

III. LAND USE CONTEXT

A. *State Development and Redevelopment Plan* **Planning Areas, Designated Centers and Endorsed Plans**

As of December 2007, the State Development and Redevelopment Plan of 2001 was still the official plan for the State of New Jersey. The Morris County Comprehensive Farmland Preservation Plan continues to support the New Jersey State Plan, adopted March 1, 2001.

As defined in the State Planning Act, the purpose of the State Development and Redevelopment Plan is to:

*“Coordinate planning activities and establish Statewide planning objectives in the following areas: land use, housing, economic development, transportation, natural resource conservation, agriculture and farmland retention, recreation, urban and suburban redevelopment, historic preservation, public facilities and services, and intergovernmental coordination.”*¹

This purpose is to be accomplished by the eight **State Planning Goals**² derived from the State Planning Act. These are:

- Goal #1: Revitalize the State’s Cities and Towns
- Goal #2: Conserve the State’s Natural Resources and Systems
- Goal #3: Promote Beneficial Economic Growth, Development and Renewal for All Residents of New Jersey
- Goal #4: Protect the Environment, Prevent and Clean Up Pollution
- Goal #5: Provide Adequate Public Facilities and Services at a Reasonable Cost
- Goal #6: Provide Adequate Housing at a Reasonable Cost
- Goal #7: Preserve and Enhance Areas with Historic, Cultural, Scenic, Open Space and Recreational Value
- Goal #8: Ensure Sound and Integrated Planning and Implementation Statewide

The eight goals are coordinated by the **General Plan Strategy**:

*Achieve all the State Planning Goals by coordinating public and private actions to guide future growth into compact, ecologically designed forms of development and redevelopment and to protect the Environs, consistent with the Statewide Policies and the State Plan Policy Map*³.

The 2001 State Plan contains over 300 policies concerning Planning Areas, and Centers to implement the General Plan strategy. Morris County reviewed the goals and policies of the 2001 State Plan as it related to agriculture. The specific policies and responses are contained in Appendix J.

¹ N.J.S.A. 52:18A-200(f)

² The New Jersey State Development and Redevelopment Plan, Adopted March 1, 2001, page 7

³ Ibid

1. **PLANNING AREAS**

The State Plan Policy Map designates **Planning Areas**, as “*areas for growth, limited growth, agriculture, open space, conservation and other appropriated designations.*”⁴ Planning Areas consist of regions that are over one square mile in size and share similar characteristics and policy intent. In each case, the *Delineation Criteria* is intended as a general guide for delineating the specific Planning Area. Local conditions may require flexible application of the criteria to achieve the Policy Objectives of this Planning Area. The seven Planning Areas are:

Metropolitan Planning Area (PA 1)

Delineation Criteria

1. Density of more than 1,000 people per square mile
2. Has existing public water and sewer systems, or physical accessibility to those systems, and access to public transit systems
3. Land area greater than one square mile
4. A population of not less than 25,000 people
5. Areas that are totally surrounded by land areas that meet the criteria of a Metropolitan Planning Area, are geographically interrelated with the Metropolitan Planning Area, and meet the intent of this Planning Area

Intent of the State Plan:

- provide for much of the state’s future redevelopment
- revitalize cities and towns
- promote growth in compact forms
- stabilize older suburbs
- redesign areas of sprawl
- protect the character of existing stable communities

Suburban Planning Area (PA 2)

Delineation Criteria.

1. Population density of less than 1,000 people per square mile
2. Natural systems and infrastructure systems reasonably anticipated to be in place by 2020 that have the capacity to support development that meets the Policy Objectives of this Planning Area. These systems include public water supply, sewage collection and treatment facilities, stormwater management, transportation, public schools and parks
3. A land area contiguous to the Metropolitan Planning Area
4. Land area greater than one square mile

Intent of the State Plan

- provide for much of the state’s future development
- promote growth in Centers and other compact forms

⁴ Ibid, page 2

- protect the character of existing stable communities
- protect natural resources
- redesign areas of sprawl
- reverse the current trend toward further sprawl
- revitalize cities and towns

Fringe Planning Area (PA 3)

Delineation Criteria

1. Population density of less than 1,000 people per square mile
2. Generally lacking in major infrastructure investments:
 - a. The circulation system is mainly provided by state and county roadways with a major emphasis on moving traffic through the area
 - b. Some Centers are served by public water and sewer
3. Land area greater than one square mile
4. Does not include land that meets the criteria of Rural or Environmentally Sensitive Planning Areas
5. Area is adjacent to Metropolitan or Suburban Planning Areas

Intent of the State Plan

- accommodate growth in Centers
- protect the Environs primarily as open lands
- revitalize cities and towns
- protect the character of existing stable communities
- protect natural resources
- provide a buffer between more developed Metropolitan and Suburban Planning Areas and less developed Rural and Environmentally Sensitive Planning Areas
- confine programmed sewers and public water services to Centers

Rural Planning Area (PA 4)

Delineation Criteria - land that satisfies criteria for **Environmentally Sensitive Planning Area (PA5), as well as the criteria below:**

1. Population density of less than 1,000 people per square mile
2. Area greater than one square mile
3. Land currently in agricultural or natural resource production or having a strong potential for production
 - a. soils of local importance as determined by the County Agriculture Development Board
 - b. prime and unique soils as determined by the U.S. Department of Agriculture Natural Resources Conservation Service
 - c. soils of statewide importance as determined by the New Jersey Department of Agriculture State Soil Conservation Committee

4. Undeveloped wooded tracts; vacant lands; large, contiguous tracts of agricultural lands; and other areas outside Centers predominantly served by rural two-lane roads and individual wells and septic systems, with some Centers served by sewers and public water

Intent of State Plan

- maintain the Environs as large contiguous areas of farmland and other lands
- revitalize cities and towns
- accommodate growth in Centers
- promote a viable agricultural industry
- protect the character of existing, stable communities
- confine programmed sewers and public water services to Centers

Rural/Environmentally Sensitive Planning Area (PA 4B)

Delineation Criteria – combination of both Rural (PA4) and Environmentally Sensitive (PA5) Planning Areas

Intent of State Plan

- maintain the Environs as large contiguous areas of farmland and other lands
- revitalize cities and towns
- accommodate growth in Centers
- promote a viable agricultural industry
- protect the character of existing, stable communities
- confine programmed sewers and public water services to Centers

Environmentally Sensitive (PA 5)

Delineation Criteria

1. Population density of less than 1,000 people per square mile
2. Land area greater than one square mile
3. One or more of the following features outside Centers:
 - a. trout production waters and trout maintenance waters and their watersheds
 - b. pristine non-tidal Category I waters and their watersheds upstream of the lowest Category I stream segment
 - c. watersheds of existing or planned potable water supply sources
 - d. prime aquifer recharge areas of potable water supply sources and carbonate formations associated with recharge areas or aquifers
 - e. habitats of populations of endangered or threatened plant or animal species
 - f. coastal wetlands
 - g. contiguous freshwater wetlands systems
 - h. significant natural features or landscapes such as beaches, coastal spits, barrier islands, critical slope areas, ridge lines, gorges and ravines, and important geological features (including those associated with karst topography) or unique ecosystems
 - i. prime forested areas, including mature stands of native species

Intent of State Plan

- protect environmental resources through the protection of large contiguous areas of land
- accommodate growth in Centers
- protect the character of existing stable communities
- confine programmed sewers and public water services to Centers
- revitalize cities and towns

Environmentally Sensitive/Barrier Islands Planning Area (PA 5B)

Delineation Criteria

Barrier islands and spits are coastal land forms caused by the periodic deposition and movement of sediment by ocean currents and wind. During storms they function as the mainland's barriers, a first line of natural defense, protecting offshore communities and sensitive bay habitats from the destructive forces of coastal storms.

For discussion and planning purposes, the State Plan classifies these geologic features as barrier islands since they share many common elements, most notable of which are a separation from the mainland by water and an infrastructure connection to the mainland, primarily for access, but occasionally for other services. New Jersey's coastal barrier chain extends from Monmouth to Cape May County.

Intent of the State Plan

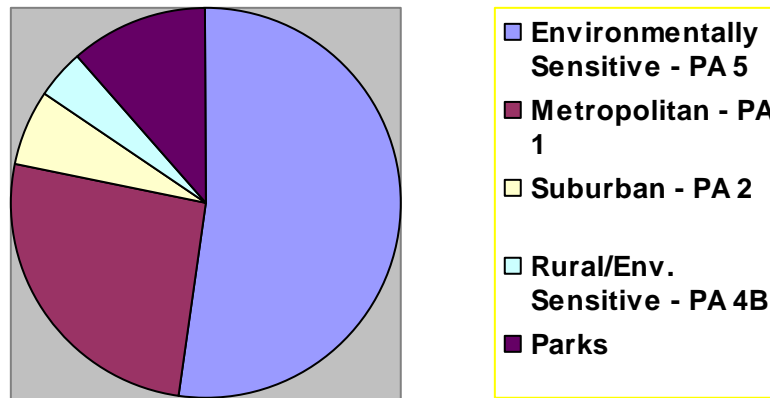
- accommodate growth in Centers
- protect and enhance the existing character of barrier island communities
- minimize the risks from natural hazards
- provide access to coastal resources for public use and enjoyment
- maintain and improve coastal resource quality
- revitalize cities and towns

SPECIFIC PLANNING AREAS IN MORRIS COUNTY

Based on the 2001 State Plan Map, Morris County contains all of the above mentioned Planning Area designations except for the Environmentally Sensitive/Barrier Islands Planning Area (PA5B).

The percentage distribution of Planning Areas in Morris County are:

- 50% - Environmentally Sensitive Planning Area (PA5)
- 25% - Metropolitan Planning Area (PA-1)
- 6% - Suburban Planning Area (PA2)
- 4% - Rural/Environmentally Sensitive Planning Area (PA4B)
- 11% - Parks – please see note below



Please note: **Parks** were mapped as a separate area and constitute 11% of the county. With the update of the State Plan, these percentages should only change slightly with a probable increase in the percentage of land in Parks; and a slight decrease in PA1 due to open space acquisitions and better mapping of existing parkland.

Most of the preserved and targeted farms in Morris County are located in PA5. The reason that most of these farms are not in PA 4 or 4B is that the mapping criteria requires a contiguous area of at least one square mile for a planning area to be delineated. With the exception of the Long Valley area, most farms and prime agricultural soils are not contiguous and therefore do not meet the one square mile threshold. The farms in PA5 are consistent with the Intent and Policies of the Environmentally Sensitive Planning area in that they maintain the Environs as open land, while providing economic benefit to the region.

Critical Environmental Sites, Cultural and Historic Sites

The State Plan also allows for the designation of Critical Environmental Sites (CES), and Cultural and Historic Sites (CHS)

- **CES:** areas less than one square mile in size that contain one or more of the environmental features that are the criteria for the Environmentally Sensitive Planning Area (PA 5).
- **CHS:** sites of significant historic, cultural, or scenic value. Can include greenways, trails, dedicated open space, historic sites and districts, archeological sites, scenic vistas and corridors, and natural landscapes of exceptional aesthetic or cultural value.). These areas are protected from the impacts of development and can be enhanced and/or restored to their natural and original manmade condition.

Parks, Natural Areas, and Military Installations

Because of their significant size and bearing on the landscape of New Jersey, the State Plan also recognizes Parks, Natural Areas (permanently preserved open space) and Military Installations. The delineation of Parks and Natural Areas is intended to provide for the continued maintenance and protection of these areas, and to help plan for and encourage interconnectivity of large swaths of contiguous open spaces. Picatinny Arsenal is the only mapped Military Installation, which is not subject to the State Plan as it is under federal jurisdiction.

2. DESIGNATED CENTERS

The State Plan identifies five different types of *Centers*, which are the preferred location for directing future growth. *Centers* are compact forms of mixed use development that are generally transit-oriented and pedestrian friendly, offering a variety of housing units, services, and employment. *Centers* are to be surrounded by *Environs*, where such uses as open space, agriculture and appropriate low intensity development are to take place as defined by the Planning Area. The five types of *Centers* are as follows⁵.

Urban Centers

Are generally the largest *Centers*, offering the most diverse mix of industry, commerce, services, residences and cultural facilities. There have been 8 Urban Centers identified by the State Planning Commission

Designation Criteria

1. Fully developed, with an infrastructure network serving its region
2. Population of more than 40,000
3. Population density exceeding 7,500 persons per square mile
4. Employment base of more than 40,000 jobs
5. Job-to-dwelling ratio of 1:1 or higher
6. Serves as the primary focus for commercial, industrial, office and residential uses in the Metropolitan Area, providing the widest range of jobs, housing, governmental, educational and cultural facilities in the region and providing the most intense level of transportation infrastructure in the state
7. In lieu of all the above, a history of population and employment levels that are consistent with the above six criteria
8. In conjunction with either of the above two options (criteria 1-6 or 7), the municipal boundary of the Urban Center is used in the application of the criteria and serves as the boundary of the Urban Center

⁵ The New Jersey State Development and Redevelopment Plan, Adopted March 1, 2001 pages 238-248.

Regional Centers

Are a compact mix of residential, commercial and public uses, serving a large surrounding area and developed at an intensity that makes public transportation feasible.

Designation Criteria

1. Functions/plans to function as the focal point for the economic, social and cultural activities of its region, with a compact, mixed-use (i.e., commercial, office, industrial, public) Core and neighborhoods offering a wide variety of housing types
2. Access to existing or planned infrastructure sufficient to serve projected growth
3. Has, within the Center Boundary, an existing (or planned) population of more than 10,000 people in Metropolitan and Suburban Planning Areas and more than 5,000 people in Fringe, Rural and Environmentally Sensitive Planning Areas
4. a gross population density of approximately 5,000 persons per square mile (or approximately three dwelling units per acre) excluding water bodies or more within the Center Boundary
5. Has/plans to have (within the Center Boundary) an employment base of more than 10,000 jobs in Metropolitan and Suburban Planning Areas and more than 5,000 jobs in Fringe, Rural and Environmentally Sensitive Planning Areas
6. Near a major public transportation terminal, arterial intersection or interstate interchange capable of serving as the hub for two or more modes of transportation; and
7. Land area of one to ten square miles

In addition, the following criteria apply specifically to new Regional Centers

- In a market area supporting high-intensity development and redevelopment, and reflects characteristics similar to existing Regional Centers regarding employment and residential uses
- Is a single- or limited-purpose employment complex that can be retrofitted to form the Core of a full service, mixed-use community, as described above
- Has a jobs-to-housing ratio of 2:1 to 5:1
- Identified as a result of a strategic planning effort conducted on a regional basis, which includes participation by the private sector, municipalities, counties and state agencies that represent the major actors in the development of the region and is identified in county and municipal master plans
- It is located, scaled and designed so as not to adversely affect the economic growth potential of Urban Centers

Town Centers

Traditional Centers of commerce or government throughout New Jersey, with diverse residential neighborhoods served by a mixed-use Core offering locally oriented goods and services.

Designation Criteria

1. While smaller than an Urban or Regional Center, it has a traditional, compact, mixed-use Core of development providing most of the commercial, industrial, office, cultural and governmental functions commonly needed on a daily basis by the residents of the Town

- and its economic region; it has neighborhoods providing a mix of residential housing types, with infrastructure serving both the Core and the neighborhoods
2. Has or plans to have, a population between 1,000 - 10,000 persons within the Center Boundary
 3. Has or plans to have, a gross population density of more than 5,000 persons per square mile excluding water bodies
 4. Has or plans to have a minimum gross housing density of three dwelling units per acre excluding water bodies
 5. Land area of less than two square miles
 6. Has or plans to have a jobs-to-housing ratio of 1:1 to 4:1
 7. Served by an arterial highway and/or public transit.

In addition, new **Town Centers** should meet the following criteria:

- Access to existing or planned infrastructure sufficient to serve projected growth throughout the Center
- Identified through a strategic planning effort involving the private sector, municipalities, the county and relevant state agencies; and is identified in local master plans

Village Center

Are primarily residential places that offer a small Core with limited public facilities, consumer services and community activities.

Designation Criteria

1. Is or plans to be a primarily a mixed-residential community with a compact Core of mixed-uses (for example, commercial, resource-based industrial, office, cultural) offering employment, basic personal and shopping services and community activities for residents of the Village and its Environs
2. Land area of less than one square mile
3. Has or plans to have a minimum gross population density of 5,000 people per square mile (excluding water bodies) and a minimum gross housing density of three dwelling units per acre
4. Existing and 2020 population should not exceed 4,500 people
5. Reasonable proximity to an arterial highway

In addition, new **Village Centers** should meet the following criteria:

- Identified in municipal and county master plans
- Capable of being served by a wastewater treatment system to meet applicable standards
- Identified as a result of a strategic planning effort with participation by the private sector, municipalities, the county and relevant state agencies and is identified in local master plans

Hamlet Centers

Small-scale, compact residential settlements organized around a community focal point, such as a house of worship, luncheonette, small park, or a civic building.

Designation Criteria

1. Functions or plans to function primarily as a small-scale, compact residential settlement with community functions (including, for example, a commons or community activity building or place) that clearly distinguishes it from the standard, single-use, residential subdivision
2. Has or plans to have a population of at least 25 people and not more than 250 people
3. Has or plans to have a minimum gross housing density of two dwelling units per acre
4. An area that encompasses, generally, 10 to 50 acres, unless wastewater systems are not reasonably feasible, in which case the boundary may encompass as much as 100 acres (wastewater systems are preferred and should be installed to assure compact development, unless there are mitigating environmental factors that make septic systems, and the resulting larger lot sizes, preferable)
5. Has or plans to have up to 100 dwelling units and a range of housing types within the Center.

In addition, a new **Hamlet** Center should meet the following criteria:

- Identified as a result of a municipal planning effort conducted with the participation of the county and reflected in municipal and county master plans
- A small, compact, primarily residential settlement. It should be planned to absorb the development that would otherwise occur on tracts of land in the Environs. A new Hamlet may require a small-scale public water, wastewater treatment, or potable water system. The total amount or level of development within both the Hamlet and the Environs should conform to the Policy Objectives of the Planning Area and to the capacities of natural resource and infrastructure systems that would exist in the Planning Area in the absence of the water and wastewater facilities
- Planned to be integrated into a regional network of communities with appropriate transportation linkages
- Planned and designed to preserve farmlands or environmentally sensitive areas.

DESIGNATED CENTERS IN MORRIS COUNTY

No farms are located within a Designated Center in Morris County. Currently there are six Centers in Morris County. All of these centers are existing, and no new centers have been proposed during the third round of Cross-Acceptance:

- Dover (Regional Center)
- Lincoln Park (Town Center)
- Mendham Borough (Village Center)
- Morristown (Regional Center)
- Mount Arlington (Village Center)
- Netcong (Town Center)

With the exception of Lincoln Park, all of the Centers are located within the Highlands Region. The Highlands Council is encouraging Centers to become receiving areas for Transfer of Development Rights; however, the details and critical components of the program have not been completed. The Centers in Morris County either have redevelopment projects that are underway, or are restricted by infrastructure capacity and other environmental constraints that will limit the centers' ability to absorb additional development.

These Centers are still important to the farming community. Produce and other goods from local farms are sold in farmers' markets located in the downtowns, which support the economy of the centers by attracting customers to these areas as well as providing additional income for the farmers.

3. ENDORSED PLANS

Only two municipalities in Morris County have filed Pre-Petition documents with the Office of Smart Growth: the Town of Dover and the Township of Mount Olive. The Town of Dover is seeking Plan Endorsement to maintain its Center Designation, which will expire on January 7, 2008. The Office of Smart Growth held a Pre-Petition meeting with the Township of Mount Olive on July 19, 2005, but there has been no further activity on endorsement by the Township. Most of the Township is within the Highlands Preservation Area over which the State Planning Commission has no jurisdiction.

Since the enactment of the State Planning Act in 1985, the County of Morris has participated in three rounds of the Cross-Acceptance resulting in the adoption of the 1991 State Plan and the 2001 State Plan. Since April 2004, the Morris County Planning Board has participated in the third Cross-Acceptance process for the update and revision of the State Plan. In preparation for Cross-Acceptance, County staff reviewed the "Farmland Preservation Priority/Classifications" maps provided by the Office of Smart Growth and submitted a sheet of corrections.

While the third round of Cross-Acceptance has ended, the State Planning Commission and the Office of Smart Growth have not completed drafting the Interim State Plan upon which the Assessment Study of the economic, environmental, infrastructure, community life, and intergovernmental coordination impacts of the Plan are to be based. The economic impact study is required to include: "Changes in property values, including farmland, State and local expenditures and tax revenues, and regulations" 52:18A-202.1. i. (1) and "Changes in the agricultural industry and the costs of preserving farmland and open spaces" 52:18A-202.1. i. (4). Upon completion of the Assessment Study, the proposed final State Plan will be drafted, released for public comment and subject to no less than six public hearings throughout the State.

STATE PLAN POLICY MAP FOR MORRIS COUNTY

On the following page please find the 2001 State Plan Policy Map that is currently in effect for Morris County including Planning Areas, and Centers. The Third Round of Cross-Acceptance has ended. This round included changes to the State Plan resulting from Negotiation Sessions between the staff of the Office of Smart Growth and the staff of the Morris County Planning Board.

Morris County has not yet seen or received a copy of the revised Cross Acceptance III map drafted by the Office of Smart Growth. Morris County staff was informed that the draft map would not be provided to us until the Interim State Plan is completed and the State Planning Commission authorizes its release. As a member of the State Planning Commission, the Department of Agriculture should have access to the draft revised State Plan Policy Map.



Special Resource Areas

The New Jersey Highlands Region is identified in the State Development and Redevelopment Plan as a Special Resource Area. Special Resource Areas are defined as “*an area or region with unique characteristics or resources of statewide importance which are essential to the sustained well being and function of its own region and other regions or systems- environmental, economic, and social – and to the quality of life for future generations*”.⁶ Following this designation in the 2001 State Plan, the Highlands Water Protection and Planning Act was signed into law in August of 2004.⁷

The Highlands Water Protection and Planning Act divides the Highlands Region into the Highlands Preservation Area and the Highlands Planning Area, each area representing approximately half of the entire Region. In the Preservation or “Core” Area, future development is severely limited. In the Planning Area, growth is encouraged where water and sewer capacity are available, and discouraged in environmentally sensitive areas.

HIGHLANDS ACT’S SPECIFIC IMPACT ON MORRIS COUNTY

- 32 of the county’s 39 municipalities (82 %) are within the Highlands Region
- 13 municipalities (33%) are included, in whole or in part, within the Highlands Preservation Area
- Highland’s Preservation Area impacts 188 square miles or about 39 percent of the total area of Morris County
- Highland’s Preservation Area contains most of Morris County’s remaining vacant land and unpreserved farmland, which will now be subject to substantial limitations on future development.

The Highlands Act has direct and immediate consequences on future land use, development and preservation. In the designated Preservation Area, municipal compliance with the Act is mandatory and both municipalities and counties will be required to revise their master plans and land use regulations to conform to the Highlands Regional Master Plan. In the Planning Area, compliance with the Highlands Regional Master Plan is intended to be voluntary and the Act provides incentives to encourage local governments to voluntarily opt into conformance with the Highlands Regional Master Plan. In doing so, municipalities will be required to revise their master plans and zoning ordinances to conform to the Highlands Plan. At present, a definition of “consistency” has not been established, and the degree to which changes may be required of local plans to achieve this status is unknown.

Since the majority of farmland in Morris County is located in the Highlands Preservation Area, it is subsequently severely restricted in terms of allowable non-agricultural development.

⁶ 2001 State Development and Redevelopment Plan, page 171.

⁷ Highlands Water Protection and Planning Act, P.L. 2004, c. 120.

Municipalities Partially or Wholly within *Highlands Preservation Area*:

Boonton Township	Chester Township	Denville Township ⁸
Jefferson Township	Kinnelon Borough	Montville Township
Mount Arlington Borough	Mount Olive Township	Pequannock Township
Randolph Township	Rockaway Township	Roxbury Township
Washington Borough		

Municipalities within the *Highlands Planning Area* Only:

Town of Boonton	Butler Borough	Chester Borough
Denville Township	Town of Dover	Hanover Township
Harding Township	Mendham Borough	Mendham Township
Mine Hill Township	Morris Plains Borough	Morris Township
Morristown	Mountain Lakes Borough	Netcong Borough
Parsippany-Troy Hills Township	Riverdale Borough	Rockaway Township
Victory Gardens Borough	Wharton Borough	

Municipalities *Outside the Highlands Region*:

Lincoln Park Borough	E. Hanover Township	Florham Park Borough
Madison Borough	Chatham Borough	Chatham Township
Long Hill Township		

The Highlands Act – Impact on Agricultural / Horticultural Development

As demonstrated in the chart below, the majority of farmland in Morris County is located in the Highlands Preservation Area. This land is subsequently very restricted in terms of allowable *non-agricultural* development. Agricultural and Horticultural development, however, as defined in the Highlands Act⁹, is conditionally exempt from Highlands Act and the NJDEP Highlands Rules.¹⁰

⁸ A portion of the Beaver Brook in Denville is included in the Preservation Area; however, no Denville land area is located in the Preservation Area.

⁹ Agricultural and Horticultural development are defined at N.J.S.A 13:20-3.

⁺¹⁰ N.J.S.A 13:20-3 and N.J.A.C. 7:38-1.4

Acreage of Farm Assessed Areas in Highlands Planning/Preservation Area:

Acreage of Preserved/ Not Preserved Farm Assessed Areas by Highlands Planning/Preservation Area (Acres)		
Farm Assessed Areas	Highlands Planning Area	Highlands Preservation Area
Preserved	1,586	5,358
Not Preserved	10,022	12,077
Total	11,609	17,435

The Highlands Act:

Although the Highlands Act defines Agricultural/Horticultural development or use as “exempt”, there are provisions in both the Act and the NJDEP Highlands Rules that will impact agricultural and horticultural operations in the Highlands Preservation Area.

- **Impervious Coverage** - Whenever there is an increase of agricultural impervious cover by 3% or more, the Highlands Act¹¹ requires the creation and implementation of a **farm conservation plan**. A similar increase in agricultural impervious cover by 9% triggers a Highlands Act requirement for the creation and implementation of a **resource management systems plan**. Both of these required plans are subject to the review and approval of the local soil conservation district. Violation of these requirements or the terms of the farm conservation or resource management systems plans can result in civil actions and/or penalties.
- **Landowner Incentives** - The Highlands Act authorizes the Highlands Council to work with the SADC and the Garden State Preservation Trust to establish incentives for landowners in the Highlands Region to preserve land under the farmland preservation program, in exchange for landowner agreement to permanently restrict impervious surface and agricultural impervious cover on the farm to a maximum of five percent of the total land area of the farm.¹²

NJDEP Highlands Rules:

The NJDEP has concluded that its regulations will have no direct impact on Agriculture/Horticulture use or development in New Jersey and, in fact, may have an indirect positive impact on the agricultural industry by reducing the amount of land taken out of agricultural/horticultural use.¹³

¹¹ N.J.S.A. 13:20-29.

¹² N.J.S.A. 13:20-6(w).

¹³ Highlands Water Protection and Planning Act Rules Proposed Readoption with Amendments: N.J.A.C. 7:38, page 261.

- NJDEP Highlands rules address only “major” Highlands development. Agricultural/Horticultural development and use is specifically excluded from this definition under N.J.A.C. 7:38-2.2(c).
- NJDEP Highlands rules state that a Highlands Applicability Determination (HAD) is not required for Agricultural/Horticultural use or activity. A HAD is also not required for any activity conducted by a landowner with an approved woodland management plan for the normal harvesting of forest products in accordance with a state approved forest management plan.¹⁴

CONCLUSIONS

- The Highlands Act and NJDEP rules may inhibit the potential conversion of agricultural land to other uses
- Creation of farm conservation plans and resource management systems plans, as well as the review, approval and monitoring processes associated with these plans, will result in new business costs for the Agriculture / Horticulture industries.
- The full impact of the NJDEP rules can not be fully calculated until after the Highlands Regional Master Plan (RMP) is completed. Once adopted, the RMP will be incorporated into the existing NJDEP Highlands Rules¹⁵ Further the NJDEP will consider the RMP in all its decisions in or affecting both the Planning and Preservation Areas.¹⁶
- There will be a continuing negative impact on agriculture and horticulture unless the loss in value from reduced development potential, and thus the decrease in landowner equity can be recaptured through appropriate compensation. Landowner equity is the collateral behind loans used to fund capital expenditures and operational expansions; without this source of funding the business of Agriculture / Horticulture will suffer.

Highlands Draft Regional Master Plan

The Highlands Council is charged with the development of a Highlands Regional Master Plan (RMP). Conformance with the RMP, including goals and recommendations related to Agriculture / Horticulture, will be mandatory for all communities and counties located (entirely or partially) in the Highlands Preservation Area. Amendments to NJDEP Highlands Rules based on the RMP may also place additional requirements on Agriculture / Horticulture uses. A draft version of this RMP was released in November of 2006; a second draft was released in November of 2007.

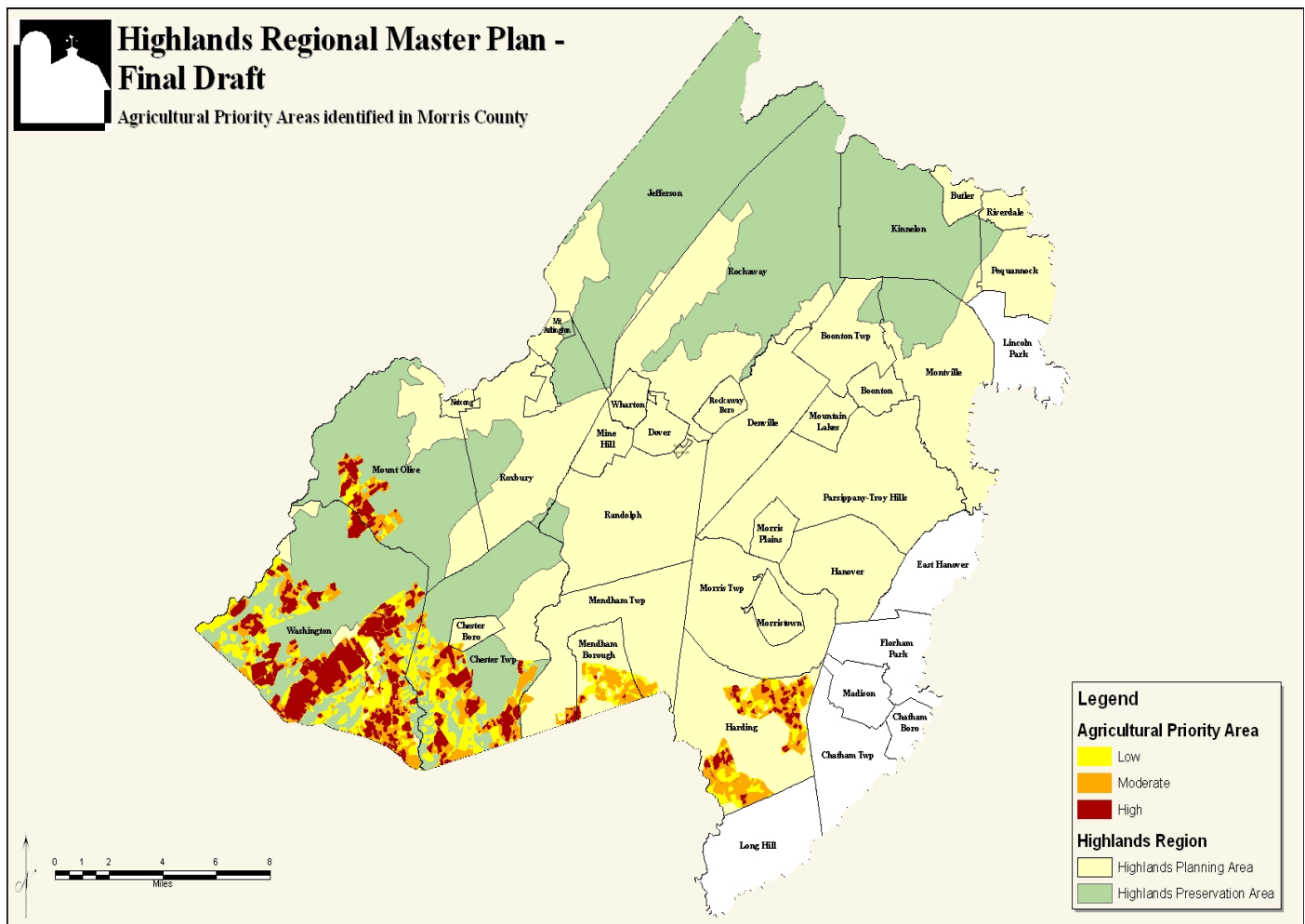
¹⁴ N.J.A.C. 7:38-2.4(b)6-7.

¹⁵ N.J.A.C. 7:38-1.1(g)

¹⁶ N.J.A.C. 7:38-1.1(l)

Both versions of the RMP identify **Agricultural Resource Areas (ARA)** and **Agricultural Priority Areas (APA)** in the Highlands Region based on unique criteria developed by the Highlands Council. These criteria differ from those used by the SADC, and in turn the MCADB, to define **Agricultural Development Areas (ADA)**. Despite this difference in criteria, there is substantial overlap in the ADA's identified in the Morris County Farmland Preservation Plan, and the ARA's identified in the draft Highlands Plan. Enhanced consistency is anticipated as a result of completion of the Highlands Conformance process which will occur within 15 months of adoption of the final Highlands Plan.

The November 2007 draft RMP defines APA's as a *subset* of the ARA's. These APA's are defined in three categories: Low-, Medium- and High-Priority. All together, there are about 28,285 acres identified as APA's in Morris County.



Land is evenly distributed between these three APA designations with roughly 1/3 of the acreage in each category; please see chart below.

Acreage of Agricultural Priority Area (APA) by Municipality			
District	Low	Medium	High
Chester Borough	27	29	0
Chester Township	2,521	1,939	1,414
Harding Township	1,281	2,474	769
Mendham Borough	593	780	74
Mendham Township	159	387	72
Morris Township	5	3	0
Mount Olive Township	355	730	727
Washington Township	4,491	3,546	5,909
Total	9,432	9,888	8,965

As demonstrated in the grid below, about 68% of all Morris County APA lands are located in the Highlands Preservation Area.

Acreage of Agricultural Priority Areas by Highlands Planning/Preservation Area		
APA Designation	Highlands Planning Area	Highlands Preservation Area
Low	2,813	6,619
Medium	4,391	5,498
High	1,883	7,082
Total	9,086	19,199

Farm assessed lands in Morris County located in the Agricultural Preservation Area totals 13,294 acres. Approximately 5,972, or 45%, of these acres are permanently preserved as farmland. A breakdown of this acreage is provided below.

Farm Assessed Acreage within Agricultural Priority Areas by Municipality (Acres) - Preserved				
District	Low	Medium	High	Municipal Total
Chester Borough	0	5	0	6
Chester Township	15	310	537	861
Harding Township	1	95	164	259
Mendham Borough	0	5	7	12
Mendham Township	0	12	35	46
Morris Township	0	0	0	0
Mount Olive Township	0	13	105	118
Washington Township	92	745	3,831	4,669
Total	108	1,185	4,679	5,972

Farm Assessed Acreage within Agricultural Priority Areas by Municipality (Acres) - Not Preserved				
District	Low	Medium	High	Municipal Total
Chester Borough	0	0	0	0
Chester Township	269	437	424	1,130
Harding Township	146	535	268	949
Mendham Borough	215	376	59	650

Mendham Township	39	119	37	194
Morris Township	0	0	0	0
Mount Olive Township	96	508	571	1,176
Washington Township	585	1,193	1,446	3,224
Total	1,350	3,167	2,806	7,323

Source: Morris County GIS, March 2008.

The 2007 version of the RMP also contains a “Land Use Capability Map” that includes six general “overlay” Planning Zones which relate to potential carrying capacity for development in the region. Of these six overlay zones, two are designated to identify areas with significant agricultural lands: the **Conservation Zone** and the **Conservation Zone / Constrained**. It is noteworthy that the **Conservation Zone / Constrained** lands may contain environmental features that render it unsuitable for agriculture. Acreage by overlay zone and municipality is provided in **Appendix A**.

The total acreage in each of the six overlay zones in Morris County is shown below.

MC Highlands Overlay Zone	Planning Area Acreage	Preservation Area Acreage
Protection	51,420	94,047
Conservation	2,495	3,109
Conservation / Constrained	3,832	6,562
Existing Community	70,466	11,478
Existing Community / Constrained	18,559	3,032
Lake Community	8,680	1,920

B. County Master Plan and Development Regulations

1. Master Plan

The 1975 Morris County Master Plan (MCMP) - Future Land Use Element does not specifically address farmland preservation or agriculture except to indicate the amount of agricultural land existing in 1970, estimated at 25,188 acres for the entire county. The 1975 Plan does, however note that “*the historical importance of agriculture in Morris County, although diminished over the last decades, was still significantly retained as of 1970.*” (Page 20). See Appendix K for the Goals and Objectives of the MCMP, Future Land Use Element, adopted April 1975.

The Farmland Preservation Plan Element can be considered consistent with the 1975 MCMP based on the following:

1. Two basic principles of the Plan are:
 - a.) All future development proceed only after careful analysis of environmental considerations; and
 - b.) Future growth is clustered, in order to preserve open land and to render utility service and public transportation feasible and economical. (page 7)

The preservation of farmland as proposed in the new plan preserves environmentally sensitive areas and farmland and, through preservation, diverts development pressures to areas of the county where higher density housing can be accommodated.

2. The *Future Land Use Plan Map* focuses new development in employment and population centers in the existing major Centers. These Centers generally avoid areas of existing farmland in the southwestern portion of the county. The 1975 MCMP identifies existing farmland as of 1970, which is shown as concentrated in the southern and southwestern portions of the County. The proposed Farmland Preservation Plan focuses its preservation efforts in these geographic areas.

Morris County adopted a Comprehensive Farmland Preservation Plan Element as part of its Master Plan in 2003. The current Farmland Preservation Plan updates and expands the scope of this element to include specific properties targeted for preservation.

2. Development Regulations

The Morris County Land Development Standards address several purposes, included in which is the purpose of providing recommendations that ensure that land development within the County proceeds in accordance with the goals and objectives of the County Master Plan and other adopted Plans. Accordingly, land use applications are reviewed against various adopted County Plans, including the Morris County Master Plan and the Morris County Farmland Preservation Plan, which is specifically referenced in Section 701(F) of the Development Regulations.¹⁷

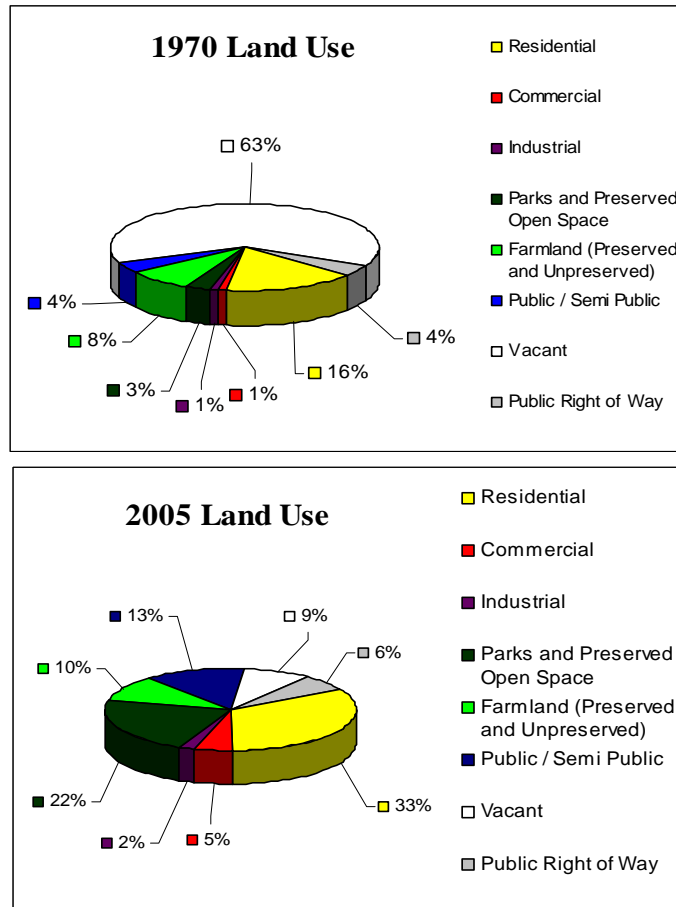
C. Current Land Use and Trends

Morris County encompasses about 308,000 acres (481 square miles). Land use in the county has changed dramatically since the last comprehensive land use survey was conducted in 1970, with that information subsequently included in the 1975 MCMP - Future Land Use Plan. As documented in the 1975 Plan, only 37% of the county was considered “developed” as of 1970.¹⁸ In contrast, approximately 81% of the county is currently developed, an *increase of 44% in developed land*. As a result only 19% of our county’s land remains assessed as either vacant land or farmland, based on current tax records. \

As illustrated in the accompanying charts, the use of land in Morris County has undergone substantial transformation. Vacant land, previously accounting for nearly 66% of the county, now comprises less than 10% of land area. This change is nearly matched by the doubling of land devoted to residential use, which is now the largest land use in the county. Land devoted to parkland and preserved open space has increased over seven-fold to become the second largest use of land in the county.

¹⁷ Morris County Land Development Standards, September 23, 1998, as Amended May 12, 2004p. page 77.

¹⁸ Morris County Master Plan, Future Land Use Element, 1975, pg. 20. At that time, land devoted to agriculture was also considered “developed land.”



Source: 1975 Morris County Future Land Use Plan Element and Morris County Department of Planning, Development and Technology. All figures rounded.

1. Vacant Lands

For the purposes of this report, vacant land is defined as all undeveloped properties listed as vacant in the county tax records that is in private ownership.¹⁹ Making up approximately 63% of the county in 1970, by the end of 2005 vacant land accounted for only 9% of all county land. This land is scattered throughout the county in relatively small parcels. As expressed herein, the vacant land category does not include lands reserved for watershed protection or devoted to wellhead protection, (such as the Alamatong well fields); even though tax assessment records sometimes identify these as “vacant” lands. These lands are included in this analysis in the public / semi-public category. Agricultural lands are also not considered vacant and are indicated separately in this report.

¹⁹ Morris County MOD IV Real Property records.

2. Residential

Land devoted to residential development currently represents the greatest amount of developed land in the county, rising from 16% to 33% between 1970 and 2005. Single family detached housing was and continues to be the dominant residential use. It currently makes up 69% of all county housing²⁰, down slightly from 76% in 1970.²¹ The bulk of this difference may be attributed to a significant rise in the development of attached housing types (townhouses and condominiums). Much of this new attached housing was completed in the 1980's and early 1990's, often in response to state affordable housing mandates and related court settlements. More recent years have seen increased development of senior-oriented housing, primarily in attached housing types and assisted living facilities.

With the rise in land devoted to residential use there has also been a rise in the density of housing units and residential population. In 1970, there were 113,033 housing units of all types in the county, with a resulting housing density of 235 housing units per square mile.²² By 2000, the number of housing units rose to 174,379, generating a housing density of 372 units per square mile.²³ During this same period, population density rose from 818 persons per square mile to 1,003 persons per square mile.²⁴ While residential land use is dispersed throughout the county, the highest concentrations are generally located in the central and eastern portions of the county.

3. Commercial and Industrial

Overall, land in commercial use (non-farm, office and retail) and industrial uses rose from a combined total of just 2% in 1970 to about 7% in 2005.

a. Commercial

Commercial land use rose from 1% in 1970 to 5% in 2005. This rise represents significant expansion of corporate office and business campuses, generally in the eastern portion of the county, followed by gains in retail and service uses, located primarily along established highway corridors.

Morris County has long been a prime location for quality office development, and is currently leading the state in office space with over 27 million square feet.²⁵ Much of this office and business development occurred in response to the northeast New Jersey economic expansion of the 1980's and the completion of the interstate highway system (including Routes 287, Route 80 and nearby Route 78), and major state highways such as Route 24. In more recent years, office development has slowed considerably. In fact, the county has been experiencing relatively high office vacancy rates for several years for all classes of office, particularly higher quality and

²⁰ 2006 Morris County Data Book, No. 28. U.S Census Bureau, Census 2000.

²¹ Morris County Census Trends 1970-1980, State Data Center, pg. 34, US Census of Population and Housing.

²² Ibid.

²³ 2006 Morris County Data Book, No. 28. U.S Census Bureau, Census 2000.

²⁴ NJ Department of Labor, Census Bureau 2000 SF1. NJ Department of Labor and Workforce Development, Population Density, NJ Counties 1930-1990.

²⁵ Morris County Economic Development Corporation.

more expensive “Class A” and “Class B” space.²⁶ The declining amount of vacant lands combined with a large supply of unused space indicate a near-term future in which new large scale development of office use is likely to be relatively modest.

b. Industrial

The amount of land devoted to industrial uses has risen slightly, up from 1% of total land in 1970, to just 2% in 2005. While traditional heavy manufacturing uses have declined here and throughout the state, there have been some increases in smaller specialty manufactures, assembly operations and associated warehousing. Examples of significant contributors in this category include the Sussex Turnpike Industrial Campus in Randolph Township, the Iron Mountain Industrial Park in Mine Hill and perhaps most notably, the International Trade Center and Foreign Trade Zone in Mount Olive, which includes nearly 684 acres and 7 million square feet of mixed office, industrial and warehouse development. In 2005, there were approximately 116 million square feet of combined commercial, office and industrial space located in Morris County.²⁷

4. Parks and Open Space

In 1970, parks accounted for less than 3% of total land area; by 2005, public parkland and preserved open space in Morris County accounted for about 22% of county land.²⁸ This increase is primarily the result of local and county open space funding initiatives, aggressive parkland/open space acquisition, combined with the purchase of large tracts of land by the state for wildlife management purposes.

Federal open space holdings include the Great Swamp National Wildlife Refuge and the Morristown National Historic Park (Jockey Hollow). State parks and wildlife areas are located primarily in the western and central areas of Morris County, while county and municipally-owned parklands are more widely dispersed.

5. Agricultural Lands

The 1975 Land Use Plan reported that 8% of Morris County was devoted to agricultural use. By 2005, this figure rose to 10%. Given the amount of development that has occurred, one would intuitively expect the current amount of farmland to be less than reported in 1975. This “increase”; however, more appropriately represents a difference in the manner in which agricultural land was defined in 1970 and how it is defined today. The earlier analysis of agricultural lands was determined by interpretation of aerial photographs, while the current land use analysis of agricultural lands, and all other land use categories, is based on tax assessment records, which include specific parameters as to what is to be considered in the definition of farmland and farm qualified.²⁹ For this study, “agricultural land” was based on analysis of farm

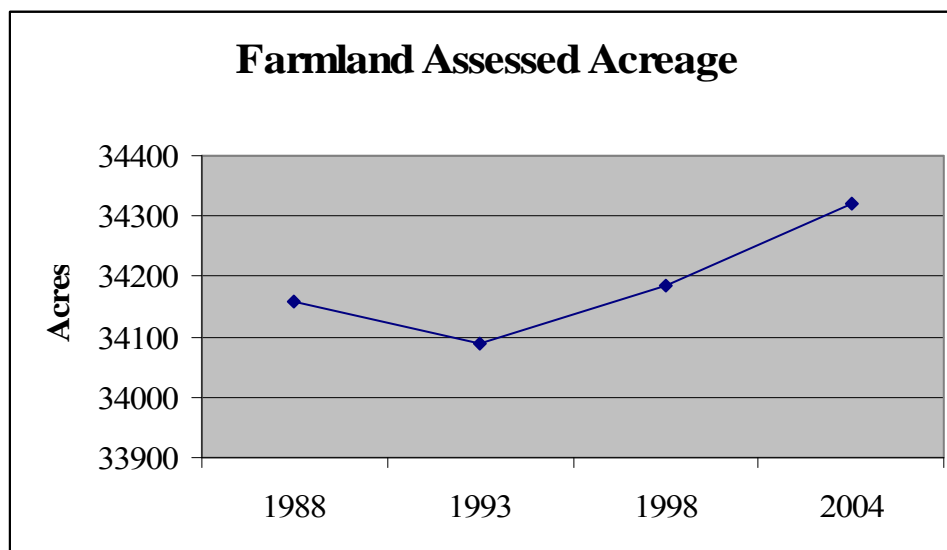
²⁶ Ibid.

²⁷ 115,896,610 s.f. 2005 Morris County Cross Acceptance Report, amended 3/2/06.

²⁸ Not including farmland.

²⁹ Based on tax assessment of farm qualified (3B) lands - Morris County GIS Database, May 2005. Includes farmhouse “exception” (3A) properties. Current tax requirements require that land must be actively devoted to

“assessed” lands. The majority of these farm assessed properties are located in the northern and southwestern portions of the county. Over the past twenty years, the level of farm assessed property in the county has been steady. Since 1988, the amount of farm assessed acreage has been quite consistent, ranging from a low of 34,089 in 1993, to a high of 34,322 in 2004.



6. Public / Semi-Public Lands

Public / Semi-Public is a broad land use category encompassing a variety of public and other *semi-public* uses. Semi-public uses are publicly or privately owned, typically providing a specific public benefit and often tax exempt. Public and semi-public uses are defined in this report to include railroads, schools, libraries, municipal facilities (non-park/open space) and other local, county, state and federal non-park properties, communications facilities, churches, correctional facilities and cemeteries. Additionally, this category includes properties used for watershed and wellhead protection, including all utility authority properties. These watershed protection lands currently account for over 1,600 acres throughout the county. Finally, this category also includes the federally owned Picatinny Arsenal Military Reservation, which covers nearly 6,300 acres.

The 1975 Land Use Plan reported that about 4% of the county was devoted to public and semi-public use in 1970³⁰ while 13% of the county was devoted to this use in 2005. Increases in the Public / Semi-Public land use category reflect the addition of public facilities that have resulted largely from population growth and subsequent demands for public services.

agriculture for 2 years, must be at least 5 acres and gross sales must average at least \$500 plus \$5 per cropland acre and \$.5 per woodland acre for each acre over 5, or provide evidence of anticipated yearly gross sales amounting to the minimum requirements.

³⁰ The 1975 Land Use Plan includes separate categories for public / semi public, transportation/utilities/communications and cemeteries. These 3 categories are combined into public / semi-public to make comparison with 2005 figures.

7. Roads and Highways

Road and highway rights-of-way increased from about 4% of the county in 1970 to about 6% in 2005. Part of this increase can be attributed to major road building projects, including Route 287, Route 80 and Route 24. Other improvements reflected in this figure include state and county intersection improvements, road realignments and roadway widening. Other contributing factors are the many new “local” roads constructed as part of new residential and commercial subdivisions.

8. Future Development - Potentially Developable Lands

Vacant lands and large unpreserved farm assessed lands provide the bulk of *potentially* developable land remaining in the county. Available vacant lands, (i.e. lands that have not been previously developed) and all unpreserved farmland combined make up roughly 52,800 acres or 17% of all county land.³¹ Not addressed in this amount are potential redevelopment lands, i.e., underutilized commercial areas, abandoned industrial sites and brownfields, parking lots or other underutilized property that may provide opportunities for redevelopment.³²

The amount of “vacant land” has diminished substantially over the years, and where these parcels still exist, most are relatively small, infill properties. Many are undersized or contain other constraints to development. Remaining unpreserved agriculturally assessed parcels are often larger and typically more likely to be developable, although some parcels with agricultural assessment may be relatively small with little additional development potential. For larger farmland assessed properties, the same attributes which make them suitable for farming (well-drained, relatively, free of steep slopes and significant wetlands), often make them generally capable of sustaining development.

The combined total of vacant and unpreserved farmland assessed properties provides only an indication of potential developable lands. Environmental constraints impacting these properties often reduce their overall development potential.

9. Environmental Constraints

Of all vacant land and unpreserved farm assessed property,³³ about 32% can be readily identified as constrained by specific environmental features. Constraints considered include steep slopes,

³¹ As of 2005, vacant land accounted for about 27,500 acres and unpreserved agriculturally assessed land accounted for about 25,300 acres. Agriculturally assessed lands included related residential structures. Note: Successful farmland preservation efforts by state, county and local government continues to reduce the amount of farm assessed land that may be developed for non-farm purposes. These acreage figures are in a constant state of change as land is developed or preserved.

³² Methodologies for assessing properties with redevelopment potential are currently being reviewed by MCDPDT staff.

³³ 52,800 acre figure rounded from Morris County GIS. Does not include brownfields, underutilized and other potential redevelopment sites. No adjustments have been made for lands with development approvals or lands currently being considered for preservation as open space or farmland.

DEP identified wetlands, Category One streams, water bodies and 100 year floodplains.³⁴ This leaves roughly 68% or about 36,100 acres “potentially” available for development.³⁵

This remainder may be further restricted from substantial development due to the shape and geometry of individual parcels and/or the specific location of environmental constraints on these parcels. Some of these lands may also have been targeted for preservation or have existing development approvals. Land may also be restricted due to other environmental constraints or local environmental standards not identified in this analysis. Still more land may be restricted by other state environmental regulatory programs, such as those addressing septic systems, wellhead protection, and sewer system extensions and treatment upgrades.

Finally, of the estimated 36,100 acres of “potentially” developable unconstrained land, the Highlands Act places more than half i.e. 19,000 acres (53%), within the Highlands Preservation Area. Development potential in this area is extremely limited due to NJDEP standards for septic systems, impervious cover, land disturbance and other restrictions.

Unconstrained vacant and unpreserved farm assessed lands located in the Highlands Planning Area equal about 15,900 acres. While no additional restrictions are placed on these lands at present, they too may eventually be subject to increased NJDEP environmental restrictions on development as a result of Highlands Regional Master Plan recommendations. The Highlands Regional Master Plan and related NJDEP standards may allow additional development or redevelopment in designated centers, brownfields, or other designated areas, but the extent to which this may be permitted is not presently known.

10. Market Trends

Changing market and economic conditions will influence future development. For example, the national and regional economic expansion of the 1980’s prompted a demand for corporate office space, stimulating a powerful wave of office construction throughout Morris County and northeastern New Jersey. During the 1990’s, excess office construction and economic recession contributed to high office vacancy rates and an end to this building trend. By this time, however, this period of construction had substantially changed the physical and economic landscape of the county. Although new office construction has not ended, it is no longer the driving force it once was. In more recent years, market trends have supported the development of more contemporary retail commercial development such as big-box retail, power centers, national chain retailers and service uses, often challenging the viability of smaller, independent retailers. With regard to residential development in the 1980’s, market forces resulted in the creation of many large scale townhouse and condominium developments. Even so, single family housing development continued to dominate the market.

In recent years, the overall decrease in the amount of developable land, coupled with Morris County’s desirable location, has increased land values significantly. With the increase in land values, the size of single family homes has also increased. On many older developed lots, the

³⁴ 25% slope and higher. Includes estimates for associated required buffer areas.

³⁵ Of vacant and unpreserved, about 16,700 acres are identified as constrained and approximately 36,100 acres are identified as unconstrained by Morris County GIS.

value of the land is often greater than the dwelling. Often when these properties are sold, the smaller homes are razed and replaced by much larger houses. Another trend is the purchase of several adjacent lots, the removal of all structures, and their replacement with very large and expensive dwellings. If this trend continues, many moderately priced homes may be removed from the county's housing stock.

Also of note is the increasing market for senior-oriented housing. The demand for senior living arrangements, from smaller "empty-nester" single family dwellings to large scale congregate care and assisted living facilities, has greatly increased throughout New Jersey. Following demographic patterns, the market for this housing continues to be strong and some municipalities, conscious of the ratable benefits associated with this type of development, have been receptive to senior housing proposals. This market should continue to be strong as increasing numbers of baby boomers seek alternative housing for their retirement years.

11. Projections

During creation of the Morris County State Development and Redevelopment Plan Cross-Acceptance Report in 2005, local municipalities were surveyed to identify existing and projected residential and nonresidential development to the year 2025. Given the current scarcity of vacant developable land and the demand for housing, Morris County may be essentially "built-out" by 2025.

The survey reported the existence of about 184,000 housing units and approximately 116 million square feet of commercial and industrial use in Morris County.³⁶ When asked to anticipate future development, municipalities projected an overall increase of over 14,000 housing units and 17 million square feet in additional commercial and industrial use by the year 2025.³⁷

Morris County is developing a parcel based "build-out" model that will be used to estimate build-out potential for all municipalities. This model will not specifically target the year 2025, but will attempt to define the ultimate and practical full build-out potential of remaining lands within the county, including vacant properties, unpreserved farms and the likely redevelopment and/or intensification of currently underutilized properties.

Future land use projections are necessary to prepare for future needs, but due to the changing nature of state and local government regulations, altered market conditions and increased sensitivity to environmental constraints, these projections can only guide prudent planning. The fact that Morris County is largely developed may reduce the margin of uncertainty, but changing social and economic demands and increased redevelopment pressures will assure a constant state of land use evolution and a need for appropriate government response.

³⁶ 2005 Morris County Cross Acceptance Report. The number of units reported is slightly higher than U.S. Census Bureau sampling data.

³⁷ These projections were made prior to the release of NJDEP Highlands rules; therefore, figures may be considerably overstated given Preservation Area development restrictions.

D. Sewer Service Areas / Public Water Supply Service Areas

1. Wastewater Treatment

Wastewater treatment is generally accomplished by one of three main systems; municipal/regional systems, non-municipal systems (package plants) and on-site systems (septic systems). The limits of treatment and disposal are governed by the NJDEP permitting criteria, by wastewater treatment technologies and by the capacity of land and waterways to assimilate treated waste within parameters necessary to maintain public health and natural ecosystems.

a. Municipal Regional Systems

Municipal/regional systems include the sanitary sewer conveyance system, i.e., the pipelines that run under the streets, and the sewage treatment plants where sewage is treated and later discharged. A “sewer service area” includes areas that have sewer infrastructure, and/or have an NJDEP approved Wastewater Management Plan, allowing for the extension of sewer infrastructure.

At present, 19 public sewer service facilities serve Morris County and approximately 43% of Morris County is within an approved sewer service area.³⁸ The 19 current sewage facilities have an estimated treatment capacity of about 67 million gallons per day (MGD).³⁹ Much of this capacity is; however, already being used and/or is committed or otherwise restricted by NJDEP requirements. Adjusting for existing flows, committed but unused capacity and NJDEP operating requirements, the remaining available “hypothetical” capacity to serve new development is estimated to be about 11.6 MGD or about 17% of the total capacity.⁴⁰ This figure can be characterized as “hypothetical” since its use is limited by individual facility situations. Some facilities have little or no remaining capacity, while others have capacity but may be unable to utilize it due to physical, contractual or regulatory limitations.

b. Wastewater Management Planning Agencies

There are 24 Wastewater Management Planning Agencies in Morris County that oversee local sewer service planning and associated wastewater treatment facilities.⁴¹ These agencies are responsible for the preparation of Wastewater Management Plans (WMP), which must be consistent with the overall Statewide Water Quality Management Plan and State Water Quality Management Plan Rules (N.J.A.C.7:15) overseen by the NJDEP. The location of sewer service

³⁸Based on NJDEP GIS data found at www.nj.gov/dep/gis/newdata.htm This information is currently being reviewed by the county as part of an effort to confirm NJDEP sewer service information.

³⁹ NJDEP – (<http://datamine.state.nj.us/dep/DEP-OPRA/Index2>). Some plants located outside of Morris County. Not all capacity available to serve Morris County. Excludes Skyview in Roxbury as no longer active. MCDPDT analysis. Includes NJDEP permitted capacity less unused but dedicated flow.

⁴⁰ MCDPDT analysis of NJDEP Sewerage Treatment Permits. Includes NJDEP permitted capacity less unused but dedicated flow.

⁴¹ NJDEP Division of Watershed Management website 5/06
(www.nj.us/dep/watershedmgt.docs/wmpagencylist.pdf)

areas, treatment facilities, expansion of facilities and levels of treatment must be consistent with the Statewide Wastewater Quality Management Plan and associated rules.

In most cases, these agencies own and manage treatment facilities, but in other cases, they contract with outside treatment facilities to provide service. It should be noted that treatment plants are not necessarily located in the municipality they serve, and one treatment agency may be associated with wastewater treatment in several municipalities. There are also instances where a treatment facility serving a portion of Morris County is located outside of the county.

*Municipal Regional and Non-Municipal Systems as Defined by the NJDEP
NJDEP Adopted Sewer Service Area Mapping 10/2006, not verified by Morris County*

Note: At present, Morris County is working with its municipalities to develop an up to date map of sewer service areas throughout the County. Continuation of this project will be pursued in connection with the proposed NJDEP Water Quality Management Rule amendments.

Wastewater Management Planning Agency	Municipalities Served by Agency
Chatham Township	Chatham Township
Chester Borough	Chester Borough
Chester Township	Chester Township
Florham Park Sewerage Authority	East Hanover Township, Florham Park Borough, Hanover Township, Morris Township
Hanover Township Sewerage Authority	Hanover Township
Harding Township	Harding Township
Jefferson Township	Jefferson Township
Long Hill Township	Long Hill Township
Madison-Chatham Joint Meeting	Chatham Borough, Madison Borough
Mendham Borough	Mendham Borough
Mendham Township	Mendham Township
Mine Hill Township	Mine Hill Township
Morristown Town	Morris Township, Morristown Town
Morris Plains Borough	Morris Plains Borough
Mount Olive Township	Mount Olive Township
Mount Arlington Borough	Mount Arlington Borough
Musconetcong Sewerage Authority	Jefferson Township, Mount Arlington Borough, Mount Olive Township, Netcong Borough, Roxbury Township
Parsippany-Troy Hills Township	Mountain Lakes Borough, Parsippany-Troy Hills
Pequannock River Basin Regional Sewerage Authority	Butler Borough, Kinnelon Borough, Riverdale Borough
Pequannock, Lincoln Park and Fairfield Sewerage Authority	Butler Borough, Kinnelon Borough, Lincoln Park Borough, Montville Township, Pequannock Township, Riverdale Borough,
Rockaway Valley Regional Sewerage Authority	Boonton Town, Boonton Township, Denville Township, Dover Town, Mine Hill Township, Parsippany Troy Hills, Rockaway Borough, Rockaway Township, Victory Gardens Borough, Wharton Borough
Roxbury Township	Roxbury Township

Somerset County	Chester Township
Washington Township Municipal Utilities Authority	Washington Township

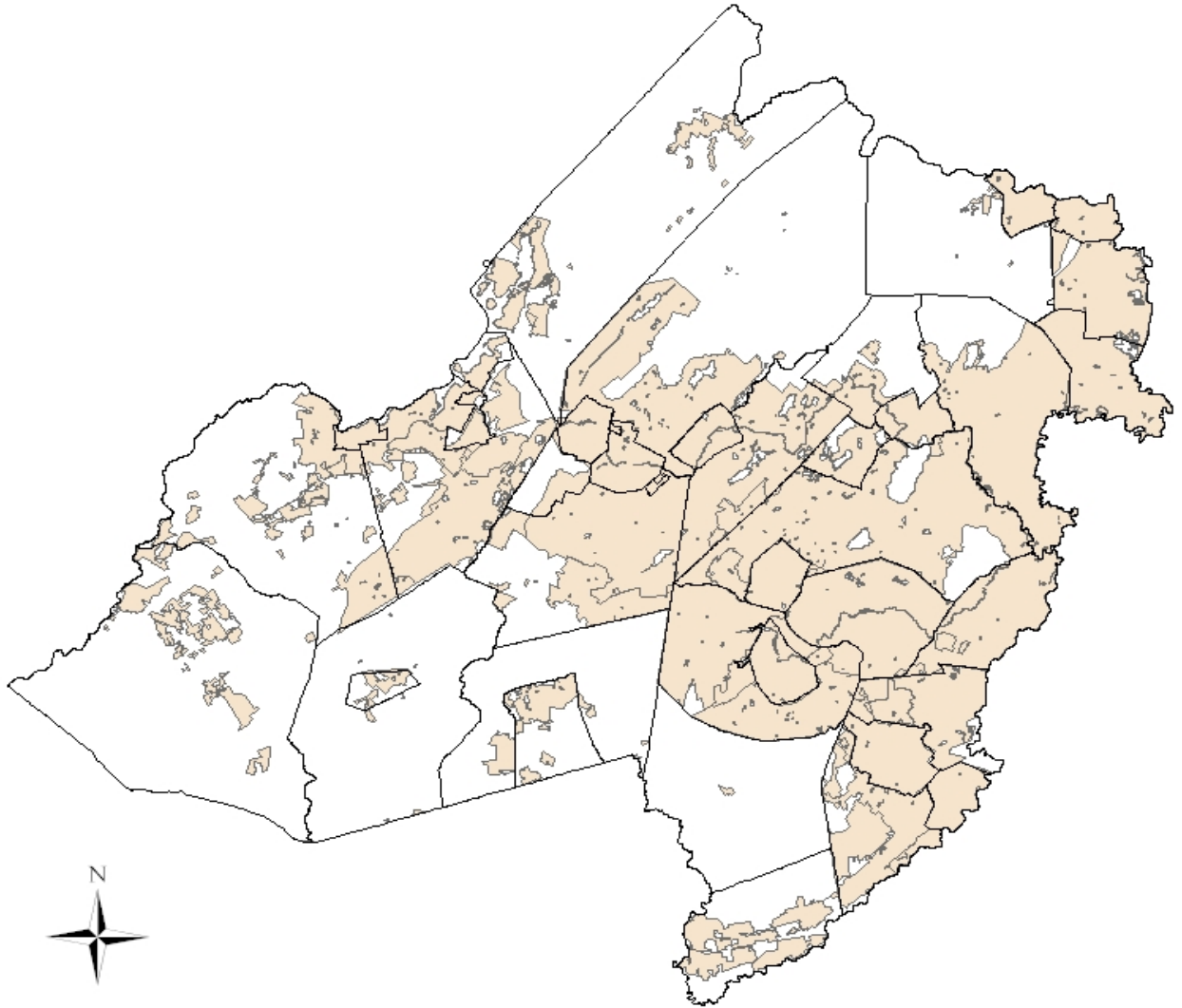
c. Non-Municipal Systems

Non-municipal systems provide treatment for individual or small groups of uses. These are small dedicated treatment systems designed to accommodate the needs of a specific user. Typically identified as “package plants,” these systems can be constructed and operated at a relatively low cost.

The 1971 Sanitary Sewerage Facilities Element of the Morris County Master Plan reported that there were about 70 package treatment plants operating in the county, serving individual users such as an industries, schools or shopping centers.⁴² With the expansion of municipal/regional sewage treatment plants in the 1970’s, many of these non-municipal systems were eliminated. About 35 are still in operation, all located outside areas currently served by public sewer.

⁴² 1971 Morris County Master Plan – Sewerage Facilities Element, Elson T. Killam Associates, Inc. pg. 3.

NJDEP APPROVED SEWER SERVICE AREAS-MORRIS COUNTY *



Source: NJDEP 10/2006 GIS DATA

* Service Areas under review by
Morris County Planning, Development & Technology

2. Public Water

a. Morris County MUA

The Morris County Board of Chosen Freeholders created the Morris County Municipal Utilities Authority (MCMUA) in 1958 as part of the effort to address water supply issues.⁴³ The MCMUA was created for the primary purpose of developing and distributing an adequate supply of water for the use of the county's inhabitants. To this end, the MCMUA obtained control of various lands and developed a well system enabling them to supply bulk water to the many water supply systems existing throughout the county. At present, the MCMUA maintains wells with a production capacity of about 10.2 million gallons of water per day. This water is provided to ten municipal and commercial water purveyors.⁴⁴ The MCMUA uses a system of pumps, booster stations, and pipelines to transmit water to the following purveyors:

Denville Township	Parsippany-Troy Hills Township
Jefferson Township	Randolph Township
Mine Hill Township	Roxbury Township
Mount Arlington Borough	Wharton Borough
N. J. American Water Company	Southeast Morris County MUA

b. County Water Supply Planning

The latest Morris County Water Supply Element was adopted in 1994 to address water distribution, water quality and the protection of water supplies. The 1994 Plan, using a 20 year time frame, estimated that water demand would increase from the 1994 demand of 56.7 MGD (million gallons per day) to a 2014 estimated demand of about 61.8 MGD. The Plan indicated that water supply would be sufficient to meet the needs of the anticipated population, which was projected as 446,000 persons by the year 2010. The Plan did not comment on the ability to meet demand post 2010.⁴⁵

In actuality, the population of Morris County reached 470,212 by the year 2000⁴⁶ and total water demand for 1999 was estimated at 60.9 MGD.⁴⁷ The 2005 estimated population of Morris County is 481,130, an increase of 2.3%.⁴⁸ Assuming a corresponding percent increase in water use, current demand is estimated at about 62.3 MGD, slightly exceeding the demand estimated for 2014.

Water use figures derived from the 1971, 1982 and 1994 Morris County Water Supply Elements illustrate the steady rise in total water demand, which has increased corresponding to population increases and development of new commercial and other nonresidential uses.

⁴³ Ibid. pg. iv.

⁴⁴ Morris County MUA website.

⁴⁵ Ibid., pg. 5-3.

⁴⁶ 2000 Census, U.S. Census Bureau.

⁴⁷ Last data available for NJDEP estimates of water demand is 1999.

⁴⁸ July 2005, American Community Survey, US Census Bureau.

Year	Population	Total Estimated Demand (public and private sources) ⁴⁹
1971	309,015	39.8 MGD
1982	407,630	48.0 MGD
1994	421,353	56.6 MGD
1999	470,212 ⁵⁰	60.9 MGD

Estimates of water demand are available from the NJDEP, Division of Water Supply, which is the state agency responsible for managing water in New Jersey. Most water purveyors must apply to NJDEP for consideration of water withdrawal permits. Data summarizing water withdrawals for Morris County as reported to NJDEP for the period (1990-1996) indicates annual average withdrawals of 42,027 Million Gallons per Year (MGY) in Morris County.⁵¹ Of this, about 53% is drawn from ground water sources and the remainder is from rivers and reservoirs. Of the total withdrawn, it is estimated that about 47% is exported, leaving approximately 22,294 MGY to serve residential and nonresidential activities within Morris County. Exported water is primarily from surface water sources.

c. Public Water vs. Private Wells

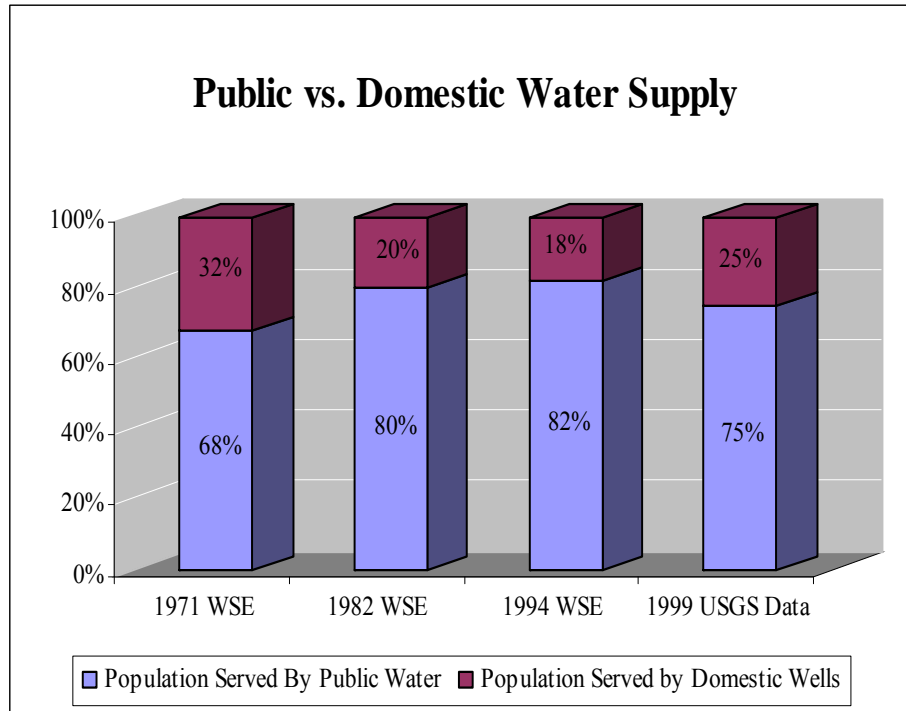
In the early 1970s, about 68% of households in Morris County received their water from a public water supply provider. The remainder relied on individual onsite wells.⁵²

⁴⁹ Public and nonpublic, community and non-community, residential and nonresidential.

⁵⁰ 2000 Census

⁵¹ www.state.nj.us/dep/njgs/enviroed/infocirc/withdrawals.pdf

⁵² 1971 Morris County Master Plan – Water Supply Element, Elson T. Killam Associates, Inc. May 1969, May 1970, reprinted Oct. 1971, Table 1.



Source: Morris County Master Plan – Water Supply Element(s) 1971, 1982, 1994, and the NJDEP.

Over the next two decades, the proportion of households serviced by domestic wells decreased as opportunities to connect to a public water supply system increased. As illustrated, this trend recently reversed, as the percentage of households relying on individual wells has increased to levels not seen since before 1982. One reason may be that much of the development occurring over the last ten years has been in more rural areas of the county, often on larger lots, where onsite wells are often the only source for water.

Public Water Supply Systems

At present, the NJDEP identifies 59 separate public water systems serving the county's 39 municipalities.⁵³ Morris County municipalities and their public water supply sources are identified in the following table.

Municipality	Major Water Systems ⁵⁴
Boonton Town	Boonton WD
Boonton Twp.	Denville WD, Boonton WD, Boonton Twp. WD, Mt. Lakes WD
Butler Boro.	Butler WD
Chatham Boro.	Southeast Morris County MUA, Chatham Boro. WD
Chatham Twp.	NJ American Water Co. (Short Hills)
Chester Boro.	NJ American Water Co., Randolph WD,
Chester Twp.	NJ American Water Co. (Short Hills.), Four Seasons at Chester
Denville Twp.	Denville WD, Mt. Lakes WD, Rockaway Boro. Water Utility,
Dover Town	Dover WD, Rockaway Water Utility

⁵³ Mobile home parks excluded.

⁵⁴ NJDEP Source Water Assessment Program and NJDEP Division of Water Supply.

Municipality	Major Water Systems ⁵⁴
East Hanover Twp.	E. Hanover WD
Florham Park Boro.	NJ American Water Co. (Short Hills.) Florham Park WD
Hanover Twp.	Southeast Morris County MUA
Harding Twp.	Southeast Morris County MUA, NJ American Water Co. (Short Hills), Lake Shore Water Co.
Jefferson Township	Mt. Shore WD, Jefferson WD, Jefferson Twp. Water Utility (Lake Hopatcong, Milton & Padere), Sun Valley
Kinnelon Boro.	Kinnelon WD, Butler WD, Fayson Lakes Water Co.
Lincoln Park Boro.	Lincoln Park WD, Lincoln Park Jacksonville System, Pequannock WD (Main and Cedar Crest)
Madison Boro.	Madison WD
Mendham Boro.	NJ American Water Co. (Short Hills), Randolph WD, Sisters of Christian Charity
Mendham Twp.	Southeast Morris County MUA, NJ American Water Co. (Short Hills)
Mine Hill Twp.	Mine Hill WD, Wharton WD, Dover WD
Montville Twp.	Montville MUA, Boonton WD, United Water Jersey City, Plausha Park Water Co.
Morris Twp.	Southeast Morris County MUA, Sisters of Charity South Elizabeth
Morris Plains Boro.	Southeast Morris County MUA
Morristown Town	Southeast Morris County MUA
Mt. Lakes Boro.	Mt. Lakes WD, Denville WD, Parsippany-Troy Hills WD
Mt. Arlington Boro.	Mt. Arlington WD (Kadel & Main System) Roxbury WD (Shore Hills)), United Water (Arlington Hills)
Mount Olive Twp.	Mt. Olive WD (Goldmine, Sand Shore, Pinecrest, Lyn, Jacket, Tinc Farm, Carlton Hill, Village Green and Main Systems), AWM Country Oaks, Mt. Olive Villages WD, NJ American Water Co. West Jersey, Short Hills and ITC) NJ Vasa Home Water, Hackettstown MUA
Netcong Boro.	Netcong WD
Parsippany Troy Hills Twp.	Parsippany Troy Hills WD, Denville WD, Mt. Lakes WD,
Long Hill Twp.	NJ American Water Co. (Shore Hills.)
Pequannock Twp.	Pequannock WD (Main and Cedar Crest)
Randolph Twp.	Randolph WD, Denville WD, Morris County MUA, Dover WD
Riverdale Boro.	Riverdale WD
Rockaway Boro.	Dover WD, Rockaway Water Utility
Rockaway Twp.	Rockaway WD, Denville WD, Wharton WD, Picatinny Arsenal –ARDEC, Hoffman Homes
Roxbury Twp.	Roxbury WD (Evergreen, Lookout Mountain, Say View, Shore Hills) Kenvil Works Site, Netcong WD, Roxbury Water Co.
Victory Gardens Boro.	Dover WD
Washington Twp.	Washington MUA (Hager, Schooleys Mountain), Hackettstown MUA, Sherwood Village, Cliffside Park Assoc. Inc.
Wharton Boro.	Dover WD, Wharton WD

3. Major Water Supply Activities

a. Morris County Water Balance Modeling

While some data exists concerning water demand characteristics, the actual or potential amount of water available for county use or for export poses an extremely difficult question which has,

to date, not been adequately addressed due to the complexity of the many factors that must be considered. Morris County is currently engaged in an effort to develop a comprehensive water balance model that can be used to estimate the current amount and quality of ground and surface water supplies in Morris County. The model will determine the long term sustainability of water supply sources in the county and will address watersheds, aquifers, stream flow, water quality, groundwater levels, geology, rainfall, aquatic biology, riparian ecosystems and discharges to waterways. Water supply sources will be determined on the basis of each of the six major watersheds located in the county (Rockaway, Upper Passaic, Raritan, Whippany, Musconetcong and Pequannock). The model is anticipated for completion by the end of 2007.

b. Scrub Oaks Mine Storage Concept Plan

The Morris County Municipal Utilities Authority is pursuing supplemental water sources in an effort to augment the current ground water inventory supplied from the Raritan River Basin and to comply with the State Water Supply Policy of reducing dependency on Inter-Basin Transfers.⁵⁵ One alternative proposes to utilize an abandoned mine as a water storage reservoir. The proposed site, Scrub Oaks Mine in Mine Hill Township, could be utilized to store as much as 1.8 billion gallons of water from ground water sources and surface water diverted from the Musconetcong River, Lake Hopatcong and the Rockaway River during high water periods. The county is undertaking a feasibility study for this project, which is expected to be concluded in 2007.

E. Municipal Master Plan and Zoning – Overview

1. General Lot Size Categories and Distribution by Municipality

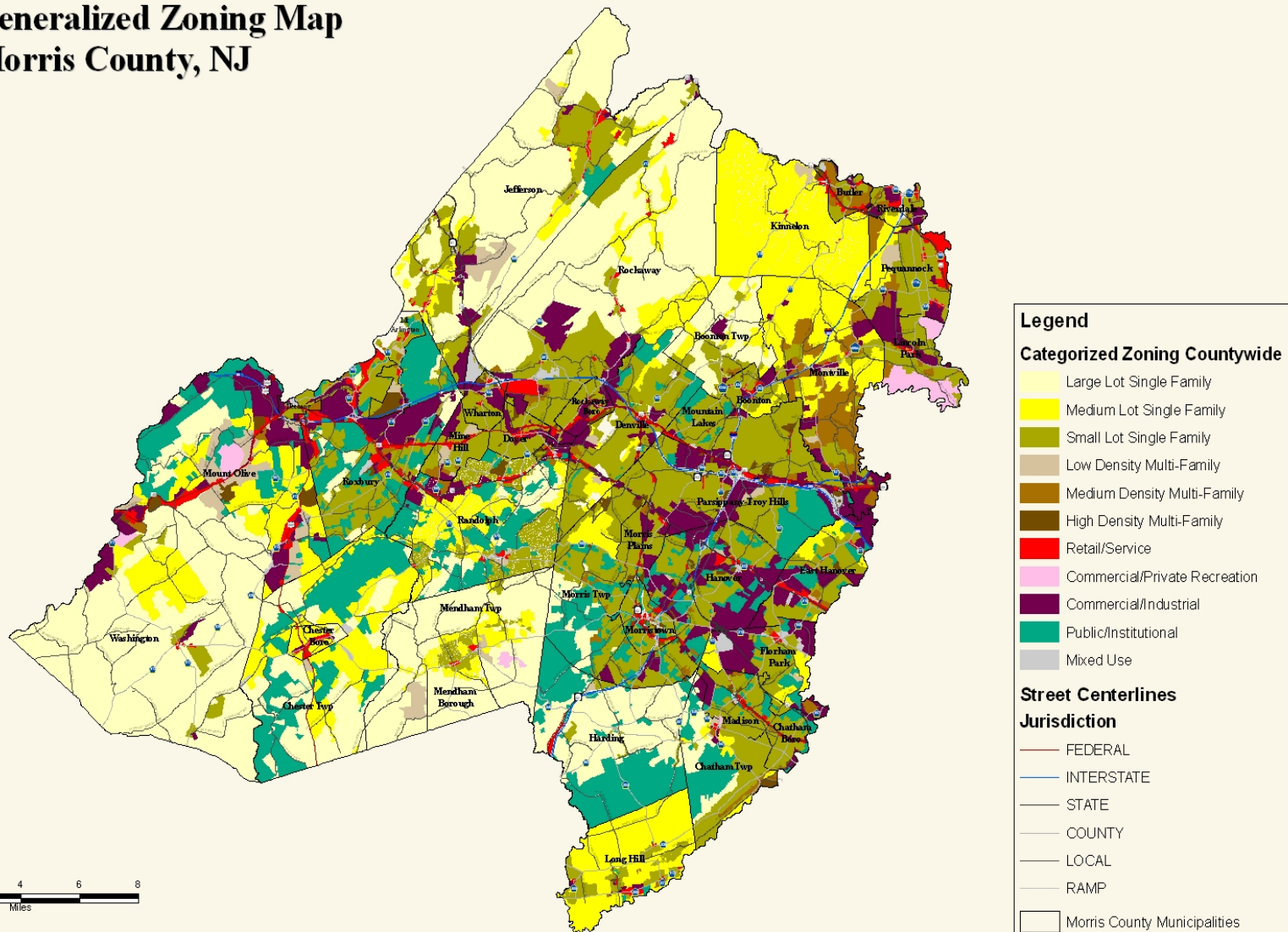
The following table lists the categories of residential lot sizes and area of non-residential uses in Morris County. The “Generalized Zoning Map” (below) of Morris County illustrates the location of this information. The central portion of Morris County, which encompasses many of the early industrial towns/cities, is where most high density residential and commercial/industrial uses are located. The remaining farmland is primarily zoned for large lot residential uses.

	Square Miles	Acres
Large Lot Single Family (≥ 3 acres)	148.4	94,983
Medium Lot Single Family (1 acre to < 3 acres)	85.9	55,001
Small Lot Single Family (< 1 acre)	104.3	66,771
Low Density Multi-Family (≤ 4 units/acre)	8.5	5,462
Medium Density Multi-Family (> 4 units/acre to 10 units/acre)	10.6	6,790
High Density Multi-Family (> 10 units/acre)	4.6	2,953
Retail/Service	11.2	7,186
Commercial/Industrial	41.8	26,744
Commercial/Private Recreation	3.2	2,075
Public/Institutional	54.6	34,912
Mixed Use	2.5	1,594
TOTAL	475.7	304,472

⁵⁵ The MCMUA’s main supply of water is from the Raritan River Basin; however, most of its service area is in the Passaic and Delaware River Basins.



Generalized Zoning Map Morris County, NJ



SOURCE: Morris County Department of Planning, Development & Technology

NOTE: Total zoned area is less than the total area of Morris County due to the fact that some municipalities do not zone highways and water bodies. Morris County Data Book, 2006, Page 68.

Innovative Planning Techniques

a. Cluster Subdivision, a.k.a. Conservation Subdivision

Cluster ordinances allow or require houses to be grouped close together on small lots to protect open land. Typically, the cluster subdivisions permit reductions in required lot area and bulk requirements, focusing the original development potential of an entire tract on a specified portion of a parcel. The portion of the parcel that is not developed is restricted by a conservation easement. Cluster developments are also known as cluster subdivisions, conservation subdivisions open space or open land subdivisions.

Through clustering, the most environmentally sensitive lands can be preserved, while those areas that are more suitable for development can be developed at higher densities. The deed restricted land may be leased or sold to a farmer at a reduced cost because the development rights have been removed.

Cluster development can generate many positive benefits which may include: protection and less fragmentation of environmentally sensitive lands, open space and farmlands, reduction of infrastructure costs, reductions in road building and impervious cover, reduced cost of municipal services (i.e. snow removal), greater flexibility in the placement of wastewater systems and types of wastewater systems that may be employed, and protection of scenic vistas. When individual site clustering is used in accordance with a town-wide clustering plan, it can result in patterns of development that increase the contiguity of protected lands, focusing housing into discrete areas and reducing overall development impacts. Disadvantages may include increased regulatory complexity and a more time consuming development review process, the potential for the creation of “orphan” open space parcels, potential failure of homeowners associations to maintain common preserved property, the increased expense and maintenance issues related to community septic systems (where applicable) and the negative public perception that cluster increases density of development. Additional concept plans may also be required to show that that the number of lots being proposed is no greater than that which could be created with a conventional development layout.

Cluster subdivisions are currently permitted in Chatham Township, Chester Borough, Chester Township, Denville Township, East Hanover Township, Florham Park Borough, Harding Township, Jefferson Township, Lincoln Park, Madison Borough, Mendham Borough, Mine Hill Township, Montville Township, Morris Plains Borough, Morris Township, Mountain Lakes Borough, Mount Arlington Borough, Mount Olive Township, Parsippany Troy Hills Township, Pequannock Township, Randolph Township, Rockaway Township and Roxbury Township.

The use of cluster development has waned in recent years, particularly as the amount of land available for development has been significantly reduced. Increased clustering may be experienced with the adoption of the current draft Highlands Regional Master Plan. The RMP mandates the use of cluster development in identified Agricultural Resource Areas to accommodate residential development. This mandate is restricted to the Preservation Area but

could be extended to Planning Area communities on a voluntary basis or through future NJDEP rule making.

b. Non-contiguous Cluster Zoning

Whereas clustering may occur on a single parcel (or multiple contiguous parcels), noncontiguous clustering allows development on noncontiguous lands under common ownership. With noncontiguous clustering, the density of development that may be permitted on two or more noncontiguous parcels may be concentrated on one parcel(s) while the other parcel(s) remains preserved as open space or farmland. In this manner, development may be transferred from one parcel to another, even if said parcels are on opposite ends of a community.

The benefits of noncontiguous clustering are similar to those associated with individual site clustering; however preservation is no longer subject to the limitations of a single site. Larger environmentally sensitive or agricultural areas can be preserved since all development can be transferred to an “off-site” location. Development potential can be transferred to parts of a municipality where there are conditions better suited for development. Use of this option can provide for greater comprehensive community planning, growth management and implementation of wider preservation goals. Essentially, the benefits of traditional individual site clustering are provided on a community-wide basis. Substantial use of this technique can result in patterns of development in which larger areas can be preserved without significant fragmentation of resources. In terms of agricultural use, this can lead to more concentrated agricultural areas and less conflict with non-agricultural uses.

Noncontiguous clustering provides greater challenges as well. It generates a more difficult development and review process, introduces new and complex master plan and ordinance challenges, and can meet with local resistance from residents surrounding a the “development receiving” parcel, which is now subject to greater development potential and associated development impacts. Its potential use is narrow, as the number of landowners that own more than one property in a municipality for which this technique is suitable is typically limited.

Mount Olive Township and Hanover Township specifically address noncontiguous parcel clustering through the “*transfer of development credits*”. Residential clustering is allowed to occur between noncontiguous lots of common ownership under specific conditions, which vary between municipalities. Typically, the permitted development from one lot is permitted to be transferred to another lot owned by the same applicant provided the original lot is permanently preserved. In the case of Hanover, this is permitted specifically to protect open space, environmentally sensitive areas and for limited public use. In the case of Mount Olive, this is also permitted to preserve land for agricultural purposes.

c. Lot Size Averaging

Lot size averaging is a subdivision technique that allows flexibility in the size and shape of lots to promote resource protection. Lot size averaging permits one or more lots in a subdivision to be undersized, provided that the size of other lots is correspondingly increased. There is no change in the total number of lots permitted, only the lot dimensions. Unlike clustering, lot

average subdivisions typically do not include areas of common open space/protected lands, but may include deed restrictions on oversized lots to prevent future subdivision.

Lot size averaging allows the placement of lots and structures in a manner that can avoid the disturbance of steep slopes, wetlands or other environmental constraints. The benefits of lot size averaging are similar to those achieved through individual site clustering, except that the larger areas of undisturbed land remain in private ownership. Like clustering, this design technique is more complex, requires greater input into the master plan and development regulation creation process, and results in a more involved and time consuming development review and approval process. Significant use of this technique can result in a subdivision pattern in which there is a lessened consistency in lot size which can impact neighborhood character.

The use of lot size averaging to avoid environmental constraints has great potential as it is less complicated in application and requires fewer unique conditions than cluster or noncontiguous clustering. Administration and monitoring is also simpler since there is no common area in need of development or preservation agreement or maintenance.

Lot size averaging is permitted in many Morris County communities, including Chatham Township, Harding Township, Mendham Township, Mount Olive Township, and Roxbury Township.

d. Transfer of Development Rights (TDR)

Transferable Development Rights (TDR) programs offer an opportunity for the free market to generate the funds necessary to preserve farmland through the sale and purchase of development rights between designated sending areas (areas to be protected) and receiving areas (areas where development from sending areas is to occur). Transferable development “credits” are allocated to landowners in the sending area that can be sold on the private market. The credits are provided in exchange for the permanent protection of the farmland from further development. The purchaser of the development credits can apply them to develop at a higher density than otherwise allowed on property within the receiving area

In concept, TDR offers many potential benefits. Severing the development rights for farmland retention and assigning credits to the landowner for those rights can, in theory, protect lands at little cost to the public, allowing farming to continue, while providing a form of compensation for the loss in development value for the landowner through the sale of development rights (credits) on the open market. The land remains in private ownership, stays on the tax rolls and is permanently preserved for agriculture. The buyer of the credits benefits through the increased development permitted in the sending area, which has been specifically identified as appropriate for higher density development. Wide-spread use of TDR could concentrate development in areas where there is sufficient infrastructure and facilities to accommodate growth, reduce sprawl and protect agricultural, and natural resources.

While simple in theory, the actual use of TDR is extraordinarily complex and requires a significant and lengthy commitment by local and regional government in terms of program planning, development, administration and maintenance. Assigning sending areas is relatively

easy, but calculating appropriate development credit compensation and locating suitable receiving areas to accommodate the transfer of development can be particularly difficult. For one, most areas deemed suitable for higher density development are already zoned to accommodate that development. Down-zoning such areas to allow TDR to function is open to legal challenge. Locating areas with infrastructure capable of accommodating significant additional growth is also difficult.

Finally, the compensation for sending area land owners depends on a functioning and viable market for the TDR credit. The credits only have value if there is suitable demand. Lack of receiving areas, increased development costs and complexity of credit transfer, soft real estate markets and the ability of developers to develop in other unrestricted areas can negatively impact demand for credits, reducing or eliminating the value of any assigned credits.

The State of New Jersey adopted State Development Rights Act in 2004 (P.L. 2004, c 2.), however, there have been very few instances of active TDR programs being created; these primarily restricted to the Pinelands and a few programs in Burlington County. The complexity and cost to create, combined with the inexperience that nearly all developers, municipalities and the state as a whole has with working TDR programs, has limited the use of this technique. In Morris County, the Town of Dover reviewed this technique in 2006, but found it infeasible for local use. There are no local Morris County municipalities with TDR programs. With the adoption of the Highlands RMP, the use of TDR may increase, as this is identified as a primary form of compensation for restricted lands in the Preservation Area. So far, however, no money has been set aside to fund a Highlands TDR bank, there have been no specific receiving areas delineated and, based on presentations of Highlands staff, the potential inception of market driven TDR is, at best, several years away. For further discussion of TDR , see section G.

e. Use of Mandatory vs. Voluntary Options

At present, the innovative regulatory techniques discussed are optional where permitted. However, the current draft of the Highlands Regional Master Plan requires clustering of permitted residential development in all Highlands Agricultural Resource Areas, and this will be mandated for all communities or portions of communities located in the Preservation Area if the current RMP is adopted with this provision. It will also be required of any Planning Area community that voluntarily opts into the Highlands Regional Master Plan. Also, it is anticipated that a Highlands TDR program will eventually be put in place. Participation will not be mandatory, but as this may be the only compensatory mechanism available for those located in the Highlands Preservation Area, de facto mandatory participation may be inevitable.

Zoning & Subdivision Regulations:
Techniques of Potential Benefit to Farming

Boonton Town

- Townhouse and multi-family residential clusters

Boonton Township

- Residential cluster developments and lot size averaging were *repealed* in 2001 and 1999, respectively.
- Agriculture is permitted in all zones except one.

Chatham Township

- Residential cluster developments are a permitted option in three zones.
- Lot size averaging is a permitted option in six zones.

Chester Borough

- Neighborhood Cluster — Lot Averaging Overlay District.
- Agriculture is a permitted use in all zones.
- Farm stands are a permitted accessory use in all zones.

Chester Township

- Cluster developments are permitted as an option in five zones.
- An Open Space Development Option is permitted in two zones (a type of cluster zoning).
- Agriculture is permitted in all zones.
- Farm stands are permitted in five zones.
- Open Space Trust Fund to purchase development rights.

Denville

- Cluster development option is permitted in five zones.
- Agriculture is a permitted use in eight zones.

East Hanover

- Cluster residential developments are a permitted option in two zones.
- Farms are a permitted use in three zones.

Florham Park

- Cluster subdivisions are permitted as an option in two zones.

Hanover

- Residential cluster subdivisions are permitted as an option in two zones.
- Transfer of Development Credits

Harding

- Lot averaged subdivision permitted as an option in one zone.
- Farm stands and farm markets permitted as a conditional use in five residential zones.

- Farming is permitted use in all zones.

Jefferson

- Residential clusters permitted as an option in five zones.
- Farm stands as an accessory use in one zone.

Lincoln Park

- Residential lot cluster developments are a permitted option in three zones.
- Farming is permitted in seven zones.
- Farm markets are permitted in seven zones.

Long Hill

- Density modification subdivisions (a type of cluster subdivision) are a permitted option in four zones.
- Agriculture is a permitted use in one zone. The keeping of horses, dairy animals, livestock and poultry are permitted as an accessory use to single family residences in four zones.
- Farms stands are a permitted accessory use to an agricultural use.

Madison

- Residential cluster developments are permitted as an option in one zone.

Mendham Borough

- Village center cluster development option permitted on three specified tracts.
- Agriculture permitted in all residential zones.

Mendham Township

- Lot size averaging is a permitted option in two zones
- Agriculture is a permitted use in seven zones.

Mine Hill

- Cluster subdivisions are a conditional use in three zones.

Montville

- Residential cluster developments are a permitted option in five zones.
- Agricultural uses are permitted in all zones.

Morris Plains

- Residential cluster developments are a permitted option in one zone.

Morris Township

- Cluster Development Option permitted in four zones.
- Agricultural uses are permitted in all residential zones.
- Farm stands are permitted.

Mountain Lakes

- Cluster developments are an optional conditional use in three zones.

Mount Arlington

- Residential clusters are a permitted option in ten zones.
- Agriculture is a permitted use in eight zones.

Mount Olive

- Residential clusters are a permitted option in six zones.
- Lot size averaging is a permitted option in three non-residential zones. Lot coverage and floor area ratio averaging is a permitted option in one non-residential zone.
- Transfer of Development Credits
- Right-to-farm includes farms stands

Parsippany-Troy Hills

- Townhouse residential clusters are a permitted option in three zones.
- A cluster option is permitted in one non-residential zone.
- Agricultural buildings are permitted in 15 zones.

Pequannock

- Cluster developments are a permitted option in five zones.
- The keeping of various listed farm animals is a conditional use in residential zones.

Randolph

- The cluster development option is a conditional use in three zones.
- The right to agriculture is established and is a permitted use in all zones.

Rockaway Township

- Cluster developments are an option in four zones.
- Agriculture is a permitted use in three zones.
- Farm markets are permitted in three zones.

Roxbury

- The cluster residential development option is permitted in six zones.
- Lot averaging is permitted in two non-residential zones.
- Agriculture is a permitted use in all residential zones plus three other zones.

Washington

- Cluster and lot averaging subdivisions were added in November 2004 but were repealed in May 2005. They remain applicable to subdivision applications filed prior to May 1, 2005 (six zones listed cluster subdivisions as a conditional use).
- An “Agricultural Use Overlay Zone” is an option permissible in all zones. The minimum lot size is 400,000 square feet (amongst other restrictions). Lots shall be deed restricted to prohibit further subdivisions and to prohibit more than one single-family dwelling unit.
- The right to engage in agriculture applies to all zones.

- Appropriate housing for farm labor may be provided on any operating farm (maximum units based on conventional residential build-out).
- The subdivision regulations specify private agricultural overlay zone road standards.

3. Development Pressures and Land Value Trends

a. Development Pressure – Spatial / Temporal

Spatial and temporal development patterns in the County can best be expressed through the following three tables. As can be seen, the amount of residential single family development has declined significantly in recent years, and is expected to continue to decline as the availability of vacant land diminishes, and as the impacts of the Highlands Act and new NJDEP regulations become more evident.

Number of Single Family House Lots from Major Subdivisions Recorded at the Office of the Morris County Clerk.

Municipality	2002	2003	2004	2005	2006	5 Year Total
Boonton	-	2	2	-	2	6
Boonton Twp.	8	14	12	-	-	34
Butler	-	-	2	-	3	5
Chatham Twp.	-	2	-	2	-	4
Chester	-	7	-	17	-	24
Chester Twp.	25	8	22	3	26	84
Denville	9	60	-	93	33	195
Dover	-	1	-	-	-	1
East Hanover	8	20	4	-	4	36
Florham Park	9	1	10	-	-	20
Hanover	-	-	35	-	-	35
Harding	-	4	5	6	12	27
Jefferson	195	88	127	10	-	420
Kinnelon	3	67	-	5	6	81
Lincoln Park	4	2	4	-	6	16
Madison	5	-	-	-	-	5
Mendham	-	-	-	-	1	1
Mendham Twp.	-	1	-	23	-	24
Montville	49	33	28	23	6	139
Morris Twp.	-	-	6	3	-	9
Morris Plains	-	3	-	-	-	3
Mt. Arlington	-	2	-	-	-	2
Mt. Olive	60	61	405	24	-	550
Parsippany-Troy Hills	37	12	-	9	20	78
Pequannock	3	4	-	-	1	8
Randolph	6	-	32	-	-	38
Riverdale	-	31	-	4	-	35
Rockaway	-	-	3	4	3	10
Rockaway Twp.	6	11	39	-	-	56
Roxbury	-	-	13	7	1	21
Washington	117	3	18	24	-	162
Total	544	437	767	257	124	2,129

No activity recorded for Chatham, Long Hill, Mine Hill, Morristown, Mountain lakes, Victory Gardens, Wharton.

Proposed Townhouse & Multi-Family Site Plans Reviewed by the Morris County Planning Board (Number / Total Units)

Municipality	2002	2003	2004	2005	2006	5 Year Total
Boonton	-	-	1/7	-	-	1/7
Butler	-	-	2/146	-	-	2/146
Chatham Twp.	-	1/56	-	-	-	1/56
Chester	-	1/10	-	-	-	1/10
Denville	1/140	2/68	-	-	-	3/408
Dover	-	1/2	1/12	-	-	2/14
East Hanover	-	-	2/24	-	-	2/24
Florham Park	-	-	2/60	-	1/33	3/93
Hanover	1/160	-	1/40	1/24	-	3/224
Kinnelon	-	1/136	-	-	-	1/136
Long Hill	-	-	-	1/172	-	1/172
Mine Hill	2/826	1/66	-	-	1/37	4/929
Montville	-	-	-	2/110	-	2/110
Morris Twp.	-	1/238	-	-	-	1/238
Morris Plains	-	-	-	1/86	1/246	2/332
Morristown	2/295	2/286	1/30	1/59	-	6/670
Mountain Lakes	-	-	-	-	1/44	1/44
Mt. Arlington	-	2/300	1/3	1/60	-	4/363
Mt. Olive	1/250	-	-	2/422	-	3/672
Parsippany-Troy Hills	1/28	1/46	1/80	-	-	3/154
Pequannock	1/1,042	1/510	-	-	-	2/1,152
Randolph	2/107	1/232	-	-	-	3/339
Riverdale	1/558	-	-	-	1/424	2/982
Rockaway	-	-	-	-	1/4	1/4
Rockaway Twp.	1/152	2/420	-	-	1/188	4/760
Roxbury	-	-	-	-	1/260	1/260
Washington	-	-	1/360	-	-	1/360
Total	13/3,558	17/2,370	13/762	9/933	9/1,236	60/8,859

No activity recorded for Boonton Twp., Chatham, Chester Twp., Harding, Jefferson, Lincoln Park, Madison, Mendham, Mendham Twp., Netcong, Victory Gardens, Wharton.

Commercial, Industrial and Office Site Plans with 50,000 Square Feet or More of New Floor Area Reviewed by Morris County Planning Board (Number / Total Square Feet)

Municipality	2002	2003	2004	2005	2006	5 Year Total
Boonton	1/173,505	-	1/93,235	-	-	2/266,740
Butler	-	1/185,173	-	-	-	1/185,173
Chatham	-	1/107,175	-	-	-	1/107,175
Chatham Twp.	-	-	-	1/83,767	-	1/83,767
Denville	1/55,025	-	-	1/53,245	-	2/108,270
Dover	2/359,549	-	-	1/174,240	1/144,562	4/678,351
East Hanover	-	-	-	1/160,000	-	1/160,000
Florham Park	2/185,578	-	-	-	3/398,995	5/584,573
Hanover	4/838,591	2/337,365	3/770,110	-	-	9/1,1946,066
Jefferson	-	1/83,900	-	-	-	1/83,900
Montville	-	-	1/76,935	-	-	1/76,935
Morris Plains	-	-	2/659,326	-	-	2/659,326
Morristown	-	1/67,100	1/185,745	-	1/99,038	3/351,883
Mt. Arlington	1/317,000	-	-	-	-	1/317,000
Mt. Olive	-	1/149,800	1/99,300	1/92,552	-	3/241,652
Parsippany-Troy Hills	2/189,253	1/101,474	1/62,864	2/242,436	2/701,840	8/1,297,831
Randolph	2/234,040	-	-	1/55,266	-	3/289,306
Riverdale	-	1/258,800	1/129,486	-	-	2/388,286
Rockaway	-	-	1/77,300	-	-	1/77,300
Rockaway Twp.	2/298,155	3/572,643	1/71,374	-	-	6/942,172
Roxbury	-	1/366,373	-	1/111,380	2/291,552	4/769,305
Washington	-	1/144,750	-	-	1/138,720	2/283,470
Wharton	-	1/111,000	-	-	-	1/111,000
Total	17/2,650,696	15/2,485,553	13/626,069	9/972,886	10/1,774,707	64/8,509,911

No activity recorded for Boonton Twp., Chester, Chester Twp., Harding, Kinnelon, Lincoln Park, Long Hill, Madison, Mendham, Mendham Twp., Mine Hill, Morris Twp., Mountain lakes, Netcong, Pequannock, Victory Gardens.

b. Land Value Trends

Land Value Trends – Morris County Vacant and Farm Assessed Property Assessed Values

Morris County	1990	1995	2000	2005
Vacant (1)	\$942,015,581	\$973,014,486	\$1,042,911,835	\$1,229,486,204
Farm Regular (3A)	\$135,476,725	\$172,138,600	\$256,834,690	\$452,337,200
Farm Qualified (3B)	\$11,619,240	\$13,844,723	\$14,916,507	\$13,817,146
Total Vacant and Farm Assessed	\$1,089,111,546	\$1,158,997,809	\$1,314,663,032	\$1,695,640,550
All Taxable Land (1, 2, 3A, 3B, 4A, 4B, 4C)	\$24,133,181,860	\$28,466,065,377	\$50,734,495,994	\$62,027,632,792

Source: Morris County Board of Taxation

The following chart illustrates the steady rise in the value of farmland real estate in New Jersey. Data is not available for the average value per acre on a county basis. However, the Morris CADB has statistics for the 100 farm easements purchased in Morris County. That information is presented below, which illustrates how Washington Township has the lowest per acre easement

values. The numbers presented represent the per acre purchase price. This number is not always reflective of appraised value.

**Farm Real Estate: Average Value
Per Acre for New Jersey 1996 – 2006**

Year	NJ Average Value Per Acre
1996	\$7,100
1997	\$7,100
1998	\$7,000
1999	\$7,300
2000	\$7,600
2001	\$8,100
2002	\$8,600
2003	\$9,100
2004	\$9,750
2005	\$10,500
2006	\$10,900

Source: USDA, Agricultural Statistics Board, Land Values and Cash Rents – Summary 2006
 USDA, Agricultural Statistics Board, Land Values and Cash Rents – Final Estimate March 1999
 USDA, Agricultural Statistics Board, Land Values and Cash Rents – Final Estimate March 2004

**Average Per Acre
Easement Values – by Municipality**

Municipality	Average per acre easement value	Number of preserved farms	Preserved Acres
Boonton Twp.	\$15,052	3	141
Chester Boro	\$31,500	1	53
Chester Twp.	\$29,571	14	1,073
Harding Twp.	\$85,629	7	267
Lincoln Park Boro	\$64,276	2	77
Long Hill Twp.	\$13,657	1	54
Mendham Boro	\$12,581	1	29
Mendham Twp.	\$18,112	2	92
Montville Twp.	\$11,320	1	27
Mt. Olive Twp.	\$16,389	3	190
Randolph Twp.	\$27,761	4	147
Washington Twp.	\$10,782	62	4,345
Countywide	\$12,243	60	6,495

F. Municipal and Regional TDR Opportunities

In New Jersey, TDR has only been used in connection with special legislation directed at the NJ Pinelands and through a pilot program allowing its use in Burlington County. To date, its use has been limited to the Pinelands and to two communities in Burlington County.

In 2004, the NJ Legislature passed the State Transfer of Development Rights Act, allowing the use of TDR statewide. The Act requires various and detailed conditions for the use of TDR, which includes creation of a Development Transfer Plan Element, Utility Service Plan Element, a Capital Improvement Program, preparation of a Real Estate Market Analysis, creation of a TDR ordinance, county approval and receipt of local plan endorsement by the State Planning Commission. So far, the administrative commitment, complexity and costs of creating a successful TDR program have prevented the expansion of TDR use based on this Act.

The Highlands Water Protection and Planning Act, adopted in 2004, includes a requirement for establishment of a TDR program, prior to the adoption of a Highlands Regional Master Plan, consistent with the State TDR program. A requirement of the Highlands Act is that the Highlands Council establish TDR opportunity areas within the “Planning Area” portion of the Highlands Region, in an amount equal to 4% of this area, or about 17,737 acres. Morris County has 32 municipalities in the Highlands Region, and roughly 50% of the county is in the Highlands Planning Area.

As of March of 2008, the Highlands Council has not adopted a Regional Master Plan and has not developed a functioning TDR program. Infrastructure capacities in the Highlands Region that might support potential TDR transfer are still being studied and a method to determine TDR credits is still under development and review. The current draft RMP identifies a “Existing Community Overlay District” in which there may be some capacity to accommodate increased density necessary for TDR receiving areas, but as of yet, these specific capacities or specific sites capable of accommodating increased development have not been determined. The Highlands Council is currently considering all lands located in the Highlands “Preservation Area” that had development potential prior to the Act’s adoption as potential TDR sending areas.

A Highlands Regional Master Plan is anticipated for adoption some time in 2008, but even if adopted, it will be several years before the administrative, regulatory and funding “infrastructure” is available to begin the use of Highlands TDR. The Council intends to establish a Highlands TDR bank to assist with the initial purchase of development credits, but this has also not yet been developed and is unlikely to be operational in the near future.

The Highlands TDR program may also include those areas of the 7 Highlands Counties outside the designated Highlands Region and the Council is exploring these opportunities. Discussions with Highland Council staff indicate that the most likely opportunities for identification of receiving areas will be outside the Highlands Region. Legislation has been introduced in the NJ Assembly that would allow the Highlands TDR program to be used outside of the 7 county Highlands Region.⁵⁶

⁵⁶ A3864, introduced 1/4/2007

Given the infrastructure restrictions in Morris County, opportunities for potential receiving areas within the county will likely be severely limited. Recent NJDEP proposed wastewater management rules will further limit the availability of infrastructure capacity in the county that would be needed for receiving zones.

There has been little local interest in pursuing TDR as a method of achieving local redevelopment goals. As previously indicated, the Town of Dover explored the potential of becoming a receiving area, but concluded that the delay in development of a program by the Highlands Council and the prospective difficulties in accommodating such a program would not fit into their anticipated planning and development scenarios. These same conditions may hinder any significant use of TDR in the county.