisional authority shall have the power to affix reasonable conditions to the granting of the permit for the removal of trees.

X-10 Protection of Trees

Whenever an application for tree removal is granted under the terms and conditions of this ordinance, the following protective measures shall be observed:

- A. No material or temporary soil deposits shall be placed within the drip line of any existing tree to be preserved.
- B. Except while engaged in tree removal, no equipment shall be operated within six feet of any tree protected by this ordinance nor shall such equipment be operated at any time in such a manner as to break, tear, bruise, decorticate or otherwise injure any living or dormant tree. Except while engaged in tree removal, all requirements of Section 6 shall be observed.

X-11 Permit Approval

A. Time limits for approval

- a) Where the permit application is submitted as a part of an application for major subdivision, minor subdivision or site plan approval, the time for approval shall be

governed by the timing requirements applicable to major subdivision, minor subdivision or site plans.

- b) Where the application is made in connection with a residential, commercial, business or industrial lot that is not part of a major or minor subdivision or site plan, the (insert appropriate municipal officer or body) shall act on the application within thirty (30) days of its receipt or within such additional time as is consented to by the applicant. Failure to act within thirty (30) days, or any extension thereof, shall be deemed to be an approval of the application and thereafter, a tree removal permit shall be issued.
- c) Approval by default with regard to major subdivision, minor subdivision and site plan applications shall not be deemed to be a waiver of a tree removal permit.

X-12 Duration of Permits

Permits granted for the removal of trees under the terms and conditions of this ordinance shall run with the land and shall remain in force and effect for the following periods of time, and not thereafter. Once the permit has expired, a new application must be submitted for review and a new permit issued.

- A. If granted for a lot or parcel of land for which no building permit is required - one year from the date of issuance.
 - a) If granted for a lot or parcel of land for which a building permit is required, but for which no site plan approval is required by the Planning Board, until expiration of the building permit granted with such tree removal permit.
 - b) If granted for a lot or parcel of land for which site plan approval from the Planning Board/Zoning Board is required as a condition precedent to obtaining a building permit - until expiration of the site plan approval, or expiration of the building permit issued after such site plan approval.
 - c) If granted for a lot or parcel of land for which minor subdivision is sought - one year from the date of granting such minor subdivision.
 - d) If granted for a lot or parcel of land for which preliminary approval of a major subdivision is sought - until expiration of such approval.

X-13 Inspection

- A. Prior to taking final action upon any application for tree removal, an inspection of the site shall be made by the (insert appropriate municipal officer, board or committee), in those cases where final determination is to be made by that body as to the granting or denial of an application.
- B. Prior to any tree removal, all trees must be marked and areas to be cleared identified for

inspection by a municipal representative.

- C. The (insert appropriate title) shall periodically inspect the site throughout the duration of construction in order to ensure compliance with this ordinance. Such inspection shall be made of the site referred to in the application, and of contiguous and adjoining lands, as well as of lands in the vicinity of the application, for the purpose of determining drainage conditions and physical conditions existing thereon.

X-14 Notice of Commencement of Tree Removal

- A. The holder of a tree removal permit shall notify the (insert appropriate municipal officer) in writing at least four (4) business days in advance of when the tree removal activity will commence.
- B. The notice shall also include information as to the manner of disposal of the removed trees.
- C. In the case of the removal of dead or diseased trees, the dead or diseased trees shall not be turned into mulch and applied to the site, but shall be disposed of in a manner so as to not disease other trees on site.

X-15 Fees

- A. A review fee of _____ dollars shall accompany the application for tree removal.

X-16 Penalties

When regulated trees are removed without a tree removal permit, the affected areas shall be replanted to the satisfaction of the appropriate municipal authority.

Ordinance #3 Stream Corridor Ordinance

X-1 Scope

These regulations apply to stream corridors as defined below.

X-2 Objective

The purpose of this subsection is as follows:

- A. To protect property from flooding.
- B. To reduce development impacts on water quality.
- C. To protect natural drainage features.
- D. To protect others' rights within the same watershed from adverse effects of improper stream corridor development, and
- E. To provide for possible recreation and wildlife migration corridors.

X-3 Definitions

The following definitions are applicable to this article:

Stream Channel - permanent or intermittent watercourses shown on U.S.G.S. quadrangle maps, the Morris County Soil Survey, or other sources as the Planning Board may deem appropriate.

Category One Streams - those stream channels afforded a heightened level of protection under New Jersey's Surface Water Quality Standards (SWQS) because of their exceptional ecological significance, exceptional water supply significance, exceptional recreational significance, or exceptional fisheries resource.

Stream Corridor - the stream channel and all land on either side of the stream channel which is within the one hundred (100)-year floodplain, or is a sloping area of fifteen (15%) percent or greater that is contiguous to the stream channel or one hundred (100)-year floodplain. A slope shall be identified from an elevation contour plan of a site based on two (2) foot elevation intervals.

Stream Corridor Buffer - an area contiguous with the stream corridor where no permanent structure is allowed.

Stream Corridor Buffer Averaging - the replacing of a curved corridor buffer boundary by a straight line or sequence of joined straight lines so that the total corridor buffer area remains the same.

X-4 Submission Requirements

The following information shall be provided for any development on property containing a stream corridor or buffer, or any property directly bordering on a stream corridor or buffer:

- A. A plan delineating the stream corridors and buffers.
- B. Detailed hydrologic engineering studies indicating the effects on drainage, streams, and adjacent properties, as well as the property in question, which should include the necessary data to determine whether the boundaries of the stream corridor and buffer would be affected if the application were granted.
- C. A plan indicating the disposition of any fill materials proposed to be deposited by the grading or regrading of land.
- D. A plan demonstrating the manner in which suitable techniques, including erosion and soil stabilization measures, sediment traps and nutrient control by vegetation filters or other mechanisms will be incorporated to protect the stream.
- E. If any disturbance is planned to a stream corridor or stream corridor buffer area, or if such has been disturbed by prior land use such as agriculture, a revegetation plan shall be provided.

X-5 Rules

- A. Stream corridors shall have a buffer of fifty (50) feet on each side. However, Category One stream corridors shall have a buffer of three hundred (300) feet on each side.
- B. No septic system shall be located within any stream corridor buffer.
- C. On any major subdivision where a stream corridor buffer has been disturbed by prior land use such as agriculture, revegetation of the disturbed area is required utilizing native tree and plant species. The submitted plan must be approved by the Township Engineer.
- D. An approved application for development on a property that contains a stream corridor or buffer or portion thereof shall provide a conservation easement for the continued protection of the stream corridor or buffer. The conservation easements shall be perpetual, shall name the Township of Rockaway as beneficiary, shall prohibit the erection of any structures including fences and walls, shall be in conformance with Section XXX of these Development Regulations, and shall be confirmed by deed recorded with the County Clerk.
- E. Stream corridor buffer averaging is allowed as long as the width at all points of the averaged buffer is at least seventy (70%) percent of the width of the stream corridor buffer before averaging.

Ordinance #4 Wetlands Ordinance

X-1 Requirements

- A. An onsite wetland delineation shall be prepared by a qualified consultant for submission on any subdivision or site plan if any of the following conditions exist on the applicant's property:
 - a) Hydric or wetland soils as identified in the Morris County Soil Survey.
 - b) Wetlands as identified on the U.S. Fish and Wildlife Service or NJDEP Wetland Maps.
 - c) Onsite vegetation or soil conditions which indicate the probable presence of wetlands.
- B. All wetlands and transition areas required pursuant to N.J.A.C. 7:7A-1 et seq. (N.J. Freshwater Wetlands Protection Act Rules) shall be clearly shown on all plats or site plans submitted for approval.
- C. Wetland protection standards are required to provide protection of these highly valuable resources. The following standards should be employed:
 - a) A snow fence shall be installed outside of the wetland transition line prior to the commencement of onsite construction so as to prevent encroachment into these regulated areas.
 - b) All silt fence and/or hay bales shall be installed adjacent to the State mandated wetland transition line (or buffer) so as to prevent the transport of silt into the wetland areas.
 - c) All final plats or final site plans shall include the wetland line(s) identification number as assigned by NJDEP, pursuant to the Freshwater Wetlands Protection Act.
 - d) The applicant shall avoid all unnecessary encroachment into State-regulated wetland areas. Preservation of the existing onsite vegetation adjacent to the wetland areas is highly recommended.

Ordinance #5 Solar Energy Ordinance

X-1 Solar Energy Provision

The use of solar energy collectors for the purpose of providing energy for heating and/or cooling is a permitted accessory use within all zone districts. Use of solar energy collectors is subject to the restraints imposed by the present development pattern and topography found inside the township limits of Rockaway plus the zoning and height. Where a strict provision of the zoning ordinance may prohibit adequate solar access, the developer may apply for a conditional use permit from the Township by filing said application with the Planning Board. The Planning Board shall weigh the following factors in its evaluation:

- A. Local energy costs, topography, and aesthetics of the specific area or land tract proposed for solar access use.

X-2 Solar Access Requirements & Provisions

Solar energy panels shall comply with and be regulated by the following:

- A. Solar panels and associated equipment may exceed the development regulations of the zone in which they are located by a maximum of eight (8) feet.
- B. Solar panels and associated equipment shall not cover more than three-fourths (3/4) of the structure on which they are located

X-3 Solar Energy System Installed; Recording Procedures

A statement that a solar energy collection system is installed in a lot shall be filed and recorded with the Building Department, and that the date of installation of said system shall be the date of recordation.

Ordinance #6 Critical Features Ordinance

Section 54-30.10 Environmental Protection has been amended to include the following new Section 54-30.100:

There are properties throughout the Township of Rockaway that exhibit various environmental characteristics that have the potential to severely impact the land, water quality, soil erosion, habitat, recharge areas, and other features that affect the quality of life in the community, particularly when a multitude of such features are evident on a particular property. The following regulations are to apply in those instances where such conditions exist:

- 1) **Critical Features:** The following elements are identified as Critical Features for the purpose of imposing the accompanying regulations:
 - (a) Steep topography (defined as fifteen percent gradient or greater);
 - (b) Flood plains;
 - (c) Flood hazard areas;
 - (d) Wetlands;
 - (e) Wetland transition areas;
 - (f) Soils with severe limitations for development (as set forth in the Morris County Soils Survey Report);
 - (g) Category One (C-1) streams requiring a 300 foot buffers along such streams;
 - (h) Sites above a sole source aquifer;
 - (i) Sites that contain or are within 200 feet of public wells;
 - (j) Sites with rare or endangered species; and,
 - (k) Sites within the Highlands Preservation Area as established by the Highlands Water Protection and Planning Act.

These features are identified as Critical Features since development of property with these features has the potential of having a severe impact upon the land, water quality, habitat, recharge and associated environmental features within the township.

2) Reduction in Permitted Impervious Coverage.

(a) Where:

- (1) A site contains a minimum of six of the Critical Features enumerated in Section 54-30.10L; and

(2) Either

- (a) The site contains rare or endangered species; or the site is above a sole source aquifer; or the site contains or is within 200 feet of a public well; or the site contains Category One (C-1) streams requiring a 300 foot buffer along such streams; or

- (b) The Critical Features other than set forth in 2(b)(1) above in the aggregate account for a minimum of fifty percent of the site area,

Then,

- (3) All requirements for impervious coverage shall be reduced to a maximum permitted twenty-five percent, provided that where the maximum permitted impervious coverage that is imposed prior to the imposition of this section is less than the twenty-five percent provided for herein, the lesser requirement shall be imposed.
 - (b) If the maximum permitted impervious coverage for a site is reduced as set forth above, and if two of the Critical Features which trigger said reduction are steep slopes of minimally twenty-five percent grade covering minimally fifty percent of the site, or wetlands and the associated wetland buffers encompassing minimally fifty percent of the site, or the required buffers associated with Category One streams encompassing fifty percent of the site, then the requirements for impervious coverage shall be further reduced to a maximum permitted fifteen percent, provided that where the maximum permitted impervious coverage that is imposed prior to the imposition of this section is less than the fifteen percent provided for herein, the lesser requirement shall be imposed.
- 3) Additional Limitations on Development: Development of buildings and impervious surfaces on critical features shall be limited to the schedule of limitations set forth below:
- Schedule of Building and Impervious Limitations:
- a) As to Lakes and Ponds: 100 percent limitation
 - b) As to Wetlands: 100 percent limitation
 - c) As to Flood Plains 100 percent limitation
 - d) As to Steep Slopes (See current steep slope ordinance)
 - e) As to Buffers to C-1 Streams 100 percent limitation
- 4) Roads and driveways may be constructed across the features referenced in Section 54-30.10(0)3b thru d herein, provided no viable alternative exists and further provided that applicable local, county, state and federal approvals are obtained.
- 5) Exceptions to the above noted environmental regulations are allowed for the following uses:
- a) Existing unimproved or improved single-family residential lot of record.
 - b) Minor subdivisions that will not result in the creation of more than four new building lots.
 - c) Agricultural operations, as protected by the Right to Farm Act.

- d) All changes in occupancy of commercial or industrial buildings for similar uses provided there is no expansion of building area or impervious area, or as otherwise regulated by the Highlands Water Protection and Planning Act.

SECTION III

OPEN SPACE PLAN ELEMENT

This portion of the report contains the following:

- I. Introduction
- II. Goals and Policies
- III. Environmental Resource Database
- IV. Inventory of Existing Open Space
- V. Open Space Plan

INTRODUCTION

This document comprises the township's Open Space and Recreation Plan, which is another element in the community's planning process. Open space and the availability of land for recreation use is rapidly diminishing in New Jersey. The development of farmland, forest and other open space accelerated rapidly in the 1990's. According to a federal Agriculture Department study the average rate of development of these vital open space resources nationally occurred at a rate of 3 million acres per year from 1992-1997. This was double the rate of the previous ten years when it averaged 1.4 million acres per year.

Given this fact, forward thinking municipalities are undertaking the challenge to identify and preserve this vital resource. Open space preservation fulfills many worthwhile goals such as preserving environmentally critical areas, retaining the natural beauty of the landscape, providing recreation opportunities in close proximity to residential areas and providing locations for leisure activity. The goal of providing adequate open space for an increasing population is a worthy public purpose.

The Open Space and Recreation Plan Element sets forth goals and objectives regarding future open space in the township. In furtherance of these goals, specific sites are identified for consideration as future open space and recreation candidates to serve the needs of citizens.

Rockaway Township is fortunate to be characterized by its extensive woodlands, varied and hilly-to-steep topography, and substantial open spaces. It is also typified by its excellent recreational facilities. In addition, the township has a distinctive geographic situation and climate wherein there are a wide variety of plant and animal species. In an effort to stem any threat to these valuable resources and, more specifically, preserve the Beaver Brook aquifer and watershed, voters passed a referendum in 1992 that called for the establishment of a Rockaway Township Open Space Trust Fund. With up to two cents out of every 100 dollars of assessed local property taxes going to the fund, it became possible to acquire and preserve additional valuable properties.

The passing of the 1992 referendum led to the adoption of an Open Space Ordinance and, subsequently, the establishment of The Rockaway Township Open Space Committee. The principle task of this committee was to develop a plan that could be used to guide the future acquisition and preservation of the township's most critical properties. The resulting Open Space Plan document, which was adopted by the township in January of 1998, included a detailed property inventory in which all land in the municipality was analyzed to determine its significance in the township's open space and conservation efforts. Each parcel was reviewed for its contribution to water resource protection (with a slight bias given to those parcels that contribute directly to the Beaver Brook Watershed, as directed by the Open Space Ordinance), as well as natural habitat preservation, dedicated open space preservation, acquisition and administrative concerns and recreation use potential. From this inventory, a priority list of 144 properties was compiled.

While the 1998 plan is an excellent tool that has been utilized over the past eight years to determine the appropriate properties to acquire for open space and conservation efforts, there is

significant need to go one step further and establish additional conservation regulations, smart growth initiatives and updated methods of preservation, as well as adopt the Open Space Plan as an element of the township master plan. This document fulfills this need by providing an update to the township's Open Space Plan, and preparing it pursuant to the applicable provisions of the Municipal Land Use Law. Specifically, this plan enumerates the goals and policies guiding Rockaway's conservation efforts. It also includes an updated environmental resource inventory, as well as a revised priority list of open space candidate properties. Furthermore, the plan introduces refinements to the township's existing ordinances, as well as new regulations and other methods of preservation. These efforts are especially important because, while the township is characterized by significant environmental constraints, it still feels pressure for additional development.

GOALS AND POLICIES

Open Space Needs Identified in Previous Master Plans

The township's most recent planning efforts include the 1992 Master Plan and the 1999 Land Use Element and Reexamination Report. Both documents identify the need for an improved approach to open space conservation. The findings of these reports, as they relate to the issue of open space, are summarized below.

1. *1992 Master Plan:* The 1992 Master Plan identified the continued decline in open space acreage in the community as an ongoing concern, especially since the open space character of the community is one of the primary features drawing so many residents to the area in the first place. The plan further noted that the manner in which the diminution of Rockaway's woodland environment could be checked was also a paramount long-range land use issue. To address these issues, the plan recommended that the "Conservation Areas" designation introduced in the 1983 master plan be modified to address stream protection, aquifer protection, abandoned mine hazards, as well as wetlands protection and open space clustering. It also introduced the R-20 Acre Residential land use category in an effort to preserve the township's most environmentally sensitive areas.

The Master Plan also included the following goals, which are relevant to the current study:

- Reserve areas in the master plan to meet existing and future community facility needs such as township facilities, parklands, school sites, water well sites and historical sites.
- Develop a master plan and implementing ordinance that will be cognizant of all environmental constraints such as wetlands, steep slopes, septic effluent limitations, high water table, swamps and bogs.
- Establish conservation easements around abandoned mine shafts and primary aquifer areas.

2. *1999 Land Use Element Reexamination Report:* The township followed up the 1992 planning document with a periodic reexamination of the master plan. This report was adopted by the planning board in August of 1999 and set forth updated goals, incorporating findings from the earlier master plan. The report stated that the loss of available open space and the extensive woodland vegetation that has come to define the municipality's character continued to be a critical concern. It was noted that the municipality had sought to deflect this trend by encouraging the use of the State's open space acquisition program to fund sites in Rockaway. The report further stated that there was a need to reassess the Township's regulatory controls to ensure that they adequately protect the community's many environmentally sensitive features.

In addition to reinforcing the propriety of the R-20 Acre Residential Zone district in protecting the township's most important resources, the report also set forth the following goals that are applicable to this matter:

- Ensure that any prospective development is responsive to the township's environmental features, and can be accommodated while preserving these physical characteristics. (The report further notes that the township takes cognizance of the fact that there are numerous sites in the municipality that are typified by extensive environmentally sensitive features and therefore may not be able to accommodate its fully zoned development potential.)
- Encourage the design of open space features in cluster developments to abut the open space of open space elements of adjacent properties.
- Establish conservation easements around abandoned mine shafts and primary aquifer areas.

Goals for Open Space

This open space plan element sets forth the following goals and objectives for enhancing existing open space and providing additional open space for all residents. These goals and objectives are designed to complement the goals, objectives and policy statements set forth in the Land Use Plan Element. The supplemental goals for open space are as enumerated below:

1. To preserve open space in those locations that are most limited by environmental constraints and thereby least appropriate for development. Preservation efforts should be aimed at the portion of the township located within the Highlands Planning Area, where open space properties are seen as most vulnerable to development, as well as in the Highlands Preservation Area.
2. To protect the Beaver Brook Aquifer and Watershed, as mandated by the township's Open Space Ordinance and Open Space Committee charter.
3. To provide for a variety of conservation, passive recreational and active recreational needs in locations that maintain a balance between undeveloped and developed areas.
4. To establish a greenway plan, to provide for a continuous network of open space between scenic and critical environmental areas. These greenways should include a mixture of both active recreation facilities, i.e. hiking and biking, as well as passive environmental corridors.
5. To adopt new, and strengthen existing, ordinances for the protection of environmentally sensitive lands. In particular, the township seeks to limit development to that which preserves steeply sloped areas (defined to include any slope of minimally fifteen percent grade), wetlands and flood plains, as well as retains such natural resources as existing vegetation and habitats for endangered, threatened or rare species.
6. To ensure the availability of resources for open space acquisition by maintaining the viability of the township's Open Space Trust Fund, as well as considering alternative acquisition strategies and funding sources.

ENVIRONMENTAL RESOURCE DATABASE

An extensive evaluation of Rockaway's environmental resources has not been carried out since the preparation of the 1992 Master Plan. This is significant, given the amount of growth that has occurred in the intervening years. Not only has environmental data for the township been altered and refined since that time, but new types of data have also been introduced. This section of the Plan provides an update to the Township's environmental resource database. In addition, the Highlands Water Protection and Planning Act – the most important regulatory change to impact the Township since the adoption of either the 1998 Open Space Plan or the 1999 Reexamination Report – is discussed below.

Environmental Features

An analysis of the township's physical characteristics is important in determining the community's development potential and future growth patterns. Additionally, information on physical features is useful in assessing sites for their natural resource value and guiding the protection of these resources.

The principal environmental features that are typically assessed within the framework of a master plan include topography, slope, soils, flood plain, and wetlands characteristics. Each of these features is described below. In addition, because of Rockaway's unique abundance of natural resources, characteristics relating to primary aquifers and recharge areas, Category One waterways, federally threatened and endangered species habitat, and abandoned mines will also be examined. Although the following descriptions and accompanying maps provide a good overview of the township's physical features and environmental constraints, they are best reviewed on a site-by-site basis as development applications are submitted to the township's local review agencies.

Topography and Slope

Topography in Rockaway is varied and presents difficulties to development in many sections of the township. Elevation ranges from a high of 1,260 feet above sea level, on top of the Green Pond Mountain in the northeast portion of the township, to a low of 520 feet, near the Route 80-Green Pond Road interchange. These contours are shown in the accompanying map, entitled Topography and Steep Slopes.

This map also identifies the areas of the township with slopes in excess of 15 percent. It is evident that the most significant slopes are located in the northeastern and central portions of the township, which are typically outside of the primary service areas, and are predominantly public-owned lots. However, there are several lots in the more developed southern and eastern portions of the township that also have slopes in excess of 15 percent, posing considerable challenges to further development in these areas.

Wetlands

The National Wetlands Inventory, prepared by the United States Department of the Interior Fish

and Wildlife Service, provides an inventory of wetland areas in Rockaway as well as other municipalities in the State of New Jersey. The wetland delineations are based upon vegetation, visible hydrology and geography in accordance with acknowledged source data pertaining to wetlands classification. This data has been mapped by the New Jersey Department of Environmental Protection (NJDEP) and is illustrated on the accompanying environmental constraints map. It should also be noted that the wetland delineations shown here differ slightly from those identified in the 1992 Township Master Plan, which were based on the more general Fish and Wildlife Service maps.

As indicated on the map, there are a number of wetland areas in Rockaway. The majority of wetland areas are small and isolated, with two major exceptions being those located directly east of Lake Denmark in the north-central portion of the township and in the westernmost portion of the Picatinny Arsenal site. Although this map provides a good indication of where wetlands are located in the township, only an official determination from the NJDEP (called a "letter of interpretation") can validate the presence of wetlands on a given property.

The adoption of the Freshwater Wetlands Protection Act in 1988 established a host of regulations aimed towards the preservation of New Jersey's wetlands as well as transition areas, or "buffers". Specifically, the Act requires the NJDEP to regulate virtually all activities proposed in wetlands, including cutting of vegetation, dredging, excavation or removal of soil, drainage or disturbance of the water level, filling or discharge of any materials, driving of pilings, and placing of obstructions. In addition, the DEP must determine the width of transition areas around wetlands, which is dependent on the sensitivity of the particular wetland. For example, especially valuable wetlands may require a 150-foot buffer. On the other hand, no buffer may be required when transition area averaging is applied. Most wetlands, however, require a minimum 50-foot buffer. Proposed activity within these transition areas typically require permits from the DEP.

Flood Plains

There are a number of parcels in Rockaway that lie within the 100-year and 500-year floodplains. The flood hazard areas in the township correspond to the prominent water features in the municipality, including Beaver Brook, Burnt Meadow Brook, Hibernia Brook, Timber Brook, White Meadow Brook, the Rockaway River, the Pequannock River, as well as the small stream feeding Parks Lake on the municipal boundary with Rockaway Borough.

These flood hazard areas are presented in the accompanying environmental constraints map and reflect the data published by the Federal Emergency Management Agency as part of the National Flood Insurance Program. This data does not necessarily show all areas of the township that are subject to flooding, but does provide a broad overview of potential flood problems throughout the municipality.

Category One Waters and Buffers

The accompanying environmental constraints map identifies what are known as Category One waterways, of which there are several located throughout the eastern portion of the township.

These waterways, as well as those areas within 300 feet of the stream, receive special protection under New Jersey's Surface Water Quality Standards (SWQS) because of their exceptional ecological, water supply, and/or recreational significance. In addition, protection is afforded to those waterways with exceptional shellfish or fisheries resources.

In those waters designated as Category One and their surrounding buffers, known as Special Water Resource Protection Areas (SWRPA), existing development is not regulated. However, new construction or expansion to existing structures that will disturb one acre or more of the property or that would increase impervious surfaces on-site by at least one-quarter of an acre is prohibited within SWRPAs.

Watersheds

Watersheds are geographic areas in which all water running off the land drains into a specific river system, creek or body of water. Each watershed is defined by topographic and hydrologic features that separate it from the adjoining watershed. Rockaway's sub-watersheds, which are smaller watersheds on the scale of a community, are identified in the accompanying watersheds map. As can be seen, the Beaver Brook, Hibernia Brook, Green Pond Brook, and Pequannock River sub-watersheds all contain Category One waterways.

Primary Aquifers

Aquifers are among Rockaway's most valuable resources because of the large amount of high quality water they are capable of supplying. Essentially, aquifers are glacial sediments below the surface of the ground that are very porous and capable of storing large amounts of groundwater. Wells can be drilled into the aquifers to extract water, while precipitation adds water back in. The township's existing well fields are situated in one of its primary aquifer areas, along Beaver Brook.

The accompanying environmental constraints map highlights the locations of the township's primary aquifers, which are those that yield an average of 251-500 gallons of groundwater per minute to high-capacity wells. They reflect the New Jersey Geological Survey's most recent findings, compiled from 1987 to 1993.

In addition, the accompanying map entitled "Primary Aquifers and Groundwater Recharge Areas" shows the location of these aquifers in relation to the township's recharge areas. These areas are ranked by inches of groundwater recharge per year, which are based on New Jersey Geological Survey data from 1999. This data reflects the methodology for delineating recharge areas outlined in NJGS report GSR-32, published in 1993. Now that both the primary aquifers and recharge areas are identified, the Township should not only recognize this valuable resource but also implement policies to protect it.

Threatened and Endangered Species Habitat

Rockaway's rich variety of natural resources provide habitat for a large number of plant and animal species, many of which are listed on Federal and State inventories as endangered or

threatened. There are two primary sources of information with regard to the location of these habitats in the township: the New Jersey Landscape Project, which was developed by the State's Division of Fish and Wildlife, and the New Jersey Natural Heritage Program, which is overseen by the NJDEP. Both are described in more detail below.

New Jersey Landscape Project: The Landscape Project combines threatened, endangered and priority species location information with land use/land cover data to provide maps of critical habitats throughout the state. The Project looks individually at each of the five major habitat types in New Jersey – forest, forested wetlands, emergent wetlands, grasslands, and beach – and classifies each based on the presence of federal threatened or endangered species, state endangered species, state threatened species, non-listed species of special concern, and/or suitable habitat that has not yet been surveyed to determine the actual presence or absence of species.

The United States Department of the Interior has expressed particular concerns to the township planning board regarding the habitat of the federal threatened bog turtle (*Clemmys muhlenbergii*) and federal endangered Indiana bat (*Myotis sodalis*) in Rockaway. The bog turtle is known to inhabit limestone fens, sphagnum bogs, and wet, grassy pastures that are characterized by soft, muddy bottoms and perennial groundwater seepage. In addition, bog turtle habitats are well-drained and water depth rarely exceeds four inches above the surface. The Indiana bat, on the other hand, inhabits forested areas within the flood plain and along the sides of streams in the summer, and hibernates in limestone caves and open, abandoned mine shafts in the winter months (October to April).

The extent of these federal threatened and endangered species' habitats is presented in the accompanying New Jersey Landscape Project map. This map reflects Version 2 of the Landscape Project's data, which was published in 2004. As can be seen, the extent of these habitats is quite extensive – covering a large majority of the township. In addition, the abandoned mine sites of Rockaway Township have been mapped separately, highlighting the potential winter hibernaculum of the Indiana Bat.

New Jersey Natural Heritage Program: The Natural Heritage Program identifies the state's most valuable natural areas through a continuously updated inventory of the distribution, biology, status and preservation needs of rare plants and animal species in New Jersey. From this inventory, Natural Heritage Priority Sites have been established for each municipality. These sites are areas of critical importance in preserving biological diversity in New Jersey and are ranked from of a scale of B1 to B5. Those sites ranked B1 through B3 are areas of global significance for biological diversity, while those ranked B4 through B5 are areas of state significance for biological diversity. In addition, each site is categorized into macrosites and standard sites, with the former being larger in size (typically over 3,200 acres) and the latter being smaller in size (typically under 3,200 acres).

As can be seen on the accompanying Natural Heritage Priority Sites map, there are five such sites located wholly or partially in Rockaway Township. The following table provides for each site a description of its physical characteristics, the types of habitat it contains, and its biological diversity ranking.

**Table 22
Natural Heritage Priority Site Descriptions**

Site Name	Physical	Habitat	Bio Rank
Green Pond Mountain Macrosite	A large landscape patch of forests, lakes, and streams. Much of the land is within Picatinny Arsenal.	Contains habitat for a concentration of State Endangered and Threatened plant and vertebrate species, and several rare invertebrate species.	B4
Hibernia Mine	The site is an abandoned iron mine, which provides suitable habitat as a bat hibernaculum.	Contains populations of two globally rare mammal species and is one of the largest bat hibernacula in the eastern United States.	B3
Lake Denmark	A large glaciated lake and adjacent herbaceous, shrubby and forested wetlands.	The site contains an excellent population of a globally rare species, and numerous populations of other state-imperiled species.	B2
Mount Hope Bog	The site contains a glacial kettlehole bog, surrounded by a mixed hardwood/conifer swamp.	The site contains an example of a state imperiled wetland natural community and a State Endangered plant species.	B5
Splitrock Reservoir Site	The site contains mixed deciduous woodlands with steep slopes that are very rocky in places, with a few permanent and intermittent streams.	The site contains one State-listed Endangered Plant Species.	B5

Septic Limitations

The accompanying map entitled “Septic Limitations” identifies the suitability of soils throughout the township for the development of septic systems. The map places Rockaway’s soils in five categories, including slight, moderate, severe, urban land, as well as water bodies. This information is highly important as many areas of the municipality, especially the northern portions, rely on septic tanks for the handling of sanitary sewer waste.

As can be seen in the following table, the majority (57 percent) of the township is characterized as having severe septic limitations. This category represents those areas for which the cost of installing septic systems generally outweighs the benefits. A smaller, yet significant portion of the township (25 percent) is showed as having moderate septic limitations. This category represents those areas for which the limitations of installing septic systems can generally be overcome by careful planning, design and operation. A minority (4 percent) of the township is characterized as having slight septic limitations. These areas are generally favorable for the installation of septic systems.

Water bodies and urban lands each comprise seven (7) percent of the township. Urban lands are typically disturbed areas for which the feasibility of installing septic systems should be determined on a site-by-site basis.

**Table 23
Septic Limitations by Category**

Category	Acres	Percent of Township
Slight	1,162	56.97
Moderate	7,362	25.35
Severe	16,547	4.0
Urban Lands (Disturbed)	1,945	6.70
Water Bodies	2,027	6.98
TOTAL	29,043	100

Highlands Water Planning and Protection Act

Perhaps the most important change affecting Rockway's future growth and development since the publication of the 1998 Open Space Plan is the passing of The Highlands Water Protection and Planning Act by the New Jersey State legislature on June 10, 2004. The Act, which covers an 800,000-acre region consisting of 88 municipalities from seven counties throughout the state, was borne out of recognition of this region as an essential source of drinking water for more than half of the state's population. In order to effectively protect this resource, it was imperative that legislation shift from the local level to the state level. In effect, the Act authorizes and directs a newly established Highlands Water Protection and Planning Council to effectuate the Act's goals through a comprehensive set of tools, controls, incentives and remedies.

The Act divides the Highlands region into two areas – the Preservation Area and the Planning Area. While the Act severely restricts and controls development in the Preservation Area, the Act's treatment of development in the Planning Area is more permissive. As shown on the accompanying Highlands map, the majority of Rockway Township is located in the Preservation Area. This area is particularly concentrated in the relatively undeveloped northern and eastern portions of the municipality. The areas that lie within the Planning Area are those that are already heavily developed, including the southern portions of the township along Route 80 as well as the Picatinny Arsenal site.

The Act charges and empowers the Highlands Water Protection and Planning Council, a 15 member political subdivision of the State created under this Act, with a number of duties, including the adoption of a regional master plan within 18 months of the Council's first meeting. This regional master plan will effectuate appropriate and coordinated land use decisions within the region. Within nine to 15 months of Plan adoption, each municipality and county wholly or partially in the Preservation Area must revise its master plan and development regulations to conform to the goals, requirements and provisions of the regional master plan. Revisions must be submitted to the Council for its approval, rejection or conditional approval. If a municipality or county fails to adopt or enforce these revisions, the Act authorizes the Council to adopt and enforce rules and requirements necessary to implement the regional master plan on its behalf. The Act offers incentives to municipalities and counties located within the Planning Area to do the same.

A strict permitting review process for all "major Highlands development" further limits the location, character and type of development allowed in the Preservation Area. Interim rules to implement this review process (to be carried out by the NJDEP) were adopted on May 9, 2005 and will remain in effect until DEP finalizes the rules proposed for public comment. The rules define "major Highlands development" as:

1. Any non-residential development in the Preservation Area;
2. Any residential development in the Preservation Area that requires an environmental land use or water permit or that results in the ultimate disturbance of one acre or more of land or a cumulative increase in impervious surface by one-quarter acre or more;

3. Any activity undertaken or engaged in the Preservation Area that is not a development but results in the ultimate disturbance of one-quarter acre or more of forested area or that results in a cumulative increase in impervious surface by one-quarter acre or more on a lot; or
4. Any capital or other project of a State entity or local government unit in the Preservation Area that requires an environmental land use or water permit or that results in the ultimate disturbance of one acre or more of land or a cumulative increase in impervious surface by one-quarter acre or more. Major Highlands Development shall not mean an agricultural or horticultural development or agricultural or horticultural use in the Preservation Area.

The interim rules incorporate the standards of various environmental protection statutes, which must be met in order for a "major Highlands development" to receive Highlands Preservation Area Approval (HPAA). Among these standards are the following:

1. As required pursuant to the "Water Pollution Control Act," P.L. 1977, c.74 (C.58:10A-1 et seq.) or the "Water Quality Planning Act," P.L. 1977, c.754 (C.58:11A-1 et seq.), the quality of all Highlands open waters and waters of the Highlands within the Preservation Area to be maintained, restored, or enhanced shall not degrade existing water quality. Further, major highlands development is prohibited within 300 feet of any Highlands open waters, and a 300-foot buffer adjacent to all Highlands open waters.
2. The anti-degradation provisions of the Surface Water Quality Standards (SWQS) and the stormwater regulations applicable to Category One waters are to be applied to Highlands open waters.
3. As required pursuant to the "Water Supply Management Act," P.L. 1981, c.262 (C.58:1A-1 et seq.), any diversion of more than 50,000 gallons per day of waters of the Highlands shall require a permit based on consideration of individual and cumulative impacts of multiple diversions, maintenance of stream base flows, minimization of depletive use, maintenance of existing water quality and protection of ecological uses.
4. There shall be a zero net fill requirement for flood hazard areas pursuant to the "Flood Hazard Area Control Act," P.L. 1962, c.19 (C.58:16A-50 et seq.).
5. Impervious surfaces of greater than three percent of the land area of a lot, not including Highlands open waters, is prohibited.
6. Development, except linear development for infrastructure, utilities and rights-of-way where no feasible alternatives exist, are prohibited on steep slopes with a grade of 20 percent or greater.
7. Development that disturbs upland forested areas is prohibited in order to prevent soil erosion and sedimentation, protect water quality, prevent stormwater runoff, and protect threatened and endangered animal and plant species sites and designated habitats.

Additionally, The Highlands Water Protection and Planning Act allows for the creation of two new programs in order to implement the goals and objectives of the legislation. These programs are the Highlands Municipal Property Tax Stabilization program and a transfer of development rights (TDR) program. The former program attempts to compensate municipalities for any loss of property tax revenue directly attributable to the development controls under the Act. The latter program provides municipalities with an additional tool to preserve land without the cost of acquisition. It also permits a balance between the desire for preservation and the need to accommodate growth.

INVENTORY OF EXISTING OPEN SPACE

Rockaway Township is the largest municipality in Morris County, encompassing over 45.6 square miles. Fortunately, there are already a significant number of properties already protected as open space, or at least highly restricted against development. Of the township's approximately 30,000 acres, government-owned non-parkland and various parkland and open space properties comprise 17,660 acres, or 60.8 percent of the municipality. This chapter provides an overview of those properties and their breakdown by category. The accompanying map entitled "Dedicated Open Space and Public Properties" graphically identifies the locations of these sites.

Dedicated Open Space and Public Property

Federal Land

As detailed in the accompanying table, the federal government owns three properties in the township, totaling approximately 6,300 acres. The largest of these properties is the Picatinny Arsenal reservation (Block 70001 Lots 1-4). It occupies over 6,270 acres and is located in the western portion of the township, along the municipal border with Jefferson Township. This reservation includes 950 buildings and is home to the U.S. Army Armament Research, Development and Engineering Center (ARDEC), which employs some 3,750 people. The two other federally owned properties in Rockaway are the 16-acre New Jersey National Guard Armory in the southern portion of the township (Block 10902 Lot 1) and an 8-acre vacant parcel located along the old railroad bed stretching from Lake Demark Road to Egbert's Lake in the township's northern end (Block 40701, Lots 22 and 23). This latter property was purchased by the United States government in 1954 and was included as a candidate for open space conservation in the 1998 Open Space Plan. Given the fact that this property is federally owned, the township may wish to solicit the federal government to sell it for preservation purposes.

State Land

The State of New Jersey owns approximately 4,800 acres in the township across its various departments (see the accompanying table entitled "Inventory of Dedicated Open Space and Public Properties"). The New Jersey Department of Environmental Protection owns the vast majority of this acreage, which have been preserved as parkland or open space. Approximately 295 acres were purchased through the Department's Green Acres Program and are subject to their regulations. As shown in the accompanying map, the bulk of this parkland and open space is located in the northern portion of the municipality where environmental constraints are most severe. This portion also falls within the Highlands Preservation Area and is further protected by the Highlands Water Protection and Planning Act regulations for this area.

It is noted that 16 of the properties presently owned by the NJDEP were included as candidates for open space in the 1998 Open Space Plan. These properties comprise nearly 1,200 acres. The locations of these particular properties are also addressed in the accompanying table.

County Land

In total, Morris County owns approximately 625 acres of land in Rockaway Township. As the accompanying table indicates, approximately 20 acres (three properties) of this total is devoted to non-park purposes. The Morris County Housing Authority owns two of these properties, which are both located in the southern portion of the township (Block 11116 Lot 49, Block 22104 Lot 10). Together, these properties occupy a total of 15.4 acres. A third property is located in the southwest corner of the township, at the junction of Jefferson Township and the Borough of Wharton (Block 11505 Lot 1). This property is used as a road garage and comprises approximately 6 acres.

The remaining 605 acres of County-owned property in the township are preserved as parkland or open space. Specifically, nearly 363 acres is devoted to open space in the western portion of the township, just north of Route 80 and south of the Picatinny Arsenal site (Block 10001 Lot 3). This property is listed on the official NJDEP Recreation and Open Space Inventory (ROSI), though it is not funded by Green Acres. A second County-owned property that is located on the ROSI, but is not funded by Green Acres, is Block 20001 Lot 6 in the central portion of the township, along Snake Hill Road. This site is approximately 77 acres in area and is used as parkland. Three recent County acquisitions include what is known as the Merner property (Block 40901 Lot 5), the Murray property (Block 40901 Lot 10.01), and the Craigmear property (Block 40901 Lots 11 and 13). These properties are all located in the northernmost portion of the township and together comprise over 130 acres. Finally, Morris County's land holdings also include approximately 30 acres of dedicated trails in the northern section of the township.

Municipal Land

The township itself owns approximately 1,400 acres of land, as detailed in the accompanying table. Approximately 1,200 acres of this municipally owned land is preserved as dedicated parkland, open space or trails. The majority of this land (1,000 acres) is located on the ROSI. Four of these sites, totaling 461 acres, were purchased through the NJDEP's Green Acres Program and are therefore subject to their regulations. Finally, it is noted that six of the sites presently owned by the township, comprising some 308 acres, were included as candidates for open space conservation in the 1998 Open Space Plan. While four of these sites have been deed restricted for open space/recreation, two of these sites (Block 11401 Lot 44, Block 70001 Lot 5) are as-yet unreserved.

As is evidenced in the accompanying map, the bulk of the municipally owned parkland and open space is again located in the northern portion of the municipality, where environmental constraints are most severe and the strict regulations of the Highlands Preservation Area are in effect.

Utilities

A variety of utility companies own a large portion of Rockaway's land area. As the accompanying table shows, these companies own a combined total of 3,660 acres. Both the Newark Water Department and the Jersey City Division of Water hold properties in the northern

portion of the township, which are part of each company's water resource and supply. However, the NJDEP owns the development rights on all of these properties and, therefore, serve as open space for the township. In addition, the Public Service Electric and Gas (PSE&G) company owns approximately 44 acres in the Wildcat Ridge area for utility easements.

Private Open Space

In addition to publicly-owned properties preserved for open space conservation, there are a significant number of privately-owned properties that are also devoted to open space. For example, several homeowners associations throughout the township have lands set aside for open space, totaling nearly 105 acres. In addition, the NJDEP has conservation easements on many private properties, including the New Jersey Camp for the Blind (Block 50001 Lots 4 and 9, Block 60101 Lot 14), the Boy Scouts of America sites (Block 50001 Lot 3, Block 50101 Lot 2), the Green Pond Golf Club (Block 40901 Lot 93), the World Ecosystems, Inc. sites (Block 30801 Lots 37 and 38) and the Morris Conservation Area (Block 30001 Lot 19). Together, these properties encompass approximately 654 acres. Finally, other properties are preserved for conservation purposes by non-profit entities, such as the Passaic River Coalition (Block 30601 Lot 3) and the Morris Land Conservancy (Block 31001 Lots 15, Block 31101 Lot 35). As shown in the accompanying table, all privately owned open space in Rockaway totals roughly 840 acres.

**Table 24
Inventory of Dedicated Open Space and Public Properties**

Block	Lot	Acres	Name	Status	Green Acres	ROSI
Federal Land						
10902	1	16.06	NJ National Guard Armory	Nonpark		
40701	22, 23	7.70	Vacant	Nonpark		
70001	1-4	6271.80	Picatinny Arsenal	Nonpark		
State Land: NJDEP						
20001	3	440.90	Wildcat Ridge	Park		
22309	1, 4, 5	6.00	Wildcat Ridge (Hibernia)	Park		
22310	7	0.52	Wildcat Ridge (Hibernia)	Park		
22311	6	0.28	Wildcat Ridge (Hibernia)	Park		
22312	1	0.38	Wildcat Ridge (Hibernia)	Park		
30001	1	998.93	Wildcat Ridge	Park		
30001	7	2.90	Wildcat Ridge	Park		
30001	8.02	10.00	Unknown	Park		
30001	9	1.13	Wildcat Ridge	Park		
30001	10, 11	36.92	Wildcat Ridge	Park		
30001	22	294.36	Morris Conservation Area	Park	X	X
30201	1	155.93	Wildcat Ridge	Park		
30201	23	40.71	Unknown	Park		
30201	24	7.00	State Open Space	Park		
30201	26	14.00	State Open Space	Park		
30201	28	50.78	Wildcat Ridge	Park		
30201	29	25.74	Wildcat Ridge	Park		
30201	30	21.02	Wildcat Ridge	Park		
30201	32	4.33	Wildcat Ridge	Park		
30201	35	11.58	Wildcat Ridge	Park		
30201	39	18.20	Wildcat Ridge	Park		
30201	41	41.75	Wildcat Ridge	Park		
30201	43	44.41	Wildcat Ridge	Park		
30201	45	0.97	Wildcat Ridge	Park		
30201	46	2.69	Wildcat Ridge	Park		
30201	47	1.08	Wildcat Ridge	Park		
30201	48	0.45	Wildcat Ridge	Park		
30201	49	0.76	Wildcat Ridge	Park		
30201	50	0.93	Wildcat Ridge	Park		
30201	51, 52	5.92	Wildcat Ridge	Park		
30201	53	10.00	Wildcat Ridge	Park		
30605	1	1.50	Unknown	Park		
30605	2	0.38	Unknown	Park		
31001	7, 9	60.68	Wildcat Ridge	Park		
31001	13, 14, 27, 28, 34, 37, 38	527.92	Koehler Property (Co-owned w/Twp)	Park		
31101	3-10	4.64	State Open Space	Park		
31101	63	25.00	State Open Space	Park		
31101	70	33.20	Wildcat Ridge	Park		
31101	74.03	2.52	Wildcat Ridge	Park		
31101	75, 18, 16	14.20	State Open Space	Park		
31101	76	26.95	Wildcat Ridge	Park		
31101	77	13.30	State Open Space	Park		

Block	Lot	Acres	Name	Status	Green Acres	ROSI
31101	78	7.50	State Open Space	Park		
31101	79	96.97	Wildcat Ridge	Park		
31101	80	150.45	Wildcat Ridge	Park		
40701	1, 2	69.18	Lake Denmark Rd Area	Park		
40701	12	33.24	State Open Space	Park		
40701	13	64.46	State Open Space	Park		
40701	15-18, 20	60.86	Lake Denmark Rd Area	Park		
40701	24	25.00	Unknown	Park		
40701	25, 26, 41, 42	228.80	Wildcat Ridge	Park		
40701	94	10.00	State Open Space	Park		
40701	133	26.00	Lake Denmark Rd Area	Park		
40701	134	0.65	Lake Denmark Rd Area	Park		
40701	139	8.49	Lake Denmark Rd Area	Park		
40701	155	30.06	Lake Denmark Rd Area	Park		
50001	2, 13, 14	737.84	Farney State Park	Park		
50101	11	21.27	State Open Space	Park		
50101	21.01	188.00	Unknown	Park		
60001	1	75.50	Farney State Park	Park		
County Land						
10001	3	362.82	Mount Hope	Park		X
11116	49	10.40	Morris County Housing Auth.	Nonpark		
11505	1	6.04	Road Garage	Nonpark		
20001	6	76.96	Mount Hope	Park		X
22104	10	5.00	Morris County Housing Auth.	Nonpark		
40701	19, 19.01, 19.02	7.92	Trail Segment	Trails		
40801	93	8.79	Railroad Bed	Trails		
40901	5	64.28	Merner Property	Park		
40901	10.01	40.79	Murray Property	Park		
40901	11, 13	28.98	Craigmear Property	Park		
50001	16	14.40	Railroad Bed	Trails		
Municipal Land						
10001	2.01	86.83	Mt. Hope Pond	Open Space		X
10002	1	58.28	Beaver Ponds Group	Nonpark		
10715	20	3.50	Rustic Ridge Border	Open Space		X
10801	32	11.30	Birchwood School Annex	Nonpark		
11101	44	22.60	Peterson Memorial Field	Park	X	X
11112	30	16.38	Fleetwood Hillside (BOE)	Nonpark		
11207	1	5.01	Park Lake Gazebo	Park		X
11301	1	17.19	Municipal Bldg and Library	Nonpark		
11301	77	7.79	Rt. 80 Park	Park		X
11401	42	1.40	Foreclosed Parcel	Nonpark		
11401	44	3.10	Foreclosed Parcel	Nonpark		
11403	40	14.20	Lavin Dump	Nonpark		
11509	10	7.65	Former Sammis Corporation	Nonpark		
11509	16	7.73	Former Sammis Corporation	Nonpark		
20001	5.03	2.02	Faesch House	Park		X
20301	39	3.80	Detention Basin	Nonpark		
20401	11	1.60	Vacant	Open Space		X
20503	12	3.40	Pumping Station / Salt Silo	Nonpark		
21201	22	10.21	Water Tank	Nonpark		
21401	58	0.41	Easement to Sherman Park	Park		X

Block	Lot	Acres	Name	Status	Green Acres	ROSI
21401	65, 96	8.99	Sherman Park	Park		X
21801	29.01	0.21	Willow Park	Park		X
22203	7	2.80	Trail Segment	Trails		
30101	1	285.73	Lake Ames Park	Park	X	X
30101	3	82.84	Camp Hudsonia Park	Open Space	X	X
30201	18	8.01	Municipal Garage & Bus Depot	Nonpark		
30201	36, 44	105.00	Wildcat Ridge	Park		X
30201	39.01	8.60	Wildcat Ridge	Park		X
30201	39.02	3.90	Wildcat Ridge	Park		
30201	40	1.00	Wildcat Ridge	Park		
30701	39.11	14.32	Oak Meadows Field	Open Space		X
30701	39.36, 39.37	52.61	Sammis Donation (Oak Meadows)	Open Space		X
30701	44	69.49	Sasso	Open Space	X	X
40701	29, 29.01	11.44	Copperas Tract	Open Space		X
40701	60-63	76.70	Egbert's Lake	Open Space		
40801	92, 94	230.75	Rockaway Compost Site	Park		X
40802	3	3.72	Marcella Field	Park		X
60001	3	7.60	Railroad Bed	Trails		X
60001	22	19.80	Trail Segment	Trails		
70001	5	115.25	Foreclosed Parcel	Nonpark		
Utilities						
30001	1.02	40.50	Public Service Elec & Gas	Easements		
31001	8	3.80	Public Service Elec & Gas	Easements		
31001	12	54.10	Jersey City Division of Water	Open Space		
40901	10	121.40	Newark Water Department	Open Space		
40901	14	6.00	Newark Water Department	Open Space		
40901	16	4.00	Newark Water Department	Open Space		
40901	27, 28	35.13	Newark Water Department	Open Space		
50001	1	718.20	Jersey City Division of Water	Open Space		
50001	15, 17	583.30	Newark Water Department	Open Space		
50001	18	141.10	Jersey City Division of Water	Open Space		
50003	19, 20	450.62	Jersey City Division of Water	Open Space		
50003	22	95.50	Newark Water Department	Open Space		
60001	2, 9, 21, 23, 24	1387.90	Newark Water Department	Open Space		
60001	20	19.10	Newark Water Department	Open Space		
Private Open Space						
21401	11, 97, 98	12.68	Sherbrook at Rockaway HOA	Open Space		
21403	9, 10, 11	4.06	Sherbrook at Rockaway HOA	Open Space		
30001	19	1.75	Morris Conservation Area	Open Space	X	X
30601	3	2.14	Passaic River Coalition	Open Space	X	X
30801	37, 38	19.00	World Ecosystems Inc. c/o P. Prall	Open Space		
30801	48, 48.39	38.53	Meriden Heights HOA	Open Space		
31001	15	60.69	Morris Land Conservancy	Open Space	X	X
31101	35	65.00	Morris Land Conservancy	Open Space	X	X
31101	81.20, 81.21	22.65	Rockaway Hills HOA	Open Space		
40701	93	60.00	Green Pond Golf Club	Open Space		
40701	132, 132.16, 132.25	30.73	Cypress Estates HOA	Open Space		
50001	3, 6, 7	393.00	Boy Scouts of America	Open Space		
50001	4, 9	163.50	NJ Camp for the Blind	Open Space		
50101	2	7.46	Boy Scouts of America	Open Space		
60101	14	9.50	NJ Camp for the Blind	Open Space		

OPEN SPACE PLAN

Overview of 1998 Open Space Candidate Inventory

As previously discussed, the Rockaway Township Open Space Committee prepared the 1998 Open Space Plan with the intention of providing a guide for the future acquisition and preservation of Rockaway's most environmentally sensitive areas. The process of preparing this guide consisted of the following key steps.

First, each parcel in the township was assessed for its size and development status. If a property was not already protected by the government or conservation easements, was at least five acres in size and did not already have major development existing on it, it was added to the inventory. Exceptions were made, however, for smaller properties that were in key positions adjacent to desirable properties, as well as those sites that contained structures but were large enough to preserve important areas, such as farms.

Second, those parcels were then reviewed for their contribution to water resource protection, natural habitat preservation, dedicated open space preservation, acquisition and administrative concerns and recreation use potential. This task was accomplished by the committee members either walking the properties themselves (approximately 85 percent of all cases), or already having prior knowledge of the properties' characteristics.

From this inventory, each parcel was then assigned a priority weight. This weight was based on an evaluation system that categorized properties by the primary purpose, or theme, for including the property in the open space plan, and used a series of 16 factors specifically scaled for that theme (see Appendix 1 for more details regarding the property evaluation system). As directed by the Open Space Ordinance, those properties that contribute directly to the Beaver Brook aquifer and watershed were given special attention and priority. Ultimately, this process resulted in a ranked list of 144 open space candidate properties, which is graphically represented in the accompanying map.

This chapter aims to provide an update to the 1998 open space candidate inventory. Specifically, the 144 open space candidates identified in the previous plan are examined to determine their current eligibility for acquisition. This examination takes into account each property's present development status, their environmental constraints, as well as the new regulations affecting the Township (i.e., the Highlands Water Planning and Protection Act, the Surface Water Quality standards). From this examination, each property remaining on the inventory is re-prioritized based on their desirability for open space acquisition.

Status of Open Space Candidates from 1998 Plan

As detailed in the table below, a number of properties included on the 1998 plan's open space candidate inventory have since been acquired for open space purposes or developed. Of these properties, 23 have been acquired for preservation by government or non-profit entities. The locations of these properties, as well as other existing open space properties, are identified in green on the accompanying Open Space Plan map. Several other sites, however, have been

subdivided or had development occur on them and are no longer candidates for preservation. The locations of these properties are identified in pink on the accompanying Open Space Plan map.

Table 25
Properties Removed From Open Space Candidate Inventory

Block	Lot	Address	Acres	Status
10501	154	HERRICK DR	8.7	Subdivided: 15 residential lots
10801	35	MT HOPE AVE	18.4	Approved Residential Development
11001	11.01	MT PLEASANT AVE	17.5	Commercial development
11301	10	MT HOPE RD	27.7	Approved Residential Development
11301	29, 54, 55	RICHARD MINE RD	49.5	Approved Residential Development
11301/11302	44/48	CONSTITUTION WAY	91.2	Residential development
11302	50	MT HOPE AVE	2.5	Approved Commercial Development
11407	15	TEABO RD	3.7	Subdivided: 3 residential lots
22202	16	195 GREEN POND RD	10.0	Commercial development
22203	2/3	140 GREEN POND RD	107.3	Pending development application
30001	11	224 GREEN POND RD	34.5	Purchased by NJDEP
30001	15	MERIDEN RD	50.0	Subdivided: 14 residential lots
30001	22	MERIDEN RD	295.0	Purchased by NJDEP
30101	3	GREEN POND RD	82.0	Purchased by Township
30201	10, 11	VALHALLA WAY	15.7	Subdivided: 6 residential lots
30201	23	GREEN POND RD	40.7	Purchased by NJDEP
30201	24	N CAPE TRAIL	6.0	Purchased by NJDEP
30201	26	536 GREEN POND RD	14.0	Purchased by NJDEP
30201	51, 52	222 UPPER HIBERNIA RD	5.9	Purchased by NJDEP
30703	1	UPPER HIBERNIA RD	5.6	Subdivided: 4 residential lots
31001	13, 14, 27, 28, 34, 37, 38	MERIDEN-LYONSVILLE RD	527.9	Purchased by NJDEP/Township
31001	15	MERIDEN RD	60.7	Purchased by Morris Land Conservancy
31101	35	10 GREEN POND RD	65.0	Purchased by Morris Land Conservancy
31101	63	GREEN POND RD	25.0	Purchased by NJDEP
31101	75, 18, 16	GREEN POND RD	13.8	Purchased by NJDEP
31101	77	UPPER HIBERNIA RD	13.3	Purchased by NJDEP
31101	78	UPPER HIBERNIA RD	7.5	Purchased by NJDEP
40701	12, 13	VALLEY RD	77.0	Purchased by NJDEP
40701	24	HILLSIDE RD	25.0	Purchased by NJDEP
40701	29, 29.01	975 GREEN POND RD	11.5	Purchased by Township
40701	60-63	923 GREEN POND RD	76.7	Purchased by Township
40701	93	764 GREEN POND RD	60.0	NJDEP Conservation Easement
40701	94	OFF GREEN POND RD	10.0	Purchased by NJDEP
40801	69	PASHA COURT	29.6	Subdivided: 12 residential lots
40901	5	GREEN POND RD	64.3	Purchased by County
50101	11	UPPER HIBERNIA RD	21.6	Purchased by NJDEP
60001	22	TIMBERBROOK RD	19.8	Purchased by Township

After removing the sites that are no longer eligible for or still requiring of acquisition for open space purposes, a total of 98 properties remain as potential open space candidates, comprising

4,525 acres of land. These properties consist of vacant sites, as well as those sites that contain some structures but are large enough to preserve important areas, such as farmland. It is also noted that three of these properties are already owned by public entities (Block 11401 Lot 44, Block 40701 Lots 22 and 23, and Block 70001 Lot 5); however, they have not yet been preserved for open space/recreation purposes and therefore remain on the list of potential open space candidates. Each of the remaining open space candidate properties are identified in yellow on the accompanying Open Space Plan map.

Priority List and Recommendations

From the updated environmental resource database previously presented, each of the 98 remaining candidate properties was evaluated for the presence of the following features: rocky and/or wooded conditions; the presence of steep slopes, wetlands, aquifers, Category One waterways and their 300-foot buffers, floodplains, federal threatened or endangered species habitat, abandoned mines, Natural Heritage Priority Sites and/or historic properties; and finally whether or not the property is located within the Highlands Preservation Area. The results of this evaluation are presented in the accompanying tables.

Because conditions on the remaining candidate properties have not changed significantly since the 1998 plan was prepared, it was decided that the properties should not be re-evaluated against the Open Space Committee's property scoring system (see Appendix 1). Instead, the remaining properties were simply re-positioned on the priority list based on their previous rank, after removing those properties no longer eligible for or no longer requiring acquisition. These rankings are also presented in Table 26 (by block and lot) and Table 27 (by priority ranking).

As for those properties that are newly impacted by the Highlands Water Planning and Protection Act (i.e., candidates located in the Highlands Preservation Area) and the Surface Water Quality Standards (i.e., candidates within 300 feet of Category One streams), it is recommended that such features be addressed as an additional data point when considering projects for acquisition.

Prioritized project recommendations are included in Appendix 2. These recommendations were prepared by the Township's Open Space Committee as part of the 1998 Open Space Plan. As such, the priority rankings presented refer to each property's position in 1998. Tables 26 and 27 show both the 1998 and 2006 rankings for ease of cross-referencing.

Ordinances

A number of ordinances are proposed to protect the township's environmentally sensitive features. The reader should refer to the Land Use Plan element of this document for these ordinances.

2006 Priority Ranking	Block	Lot	Address	Acres	Assessment	Farm	Rocky	Step Slopes	Woodland	Wetlands	Aquifers	C1 / Buffer	Floodplain	Federal T & E Habitat	Abandoned Mines	NHP Sites	Preservation Area	Historic	Beaver Brook Watershed	Property Owner
41	58	22202	18	2.5	\$ 24,500		X	X	X	X			X	X		GP	X		Tomaru Leasing	
51	71	22203	4	2.4	\$ 241,300				X	X	X		X	X			X		Hammond, W & C	
70	102	22401	1, 1.01	51.2	\$ 4,348,600				X	X				X			X		Rockaway Assoc.	
50	70	30001	4	7.5	\$ 37,500					X	X	X	X	X			X		Samco Rockaway 90, Inc	
4	6	30001	14	5.6	\$ 154,900			X	X	X	X		X	X			X		Laidlaw Realty	
13	19	30001	23, 23.01	4.6	\$ 244,500									X			X		Reilly/Wasko	
36	52	30101	2, 5	222.4	\$ 910,900		X	X	X	X		X		X	X	GP/LD	X		Radiation Tech.	
87	128	30101	11, 18, 11, 19	29.3	\$ 29,300				X	X		X		X		GP	X		Sunrise POA	
18	28	30102	1, 2	33.2	\$ 332,000				X	X				X		LD	X		Radiation Tech.	
17	27	30102	8, 9, 10	32.7	\$ 177,300				X	X				X		LD	X		Radiation Tech.	
62	87	30102	11, 12	9.8	\$ 49,000				X	X				X		LD	X		Scott, J.	
54	77	30201	12	9.1	\$ 495,900		X		X					X			X		Miller, T & A	
75	110	30201	22	2.2	\$ 22,300				X					X			X		Elbackt, A	
52	73	30201	27	5.0	\$ 25,000				X	X				X			X		Krall, S	
79	114	30201	37	15.8	\$ 214,000				X	X				X			X		Faulkner, D	
80	116	30201	38	12.0	\$ 189,000				X					X			X		Wagner, R	
76	111	30201	42	6.1	\$ 126,100				X	X				X			X		Anderson, L	
56	79	30701	4	6.5	\$ 512,100				X	X	X		X	X					Riddell, E	
48	68	30701	36, 37, 38	5.0	\$ 157,500				X	X	X			X					Buchanan	
3	5	30701	43	41.3	\$ 264,300				X	X	X	X	X	X				X	Pisarcik	
6	10	30701	43, 02	2.1	\$ 127,200						X			X				X	Fisher, P & D	
22	35	30701	45	14.7	\$ 386,200		X		X	X		X	X	X				X	Wilson Koch, A	
5	7	30701	69, 70, 79, 82	33.7	\$ 505,700				X	X				X					Kapusta	
55	78	30801	28	51.2	\$ 255,800				X	X				X					Johanson Holding	
90	131	30801	31, 32, 33	9.8	\$ 1,300	X			X	X				X					JK Assoc. of NJ, Inc.	
77	112	30901	11	49.7	\$ 7,200	X			X	X				X					Koehler Estate	
49	69	30901	25	64.7	\$ 646,600				X	X				X					Johanson Holding	
65	90	31001	6	25.0	\$ 387,400				X	X				X		SR	X		Goldthwaite, S	
58	82	31001	10	36.0	\$ 325,900				X	X		X		X		SR	X		Butler, R	
40	57	31001	11	24.0	\$ 255,000				X	X				X		SR	X		Goldthwaite, S	
1	2	31001	17, 24	22.0	\$ 580,500	X			X	X				X			X		X	Koehler Estate

2006 Priority Ranking	1998 Priority Ranking	Block	Lot	Address	Acres	Assessment	Farm	Rocky	Steep Slopes	Woodland	Wetlands	Aquifers	C1 / Buffer	Floodplain	Federal T & E Habitat	Abandoned Mines	NHP Sites	Preservation Area	Historic	Beaver Brook Watershed	Property Owner
2	3	31001	26	47-49 LYONSVILLE RD	38.9	\$ 285,300	X			X	X		X		X			X		X	Koehler Estate
43	62	31101	55	UPPER HIBERNIA RD	27.2	\$ 27,200				X					X				X		Sarah's Woods POA
8	13	40001	1	GREEN POND RD	378.0	\$ 458,700				X	X		X		X		GP/LD				Lake End Corp.
12	18	40101	1, 20, 25, 26	1033 GREEN POND RD	546.6	\$ 1,790,500			X	X					X		GP				Green Pond Mountain Co.
57	80	40201	54-56, 60	GREEN POND RD	19.1	\$ 95,600				X		X			X		GP				Green Pond Mountain Co.
15	24	40701	21	LOWER MARCELLA RD	21.6	\$ 32,400					X				X		LD				Runge, J
16	25	40701	22,23	VALLEY RD	7.7	\$ 38,600				X	X				X		LD				United States of America
47	67	40701	27, 28	1029 GREEN POND RD	125.3	\$ 375,800		X	X	X					X		GP/LD				Green Pond Mountain Co.
82	122	40701	82	879 GREEN POND RD	10.5	\$ 365,200				X					X		LD				Krijger, P & P. Mabey
89	130	40701	84	889 GREEN POND RD	5.7	\$ 92,800					X				X		LD				Pivec, W
91	132	40701	87	839 GREEN POND RD	7.8	\$ 383,200			X	X					X		LD				Rickley, T
21	33	40701	91	859 GREEN POND RD	128.9	\$ 779,800			X	X					X		LD				Heller, W
92	134	40801	1,03	TIMBERBROOK RD	9.2	\$ 206,100			X	X					X		LD				Antonelli, M
93	134	40801	1,05	GREEN POND RD	8.2	\$ 190,900			X	X					X		LD				Antonelli, S
78	113	40801	17	GREEN POND RD-REAR	30.8	\$ 153,900			X	X					X		LD				Gural
83	123	40801	78	1050 GREEN POND RD	20.9	\$ 200,000		X	X	X					X		GP				Marogi, M
96	139	40801	85,01	JACOBS RD	26.0	\$ 265,200		X	X	X					X						Fox, M
68	94	40801	91	JACOBS RD	29.7	\$ 227,000			X		X				X		GP				Marogi, M
60	85	40801	101, 102	71 JACOBS RD	62.2	\$ 772,200					X				X		GP/LD				Willi, T
98	141	40801	110	55 JACOBS RD	4.5	\$ 126,000			X						X						Tornquist
88	129	40801	142	JACOBS RD	80.2	\$ 535,800			X	X					X		GP/LD				RNJ Contracting
86	127	40802	10	762 GREEN POND RD	9.0	\$ 165,900			X						X		LD				Rickley, T
24	38	40901	1	1085 GREEN POND RD	62.1	\$ 310,400						X			X		GP				Green Pond Mountain Co.
39	55	40901	4	GREEN POND RD	13.5	\$ 40,600			X	X	X				X		GP				Green Pond Mountain Co.
67	93	40901	19	1259 GREEN POND RD	10.6	\$ 281,500	X				X		X		X						Heider, T & G
		50002/																			
11	17	50003	1-3/11, 12, 14	25 CHARLOTTEBURG RD	145.3	\$ 864,200	X		X	X					X						Oakes et al.
61	86	50003	2	3 KOEHLER RD	31.1	\$ 388,600	X		X	X					X						Koehler Estate
23	36	50003	6	320-324 SPLIT ROCK RD	33.1	\$ 4,500	X			X					X						Koehler Estate
46	66	50003	8	328 SPLIT ROCK RD	15.9	\$ 438,500	X		X	X					X						Felts
37	53	50003	9	332 SPLIT ROCK RD	15.7	\$ 294,800	X		X	X					X						Sheninger

2006 Priority Ranking	Block	Lot	Address	Acres	Assessment	Farm	Rocky	Step Slopes	Woodland	Wetlands	Aquifers	C1 / Buffer	Floodplain	Federal T & E Habitat	Abandoned Mines	NHP Sites	Preservation Area	Historic	Beaver Brook Watershed	Property Owner
97	140	50003	21	10.0	\$ 30,100		X		X	X				X			X			Timothy, R
38	54	60001	6	27.5	\$ 120,700		X	X	X					X			X			Fletcher, P & D. Brault
42	60	60001	7	19.5	\$ 169,300		X	X	X					X			X			Esses, A
74	109	60001	11.03	6.8	\$ 130,000		X	X	X					X			X			Green Pond Realty
72	104	60001	13	21.3	\$ 241,500		X	X	X					X			X			Green Pond Realty
81	121	60001	14	10.9	\$ 664,700		X	X	X					X			X			Lentner, A
63	88	60001	19	6.1	\$ 595,900	X				X		X	X	X			X			Fitzpatrick, M
19	29	60101	28	3.2	\$ 426,400				X					X		GP	X			Tanis
44	63	60101	29	9.2	\$ 144,800				X	X				X		GP	X			Hladky, G & D
53	74	70001	5	115.3	\$ 345,800			X	X			X		X		GP	X			Rockaway Township

NHP Sites: GP=Green Pond Mountain Macrosite; LD=Lake Denmark; MH=Mount Hope Bog; SR=Splitrock Reservoir Site

Table 27
Updated Inventory of Open Space Candidates
(by Priority Ranking)

2006 Priority Ranking	Block Lot	Address	Acres	Assessment	Farm	Rocky	Steep Slopes	Woodland	Wetlands	Aquifers	C1 / Buffer	Floodplain	Federal T & E Habitat	Abandoned Mines	NHP Sites	Preservation Area	Historic	Beaver Brook Watershed	Property Owner
1	2	31001	17, 24			X		X	X				X			X		X	Koehler Estate
2	3	31001	26	\$ 580,500	X			X	X				X			X		X	Koehler Estate
3	5	30701	43	\$ 285,300	X			X	X	X			X					X	Koehler Estate
4	6	30001	14	\$ 264,300				X	X	X			X					X	Pisarcik
5	7	30701	69, 70, 79, 82	\$ 154,900			X	X	X	X			X			X		X	Laidlaw Realty
6	10	30701	43,02	\$ 505,700				X					X					X	Kapusta
7	11	22103	2	\$ 127,200					X				X					X	Fisher, P & D
8	13	40001	1	\$ 44,000					X			X	X					X	Liu, Chung-Fu
9	14	20001	5	\$ 458,700			X	X	X	X	X		X		GP/LD	X		X	Lake End Corp.
10	16	20001	5,05	\$ 78,000	X		X	X	X	X	X		X		GP	X	X		ILAC Realty
		50002/		\$ 5,454,000			X	X	X			X	X	X	GP	X	X		Mt. Hope & Wayerpower
11	17	50003	1-3/11, 12, 14				X	X	X				X						Oakes et al.
12	18	40101	1, 20, 25, 26	\$ 864,200	X		X	X	X				X			X			Green Pond Mountain Co.
13	19	30001	23, 23,01	\$ 1,790,500			X	X		X			X		GP	X			Green Pond Mountain Co.
14	20	10001	2	\$ 244,500						X			X						Reilly/Wasko
15	24	40701	21	\$ 257,600	X		X	X	X				X	X		X			ILAC Realty
16	25	40701	22,23	\$ 32,400					X				X		LD	X			Runge, J
17	27	30102	8, 9, 10	\$ 38,600				X	X				X		LD	X			United States of America
18	28	30102	1, 2	\$ 177,300			X	X	X				X		LD	X			Radiation Tech.
19	29	60101	28	\$ 332,000			X	X	X				X		LD	X			Radiation Tech.
20	31	11116	42	\$ 426,400			X	X	X				X		GP	X			Tanis
21	33	40701	91	\$ 11,679,000			X	X	X										Makor, Inc.
22	35	30701	45	\$ 779,800			X	X	X				X		LD	X			Heller, W
23	36	50003	6	\$ 386,200	X		X	X	X	X	X	X	X						Wilson Koch, A
				\$ 4,500	X			X	X				X			X*			Koehler Estate

2006 Priority Ranking	Block	Lot	Address	Acres	Assessment	Farm	Rocky	Steep Slopes	Woodland	Wetlands	Aquifers	C1 / Buffer	Floodplain	Federal T & E Habitat	Abandoned Mines	NHP Sites	Preservation Area	Historic	Beaver Brook Watershed	Property Owner
24	38	40901 1	1085 GREEN POND RD	62.1	\$ 310,400						X			X		GP	X			Green Pond Mountain Co.
25	39	10715 5, 9	209 MT HOPE AVE	3.1	\$ 251,300		X	X	X					X		GP	X			Gandolfi, M & T
26	42	20001 4	ERIE AVE	158.7	\$ 79,400			X	X	X										White Meadow Lake
27	43	10715 3	205 MT HOPE AVE	3.0	\$ 45,000		X	X	X					X						Schlomm, Franz
28	44	11401 12	RT 80	8.8	\$ 44,100				X	X				X						Wharton Enterprises
29	45	11401 47	MT HOPE AVE	5.0	\$ 24,800				X	X				X						Willis, E
30	46	11401 46	MT HOPE AVE	2.1	\$ 10,500				X	X				X						Donofrio, J & P
31	47	11401 45	MT HOPE AVE REAR	3.6	\$ 18,000				X	X				X						Ruschak, J & A
32	48	11401 44	MT HOPE AVE	3.1	\$ 79,200				X	X				X						Rockaway Township
33	49	11401 19	107 RICHARD MINE RD	5.9	\$ 255,100				X	X				X						Bixler
34	50	11401 23	91 RICHARD MINE RD	2.4	\$ 94,500				X	X				X						Cullen, J & M
35	51	11401 28	MT HOPE AVE	7.1	\$ 213,600				X	X				X						Mazzochi
36	52	30101 2, 5	LAKE DENMARK RD	222.4	\$ 910,900			X	X	X				X	X	GP/LD	X			Radiation Tech.
37	53	50003 9	332 SPLIT ROCK RD	15.7	\$ 294,800	X								X						Sheninger
38	54	60001 6	JACOBS RD	27.5	\$ 120,700		X							X						Fletcher, P & D. Brault
39	55	40901 4	GREEN POND RD	13.5	\$ 40,600			X	X	X	X			X		GP	X			Green Pond Mountain Co.
40	57	31001 11	475-481 SPLIT ROCK RD	24.0	\$ 255,000			X	X	X				X		SR	X			Goldthwaite, S
41	58	22202 18	205 GREEN POND RD	2.5	\$ 24,500		X	X	X	X			X	X		GP				Tomaru Leasing
42	60	60001 7	JACOBS RD	19.5	\$ 169,300		X	X	X					X						Esses, A
43	62	31101 55	UPPER HIBERNIA RD	27.2	\$ 27,200				X					X				X		Sarah's Woods POA
44	63	60101 29	JACOBS RD	9.2	\$ 144,800				X	X				X		GP	X			Hladky, G & D
45	65	11116 64	MT PLEASANT AVE	9.5	\$ 615,700									X						B. McEwan & Constr. Co.
46	66	50003 8	328 SPLIT ROCK RD	15.9	\$ 438,500	X			X	X				X						Felts
47	67	40701 27, 28	1029 GREEN POND RD	125.3	\$ 375,800		X	X	X					X		GP/LD	X			Green Pond Mountain Co.
48	68	30701 36, 37, 38	OLD BEACH GLEN RD	5.0	\$ 157,500				X	X				X						Buchanan
49	69	30901 25	38-46 MERIDEN RD	64.7	\$ 646,600				X	X				X						Johanson Holding
50	70	30001 4	UPPER HIBERNIA RD	7.5	\$ 37,500				X	X		X		X						Samco Rockaway 90, Inc.
51	71	22203 4	MERIDEN RD	2.4	\$ 241,300				X	X	X		X	X						Hammond, W & C
52	73	30201 27	HIBERNIA (REAR LAND)	5.0	\$ 25,000				X	X				X						Krall, S

2006 Priority Ranking	1998 Priority Ranking	Block	Lot	Address	Acres	Assessment	Farm	Rocky	Steep Slopes	Woodland	Wetlands	Aquifers	C1 / Buffer	Floodplain	Federal T & E Habitat	Abandoned Mines	NHP Sites	Preservation Area	Historic	Beaver Brook Watershed	Property Owner
53	74	70001	5	GREEN POND RD	115.3	\$ 345,800			X	X			X		X		GP	X			Rockaway Township
54	77	30201	12	34 N CAPE TRAIL	9.1	\$ 495,900			X	X					X			X			Miller, T & A
55	78	30801	28	132-138 DECKER RD	51.2	\$ 255,800				X	X				X						Johanson Holding
56	79	30701	4	28 OLD BEACH GLEN RD	6.5	\$ 512,100				X	X	X		X	X						Riddell, E
57	80	40201	54-56, 60	GREEN POND RD	19.1	\$ 95,600				X	X	X			X		GP	X			Green Pond Mountain Co.
58	82	31001	10	483 SPLIT ROCK RD	36.0	\$ 325,900			X	X	X		X		X		SR	X			Butler, R
59	83	20001	5.04	CATHY'S LANE	11.9	\$ 119,300			X	X	X				X			X			ILAC Realty
60	85	40801	101, 102	71 JACOBS RD	62.2	\$ 772,200					X				X		GP/LD	X			Will, T
61	86	50003	2	3 KOEHLER RD	31.1	\$ 388,600	X			X	X				X			X*			Koehler Estate
62	87	30102	11, 12	DENMARK RD	9.8	\$ 49,000				X	X				X		LD	X			Scott, J.
63	88	60001	19	1190 GREEN POND RD	6.1	\$ 595,900	X				X	X	X		X			X			Fitzpatrick, M
64	89	20001	5.02	MT HOPE RD	48.0	\$ 5,800	X	X		X	X				X		GP	X			ILAC Realty
65	90	31001	6	487 SPLIT ROCK RD	25.0	\$ 387,400		X		X	X				X		SR	X			Goldthwaite, S
66	91	11403	14	RICHARD MINE RD	26.7	\$ 1,335,000			X	X	X				X		MH				Call, J & A
67	93	40901	19	1259 GREEN POND RD	10.6	\$ 281,500	X				X	X			X			X			Heider, T & G
68	94	40801	91	JACOBS RD	29.7	\$ 227,000			X		X	X			X		GP	X			Marogi, M
69	98	11409	2	RICHARD MINE RD	8.2	\$ 123,000				X	X				X			X			All New Constr. Co.
70	102	22401	1, 1.01	GREEN POND RD	51.2	\$ 4,348,600				X	X				X						Rockaway Assoc.
71	103	22104	11	53 GREEN POND RD	11.6	\$ 651,300				X	X				X						Moscarelle, J.
72	104	60001	13	1120 GREEN POND RD	21.3	\$ 241,500	X	X		X	X				X			X			Green Pond Realty
73	106	11408	2	RICHARD MINE RD	15.2	\$ 323,000			X	X	X				X			X			Mine Hill Properties
74	109	60001	11.03	JACOBS RD	6.8	\$ 130,000	X	X		X	X				X			X			Green Pond Realty
75	110	30201	22	GREEN POND RD	2.2	\$ 22,300			X	X					X			X			Elbackt, A
76	111	30201	42	210 UPPER HIBERNIA RD	6.1	\$ 126,100			X	X	X				X			X			Anderson, L
77	112	30901	11	301-315 SPLIT ROCK RD	49.7	\$ 7,200	X			X	X				X						Koehler Estate
78	113	40801	17	GREEN POND RD-REAR	30.8	\$ 153,900		X		X	X				X		LD	X			Gural
79	114	30201	37	UPPER HIBERNIA RD	15.8	\$ 214,000			X	X	X				X			X			Faulkner, D
80	116	30201	38	UPPER HIBERNIA RD	12.0	\$ 189,000			X	X	X				X			X			Wagner, R
81	121	60001	14	1132 GREEN POND RD	10.9	\$ 664,700	X	X		X	X				X			X			Lentner, A

2006 Priority Ranking	Block	Lot	Address	Acres	Assessment	Farm	Rocky	Steep Slopes	Woodland	Wetlands	Aquifers	C1 / Buffer	Floodplain	Federal T & E Habitat	Abandoned Mines	NHP Sites	Preservation Area	Historic	Beaver Brook Watershed	Property Owner
1998 Priority Ranking																				
82	122	40701 82	879 GREEN POND RD	10.5	\$ 365,200				X					X		LD	X			Krijger, P & P. Mabee
83	123	40801 78	1050 GREEN POND RD	20.9	\$ 200,000		X	X	X					X		GP	X			Marogi, M
84	124	21201 46	ERIE AVE	53.6	\$ 268,000		X	X	X					X						White Meadow Lake
85	126	10601 41	E MC FARLAN ST	5.3	\$ 340,400				X					X		LD	X			Rockaway Assoc.
86	127	40802 10	762 GREEN POND RD	9.0	\$ 165,900				X					X		GP	X			Rickley, T
87	128	30101 11,18, 11,19	LAKE DENMARK RD	29.3	\$ 29,300				X		X			X		GP/LD	X			Sunrise POA
88	129	40801 142	JACOBS RD	80.2	\$ 535,800				X		X			X		LD	X			RNJ Contracting
89	130	40701 84	889 GREEN POND RD	5.7	\$ 92,800				X					X		LD				Pivec, W
90	131	30801 31, 32, 33	MERIDEN RD	9.8	\$ 1,300	X		X	X					X						JK Assoc. of NJ, Inc.
91	132	40701 87	839 GREEN POND RD	7.8	\$ 383,200				X	X				X		LD	X			Rickley, T
92	134	40801 1.03	TIMBERBROOK RD	9.2	\$ 206,100				X	X				X		LD	X			Antonelli, M
93	134	40801 1.05	GREEN POND RD	8.2	\$ 190,900				X	X				X		LD	X			Antonelli, S
94	135	11403 15	625 MT HOPE AVE	2.3	\$ 115,000				X	X				X		MH				Mt. Hope Dev. Assoc.
95	136	11403 32	MT HOPE RD	7.0	\$ 70,300				X	X				X		MH				SMC-DAG, Inc.
96	139	40801 85.01	JACOBS RD	26.0	\$ 265,200		X	X	X					X			X			Fox, M
97	140	50003 21	CHARLOTTEBURG RD	10.0	\$ 30,100		X		X					X			X			Timothy, R
98	141	40801 110	55 JACOBS RD	4.5	\$ 126,000				X					X			X			Tornquist

NHP Sites: GP=Green Pond Mountain Macrosite; LD=Lake Denmark; MH=Mount Hope Bog; SR=Splitrock Reservoir Site

APPENDIX 1
PROPERTY EVALUATION SYSTEM

Chapter 3

PROPERTY EVALUATION SYSTEM

INTRODUCTION

In order to provide for balanced consideration of the broad range of factors which need to be examined to determine the relative desirability of potential Township open space acquisition projects, a system was designed for evaluating these projects. The system was designed to arrive at objective judgments, expressed in numerical terms, of the relative merits of potential properties. The numerical scores which the projects received were used by the Open Space Committee to develop property priority lists for funding purposes.

The system, which is described in greater detail in the following paragraphs, categorized properties by the primary purpose or theme for including the property in the open space plan, and used a series of 16 factors specifically scaled for that theme to evaluate these potential projects.

EVALUATION PROCEDURES

Themes: Because potential acquisition projects vary so greatly in their primary purpose, three major project themes were used to group and evaluate properties. Those themes were basically what made the property worth saving as open space. They evolved from the committee charter which was developed from the original voter referendum and ordinance establishing the committee. Different point systems were used for each theme (or category of property) to take into account the importance of the individual factors toward accomplishing the primary purpose of the charter. A property was designated as a candidate under one theme even though it may theoretically fit all three. The themes were:

Watershed and Aquifer Protection:

Projects that primarily will protect natural water production and recharge areas to maintain and/or improve the future quality and quantity of water for Rockaway Township and surrounding municipalities.

Natural Habitat Protection:

Projects that primarily will preserve natural habitat for recognized endangered or rare wildlife or plant species.

Pristine / Natural / Greenways / Greenspaces:

Projects that primarily will preserve undeveloped land for posterity to use for passive recreation as well as protection of historical, archeological, and scenic sites. These projects include lands which also result in the connectivity of other dedicated open space areas.

Factors: The committee developed a set of 16 Factors which was used to evaluate each property. Each property was evaluated according to a sliding scale as to how well it matched the description of each of the 16 Factors. Specific evaluation standards for each Factor were used to determine where the property would be scored on the sliding scale. The exact point values assigned by the committee to each factor are described later in this chapter. For example, if a project met substantially all of the definition for a factor, it was awarded 100% of the points available. If it met less than all, it was awarded an appropriate amount less.

The 16 factors were in five groups. The first three groups corresponded to the three project themes: Watershed, Habitat and Other Open Space. The last two groups covered the Acquisition Characteristics and Efficiencies of the project and the usability of the property for different kinds of Recreation (active and passive).

PROPERTY EVALUATION SYSTEM FACTORS

A. Water Resource Protection

1. Beaver Brook Aquifer System (Beaver Brook and supporting watershed and recharge areas)

Evaluation Basis: The extent to which a project is a part of and /or provides water to the Beaver Brook Aquifer System.

100% - Key component of Beaver Brook itself.

75% - Major component of Beaver Brook Aquifer System or is major contributor to system as watershed or recharge area.

50% - Minor component of Beaver Brook Aquifer System or is minor contributor to system.

0% - Site is not a part of Beaver Brook Aquifer System nor does it contribute to it as a watershed or recharge area.

2. Contribution to Communities Water Supply (source for wells, headwaters for streams and rivers that are used by Rockaway Township and surrounding communities for potable water).

Evaluation Basis: The amount of communities that rely on the water contribution of this property.

100% - Major portions of Rockaway Township and downstream communities rely heavily on the water contributed by this property.

75% - Significant portions of Rockaway Township rely on the water contributed by this property.

50% - Small portions of Rockaway Township (local or neighboring properties) rely on the water contributed by this property.

25% - Small numbers of property owners use some water contributed by this property.

0% - Water production by or use from this property is not a factor.

3. **Water Resource Features** (prime aquifer recharge areas, undeveloped floodplains, wetlands, headwaters, springs, streams, lakes and ponds)

Evaluation Basis: The degree to which a project protects significant water resource features.

100% - Prime aquifer recharge area, significant headwaters areas containing seeps and springs, sites containing significant stretches of rivers and streams with protected upstream watershed.

75% - Areas containing significant stretches of vegetated river / stream or significant woodland wetlands or meadow wetlands, lakes or large ponds.

50% - Areas containing small segments of rivers and streams, considerable wetlands or ponds.

25% - Areas containing more than insignificant amounts of wetlands.

0% - Areas containing no significant water resource features.

B. Natural Habitat Preservation

4. **Endangered Species Habitat** (wildlife and plant species included on endangered or threatened species lists maintained by the U. S. Fish and Wildlife Service, N. J. Division of Fish, Game and Wildlife and the N. J. Division of Parks and Forestry's Office of Natural Lands Management).

Evaluation Basis: The ability of the habitat that will be preserved to support state or federal recognized endangered wildlife or plant species.

100% - Confirmed habitat for a federally listed species or critical habitat for state listed species.

75% - Confirmed habitat for a state listed species.

50% - Historically documented and currently viable habitat for state listed species.

0% - None of the above.

5. **Habitat for Native Wildlife and Plant Species**

Evaluation Basis: The importance of a project site as habitat for native wildlife and plant species (Number of different types and quantity of species) .

100% - Many species with high quantities.

75% - Few species with high quantities.

50% - Many species with low quantities.

25% - Few species with low quantities.

0% - Not applicable.

C. **Dedicated Open Space**

6. **Outstanding / Unique Natural Features** (Steep slopes, ridges, overlooks, wetlands, natural communities)

Evaluation Basis: The significance of the outstanding or unique natural features that the project will protect.

100% - Natural feature or habitat designated as a National Natural Landmark; or a natural feature or habitat on the New Jersey Register of Natural Areas.

75% - Rare natural feature or habitat of the State as identified in the Natural Heritage Database.

50% - Site supports high quality example of a natural feature of the Township.

0% - Site has limited or no special natural significance.

7. **Greenway / Connectivity**

Evaluation Basis: The degree to which the property contributes to connecting or establishing a corridor of open space.

100% - Property directly links already existing dedicated open space or recreational areas.

75% - Property expands or is adjacent to existing dedicated open space or recreational area.

50% - Property is adjacent to other properties being considered as potential dedicated open space.

0% - Property does not expand nor is adjacent to potential dedicated open space.

8. Historical / Archeological Value

Evaluation Basis: Extent and significance of the Historical and/or Archeological characteristics of the property.

100% - Contains sites of large numbers, size , or rare quality of historical or archeological significance.

50% - Contains site(s) of historical or archeological significance.

0% - No significant historical or archeological value.

D. Acquisition and Administrative Concerns

9. Acquisition Efficiency

Evaluation Basis: The anticipated cost and difficulty of acquiring the project site.

100% - Site can be acquired expediently at below fair market value through a full or partial donation.

75% - Site can be acquired expediently at fair market value or at below market value through a bargain or as part of a cooperative project.

50% - Site can be acquired at fair market value with no major difficulty foreseen.

0% - Site can be acquired at fair market value but major acquisition problems are foreseen.

10. Partnership Potential (Public Interest)

Evaluation Basis: Extent that other government or not for profit organizations could be enjoined to cosponsor and cofinance acquisition of property.

100% - Property meets objectives of other agencies and there has been expressed interest in cosponsoring and cofinancing the project.

50% - Property meets objectives of other agencies and there has been interest in cosponsoring the project, but no ability or interest in financial assistance for acquisition.

25% - Property may meet the objectives of other agencies and may develop interest in the future.

0% - Property most likely will not be cosponsored or cofinanced by any other agency.

11. Development Threat

Evaluation Basis: The probability of loss of the site for open space purposes.

100% - Incompatible development of the site is highly likely in the near future.

75% - Incompatible development of a significant portion of the site is probable in the not too distant future.

50% - Incompatible development of portions of the site is possible sometime in the future.

0% - Significant problems, restrictions prevent any practical development efforts.

12. Investment Security

Evaluation Basis: The importance of a project in protecting or increasing the value of existing state or township open space.

100% - Eliminates an existing or potential conflicting use(i.e. development) which would severely detract from public use and enjoyment of an already existing nearby dedicated open space or recreation area.

75% - Eliminates or prevents encroachment of incompatible development which would detract from public use and enjoyment of an already existing nearby

dedicated open space or recreation area.

50% - Protects against possible encroachment of incompatible development which would detract from an already existing nearby dedicated open space or recreation area.

0% - Project site is not important in preserving integrity of an existing area.

13. Defensibility

Evaluation Basis: The vulnerability of a project to potential disruptive or damaging activities originating outside of the site, once acquired.

100% - Sites where the surrounding land is effectively protected from incompatible development or site is of sufficient size to include adequate buffers to protect critical resource values.

50% - Sites where incompatible development of adjacent land is unlikely, or such development would not significantly detract from site's qualities.

0% - Sites which are highly vulnerable to adverse impact from activities outside of government/municipal lands.

14. Administrative Costs

Evaluation Basis: The anticipated expense of operating and maintaining the project. Things to be considered include change in tax base, public services, etc.

100% - Project reduces existing administrative costs for municipal, county or state government of operating and maintaining property. Loss of tax base is assumed.

75% - Project administered by government but no increased administrative cost anticipated. Loss of tax base is assumed.

50% - Project will result in a minimal increase in the administrative costs for the local or state government. Loss of tax base is assumed.

0% - Project will increase administrative costs with little or no increase in recreational opportunities.

E. Recreational Use

15. **Passive Recreational Potential** (hunting, fishing, hiking, horseback riding, etc. Minor alterations of the property are permitted for paths and foot trails only).

Evaluation Basis: The degree to which the site is accessible for and compatible with passive recreational activities.

100% - Site is readily accessible and passive recreational uses would not degrade the characteristics nor the quality of the dedicated open space.

50% - Site is not readily accessible or can only support some limited types of passive recreational activities without altering the characteristics or degrading the quality of the open space.

0% - Site is so sensitive or inaccessible that opportunities for passive recreation activities are very limited to non-existent.

16. **Active Recreation Potential** (Field sports, motorized traffic, boating, etc. Alterations to the property are normally required; i.e. ballfields, parking lots, boat ramps, etc.)

Evaluation Basis: The extent that the site contains or is adjacent to areas suitable for the township to use for active recreational purposes.

100% - The site contains areas that the Township can obtain through non-open space trust fund resources for active recreation or the site is adjacent to already established active recreational areas.

0% - The site is incompatible with active recreation.

FACTOR NUMERIC VALUES

The selection of the maximum point values for each factor was a process of balancing the different weights that the committee thought each one should have relative to the others. The first balance was the weight to be given to the reason for preserving the property, the theme, compared to the importance of the acquisition, administrative and recreational factors. The committee decided that the theme should carry twice as much weight as the other factors which dictated a two (2) to one (1) ratio. That coupled with a total number of points large enough to permit discrimination between properties lead to a total target of 150 points, 100 for the property theme and 50 for the other factors.

Initially all three theme groups of factors would have the same total of 100 points; however, these points would be spread differently according to the theme of the property. Up to 60 points could be awarded in the group that matched the property theme, and the remaining 40 points were divided equally between the other two theme groups. This process allowed each property to be given the most points in its strong area yet garner a significant number of points if it contributed in the other theme areas as well. This balanced the three themes against one another. This design was altered slightly to increase the emphasis for water resource protection and specifically the Beaver Brook Aquifer System as dictated by both the original voter referendum and ordinance that established the committees basic guidance. The committee chose to increase the water resource protection groups weight by 10 points and to put most of these points in the Beaver Brook watershed contribution area.

The balance between the acquisition and administrative factors and the recreational factors was set by the committee based on the importance of the acquisition issues over the recreational opportunities. The committee felt that most properties to be considered could support some recreation and, therefore, would not permit too much discrimination between properties. The other issues of acquisition and investment were significantly more important in determining which property the Township should pursue for open space. The point spread then was set at 40 / 10 for acquisition / recreation. The individual point total for each factor within each group was set based on the committee's best judgment of the relative importance of the factor within the group.

Table 1

**Rockaway Township Open Space
Property Evaluation System
Factor Values**

<u>Factors</u>	<u>Themes</u>		
	<u>Water</u>	<u>Habitat</u>	<u>Natural</u>
<u>A. Water Resource Protection</u>			
1. Beaver Brook Aquifer System	10	2	2
2. Contribution to Communities Water Supply	40	5	5
3. Water Resource \features	<u>20</u>	<u>8</u>	<u>8</u>
(group total)	(70)	(15)	(15)
<u>B. Natural Habitat Preservation</u>			
4. Endangered Species Habitat	10	45	10
5. Habitat for Native/Wildlife and Plant Species	<u>10</u>	<u>20</u>	<u>10</u>
(group total)	(20)	(65)	(20)
<u>C. Dedicated Open Space Preservation</u>			
6. Outstanding / Unique Natural Features	10	10	40
7. Greenway / Connectivity	5	5	15
8. Historical / Archeological Value	<u>5</u>	<u>5</u>	<u>10</u>
(group total)	(20)	(20)	(65)
<u>D. Acquisition and Administrative Concerns</u>			
9. Acquisition Efficiency	10	10	10
10. Partnership Potential	10	10	10
11. Development Threat	15	15	15
12. Investment Security	2	2	2
13. Defensibility	2	2	2
14. Administrative Cost	<u>1</u>	<u>1</u>	<u>1</u>
(group total)	(40)	(40)	(40)
<u>E. Recreational Use</u>			
15. Passive Recreational Potential	7	7	7
16. Active Recreational Potential	<u>3</u>	<u>3</u>	<u>3</u>
(group total)	(10)	(10)	(10)
<u>Maximum</u>	<u>160</u>	<u>150</u>	<u>150</u>

APPENDIX 2
PRIORITIZED PROJECT RECOMMENDATIONS

Chapter 7

COMMITTEE RECOMMENDATIONS

INTRODUCTION

The committee divided its recommendations into two types, project recommendations and administrative recommendations. The committee members were of the opinion that not only was it important to recommend a prioritized project list but it was also important to recommend actions for the Rockaway Township Administration and Council to take to ensure that this Master Plan was used effectively in the future planning and development of the Township.

PRIORITIZED PROJECT RECOMMENDATIONS

The committee reviewed the Open Space Projects described in Chapter 6 and determined that a simple priority system of using the highest priority rating of any property in a project would be used to order the Project Recommendations. The projects are presented here in that order with a one sentence description for each.

1. **Open Space Project BB-1. Preserve a corridor from Old Beach Glen Road north to Wildcat Ridge by preserving the following properties:**

<u>Site #</u>	<u>Owner</u>	<u>Block</u>	<u>Lots</u>	<u>Zoned</u>	<u>Priority</u>	<u>Rating</u>	<u>Acreage</u>	<u>Assessed Value</u>
003	D. Brown	30001	22	R88	1	136.6	295	\$600,000
002	Pisarcik	30701	43	R88	5	119	41.2	\$35,000
001	Kapusta	30701	70,79, 82	R88	7	116.3	37.6	\$96,400

2. **Open Space Project BB-2. Protect the headwaters of the Beaver Brook by preserving the Koehler Estate properties north of Lyonsville Road and west of Split Rock Road:**

<u>Site #</u>	<u>Owner</u>	<u>Block</u>	<u>Lots</u>	<u>Zoned</u>	<u>Priority</u>	<u>Rating</u>	<u>Acreage</u>	<u>Assessed Value</u>
606	Koehler Estate	31001	13-15,17,24	Qfarm	2	127.8	315	\$253,600
607	Koehler Estate	31001	26-28, 34,37,38	Qfarm	3	127.8	326	\$228,200

3. **Open Space Project BB-3. Expand the greenway created in recommendation 1 above by acquiring or preserving the adjoining properties:**

<u>Site #</u>	<u>Owner</u>	<u>Block</u>	<u>Lots</u>	<u>Zoned</u>	<u>Priority</u>	<u>Rating</u>	<u>Acreage</u>	<u>Assessed Value</u>
005	Meriden Assoc	30001	15	R88	4	119.3	50	\$280,000
009	Bordano	30701	43.02	R88	10	111.8	2	\$41,000
008	Robinson	30701	23	R88	19	96.2	4.6	\$72,000

4. **Open Space Project BB-4.** Preserve the available open space along the Hibernia Brook:

<u>Site #</u>	<u>Owner</u>	<u>Block</u>	<u>Lots</u>	<u>Zoned</u>	<u>Priority</u>	<u>Rating</u>	<u>Acreage</u>	<u>Assessed Value</u>
015	Kerzner	30001	14	R88	6	116.8	5.6	\$35,000
016	Kerzner	30001	11	R88	8	114.3	34.5	\$46,500

5. **Open Space Project BB-5.** An effort should be made to preserve two parcels of land owned by Hewlett Packard since they are excellent candidates for open space:

<u>Site #</u>	<u>Owner</u>	<u>Block</u>	<u>Lots</u>	<u>Zoned</u>	<u>Priority</u>	<u>Rating</u>	<u>Acreage</u>	<u>Assessed Value</u>
011	Hewlett Packard	22203	3	OBRL	9	112.8	37	\$1,650,000
012	Hewlett Packard	22203	2	B4	12	109.9	70	\$7,500,000

6. **Open Space Project GP-1.** Work with the Lake End Corporation to permanently place the undeveloped acreage in this parcel under development restrictions:

<u>Site #</u>	<u>Owner</u>	<u>Block</u>	<u>Lots</u>	<u>Zoned</u>	<u>Priority</u>	<u>Rating</u>	<u>Acreage</u>	<u>Assessed Value</u>
116	Lake End Corp.	40001	1	R88	13	104.9	378	\$341,900

7. **Open Space Project MH-1.** Preserve two large parcels of land that contain Mt. Hope Lake and the tributaries to the north:

<u>Site #</u>	<u>Owner</u>	<u>Block</u>	<u>Lots</u>	<u>Zoned</u>	<u>Priority</u>	<u>Rating</u>	<u>Acreage</u>	<u>Assessed Value</u>
602	Mt. Hope Dev Assoc	20001	5	Qfarm	14	103.9	575	\$38,000
138	Mt. Hope Dev Assoc	20001	5.05	R88	16	102.4	463	\$4,832,900

8. **Open Space Project LD-1.** Preserve a 77 acre tract of land off of Valley Road (off of Lake Denmark Road):

<u>Site #</u>	<u>Owner</u>	<u>Block</u>	<u>Lots</u>	<u>Zoned</u>	<u>Priority</u>	<u>Rating</u>	<u>Acreage</u>	<u>Assessed Value</u>
050	Johnson Off Bldg	40701	12, 13	R88	15	103	77	\$133,700

9. **Open Space Project GP-2.** Work with the Green Pond Mountain Association to permanently place the undeveloped acreage under development restrictions. Site #117 contains the cliff face and habitat at the extreme west side of the tract:

<u>Site #</u>	<u>Owner</u>	<u>Block</u>	<u>Lots</u>	<u>Zoned</u>	<u>Priority</u>	<u>Rating</u>	<u>Acreage</u>	<u>Assessed Value</u>
117	Green Pond Mt. Assoc.	40101	1	H20	18	97.1	548	\$862,500
128	Green Pond Mt. Assoc.	40901	1	R88	38	79.2	62	\$213,200

10. **Open Space Project MH-2.** Complete the greenway connection from the Mt. Hope Lake area toward the west, Mt. Hope Pond park, with the preservation of a additional 58 acres of land owned by MT. Hope Development Association:

<u>Site #</u>	<u>Owner</u>	<u>Block</u>	<u>Lots</u>	<u>Zoned</u>	<u>Priority</u>	<u>Rating</u>	<u>Acreage</u>	<u>Assessed Value</u>
601	Mt. Hope Dev Assoc.	10001	2	Qfarm	20	95.8	58	\$127,300

11. **Open Space Project HL-1.** Take action to preserve a portion of the 100 acres in the northwestern part of the area south of Green Pond Road:

<u>Site #</u>	<u>Owner</u>	<u>Block</u>	<u>Lots</u>	<u>Zoned</u>	<u>Priority</u>	<u>Rating</u>	<u>Acreage</u>	<u>Assessed Value</u>
038	3 Investors, Inc.	31101	78	R88	21	94.5	7.5	\$25,400
041	3 Investors, Inc.	31101	35	R88	34	80.7	65	\$146,000
039	3 Investors, Inc.	31101	25	R88	59	75.4	25	\$49,100

12. **Open Space Project LD-2.** Join in all efforts to ensure preservation of the "Girl Scout Camp."

<u>Site #</u>	<u>Owner</u>	<u>Block</u>	<u>Lots</u>	<u>Zoned</u>	<u>Priority</u>	<u>Rating</u>	<u>Acreage</u>	<u>Assessed Value</u>
106	Jersey City	30101	3	R88	22	92.1	82	\$167,900

13. **Open Space Project HL-2.** Preserve the 21.6 acre tract located on the east side of Upper Hibernia Road adjoining the Boy Scout Camp:

<u>Site #</u>	<u>Owner</u>	<u>Block</u>	<u>Lots</u>	<u>Zoned</u>	<u>Priority</u>	<u>Rating</u>	<u>Acreage</u>	<u>Assessed Value</u>
042	J. Nino Nuevo	50101	11	R88	23	89.6	21.6	\$98,900

14. **Open Space Project LD-3.** The committee recommends that preservation actions be initiated on any and all of six properties in an group earmarked as the "Egbert's Lake Group:

<u>Site #</u>	<u>Owner</u>	<u>Block</u>	<u>Lots</u>	<u>Zoned</u>	<u>Priority</u>	<u>Rating</u>	<u>Acreage</u>	<u>Assessed Value</u>
119	Macmullen	40701	21	R88	24	85.4	22	\$24,700
120	Unknown	40701	22	R88	25	85.4	7.7	\$27,300
048	John Pederson	40701	24	R88	26	85.4	25	\$27,300
045	All American Dev.	40701	63	R88	30	81.9	44.5	\$321,600
046	All American Dev.	40701	60	R88	32	81.3	23	\$56,600
044	W. Heller	40701	91	R88	33	81	91	\$208,800

15. **Open Space Project LD-4.** Attempt to preserve 47 acres of Radiation Technologies ("Reaction Motors") land that are on the east shore of Lake Denmark:

<u>Site #</u>	<u>Owner</u>	<u>Block</u>	<u>Lots</u>	<u>Zoned</u>	<u>Priority</u>	<u>Rating</u>	<u>Acreage</u>	<u>Assessed Value</u>
108	Rad. Technologies	30102	8,9,10	R88	27	84.3	22	\$94,700
107	Rad. Technologies	30102	1,2	R88	28	83.9	25	\$104,000

16. **Open Space Project SW-1.** Pursue preserving the 34 acre Makor tract that lies just east of the Rockaway Town Square Mall:

<u>Site #</u>	<u>Owner</u>	<u>Block</u>	<u>Lots</u>	<u>Zoned</u>	<u>Priority</u>	<u>Rating</u>	<u>Acreage</u>	<u>Assessed Value</u>
073	Makor, Inc.	11116	42	OR1	3	81.8	34.3	\$1,213,000

17. **Open Space Project SW-2.** Preserve the two lots adjacent to the Rockaway Township Open Space tract on the ridge line adjacent to the "Rustic Ridge TownHomes" on the border between Rockaway Township and Dover:

<u>Site #</u>	<u>Owner</u>	<u>Block</u>	<u>Lots</u>	<u>Zoned</u>	<u>Priority</u>	<u>Rating</u>	<u>Acreage</u>	<u>Assessed Value</u>
077	Szumlanski, Rysard	10715	9	R13	39	78.6	2.8	\$30,000
078	Schlomm, Franz	10715	3	R13	43	77.7	3	\$20,000

18. **Open Space Project SW-3.** Preserve the 12 acre Bodner tract that is adjacent to the future Fox Hill Retirement Community project off of Mt. Hope Road:

<u>Site #</u>	<u>Owner</u>	<u>Block</u>	<u>Lots</u>	<u>Zoned</u>	<u>Priority</u>	<u>Rating</u>	<u>Acreage</u>	<u>Assessed Value</u>
088	Bodner	11301	29	R20	40	78.6	11.7	\$87,700

19. **Open Space Project HL-3.** Preserve the 5.7 acres on the west side of Upper Hibernia Road in the middle of Wildcat Ridge:

<u>Site #</u>	<u>Owner</u>	<u>Block</u>	<u>Lots</u>	<u>Zoned</u>	<u>Priority</u>	<u>Rating</u>	<u>Acreage</u>	<u>Assessed Value</u>
036	Columbus West	30201	52	R88	41	78.2	5.7	\$28,100

20. **Open Space Project MH-3.** The 165 acre tract of land held by the White Meadow Lake Association should be preserved as dedicated open space:

<u>Site #</u>	<u>Owner</u>	<u>Block</u>	<u>Lots</u>	<u>Zoned</u>	<u>Priority</u>	<u>Rating</u>	<u>Acreage</u>	<u>Assessed Value</u>
103	White Meadow Lake Assoc.	20001	4	PRD2	42	78	165	\$158,800