

## CHAPTER III: LAND USE CONTEXT

### State Development and Redevelopment Plan

The State Development and Redevelopment Plan of 2001 (State Plan) remains the official plan for the State of New Jersey. The State Planning Act requires that the State Planning Commission update and readopt the State Plan every three years, however, the 2001 State Plan has not been updated. A Preliminary Draft State Plan update was released in 2004 and, while New Jersey municipalities and counties participated in an extensive and protracted “Cross-Acceptance” process, the resulting draft document was never adopted.

In 2011, the State decided to abandon the 2004 Draft State Plan revision and develop an entirely new State Plan, known as the State Strategic Plan (SSP). A revised draft of this document was released in November 2012, but a final plan was never adopted. Until a new plan is developed and adopted, the 2001 State Plan remains in effect. All following reference to State Plan refers to the 2001 State Development and Redevelopment Plan.

The State Plan contains over 300 policies concerning “Planning Areas” and “Centers” to implement the General Plan strategy. Major goals, planning area and center policies are summarized below. As pertains to farmland preservation and support for agriculture, the State Plan includes 23 specific policies related to agriculture and these are identified in Appendix J. Morris County continues to support these agricultural policies.

### *2001 State Development and Redevelopment Plan Summary of Overall Policies, Planning Areas and Centers related to Morris County*

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.”*<sup>3</sup>

This purpose is to be accomplished by pursuing eight major **State Planning Goals**<sup>4</sup> and associated policies derived from the State Planning Act. These eight goals 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.”*<sup>5</sup>

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<sup>3</sup> N.J.S.A. 52:18A-200(f)

<sup>4</sup> The New Jersey State Development and Redevelopment Plan, Adopted March 1, 2001, page 7

<sup>5</sup> Ibid.

Planning Areas

The State Plan Policy Map designates **Planning Areas**, as “*areas for growth, limited growth, agriculture, open space, conservation and other appropriated designations.*”<sup>6</sup> 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)*

*Intent of the Metropolitan Planning Area:*

- 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.

*Delineation Criteria for the Metropolitan Planning Area:*

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.

*Suburban Planning Area (PA 2)*

*Intent of the Suburban Planning Area:*

- Provide for much of the state’s future development.
- Promote growth in Centers and other compact forms.
- 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.

*Delineation Criteria for the Suburban Planning Area:*

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.

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<sup>6</sup> Ibid., page 2

*Fringe Planning Area (PA 3)*

*Intent of the Fringe Planning Area:*

- 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.

*Delineation Criteria for the Fringe Planning Area:*

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.

*Rural Planning Area (PA 4)*

*Intent of the Rural Planning Area:*

- 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.

*Delineation Criteria for the Rural Planning Area:*

This Planning Area includes 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.

*Rural/Environmentally Sensitive Planning Area (PA 4B)*

*Intent of Rural/Environmentally Sensitive Planning Area:*

- 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.

*Delineation Criteria for the Rural/Environmentally Sensitive Planning Area:*

This Planning Area is a combination of both *Rural (PA4)* and *Environmentally Sensitive (PA5) Planning Areas*

*Environmentally Sensitive Planning Area (PA 5)*

*Intent of Environmentally Sensitive Planning Area:*

- 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.

*Delineation Criteria Environmentally Sensitive Planning Area:*

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.

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

*Intent of the Environmentally Sensitive/Barrier Islands Planning Area:*

- 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.



*Delineation Criteria for the Environmentally Sensitive/Barrier Islands Planning Area:*

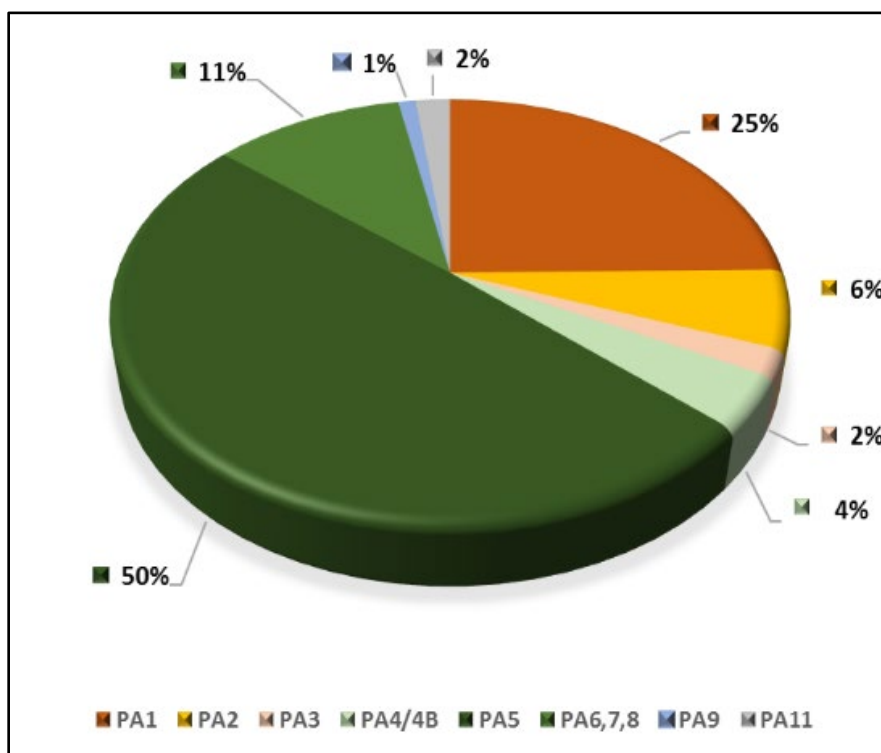
Barrier islands and spits are coastal land forms caused by the periodic deposition and movement of sediment by ocean currents and wind. During storms they function as the mainland's barriers, a first line of natural defense, protecting offshore communities and sensitive bay habitats from the destructive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

Specific State Planning Areas in Morris County

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

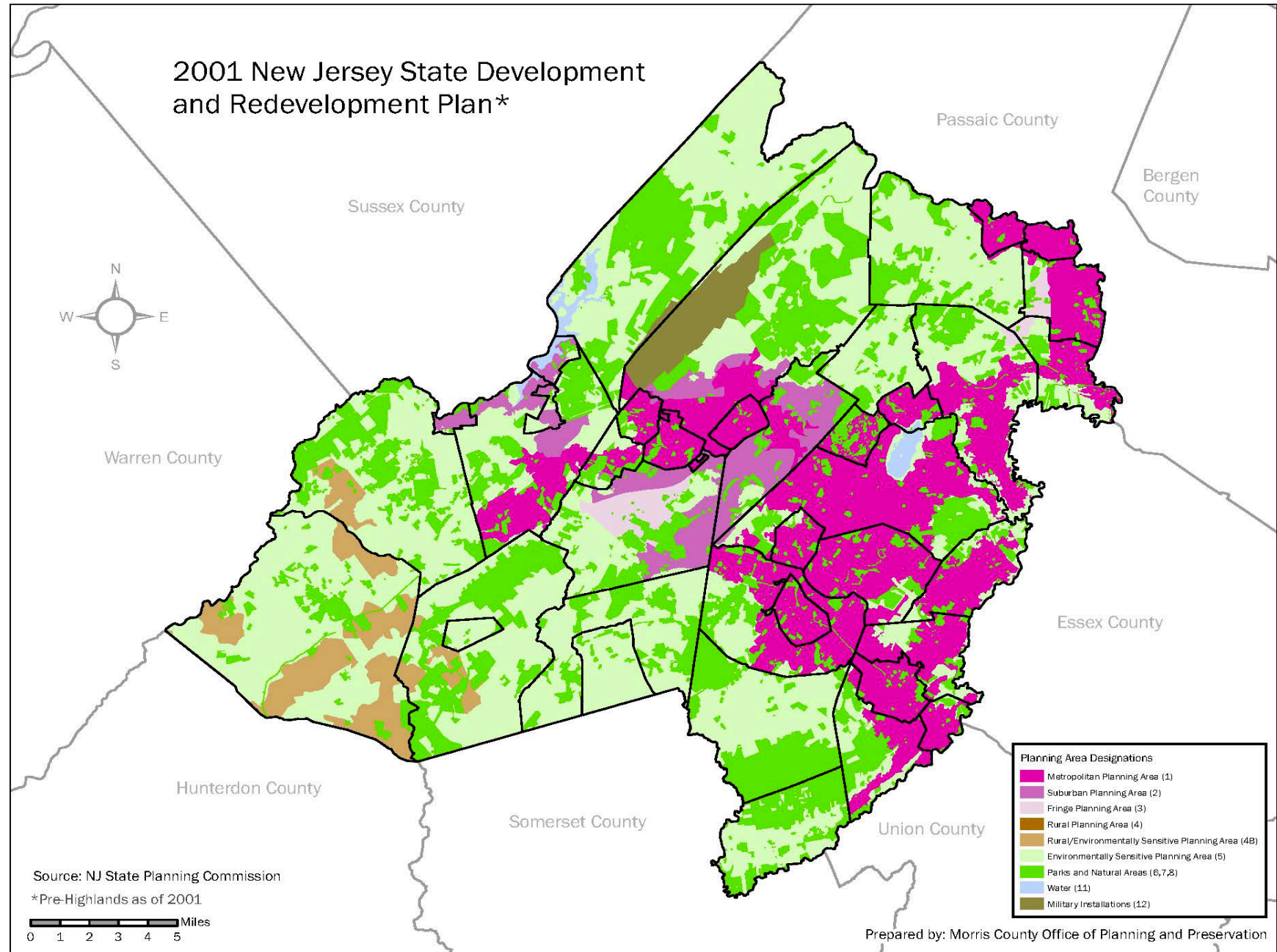
Distribution of Planning Areas in Morris County



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.

*State Plan Policy Map for Morris County*

Following is the 2001 State Plan Policy Map that remains in effect for Morris County including Planning Areas, and Centers.



### *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.

### 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 follows.<sup>7</sup>

**Urban Centers:** Urban Centers are generally the largest Centers, offering the most diverse mix of industry, commerce, services, residences and cultural facilities. There have been eight Urban Centers identified by the State Planning Commission, but none in Morris County.

#### *Designation Criteria for Urban Centers:*

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.

**Regional Centers:** Regional Centers are defined as a compact mix of residential, commercial and public uses, serving a large surrounding area and developed at an intensity that makes public transportation feasible.

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<sup>7</sup> The New Jersey State Development and Redevelopment Plan, Adopted March 1, 2001 pages 238-248.

*Designation Criteria for Regional Centers:*

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 or 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.
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:** Town Centers are defined as 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 for Town Centers:*

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:** Village Centers are primarily residential places that offer a small Core with limited public facilities, consumer services and community activities.

*Designation Criteria for Village Centers:*

1. Is or plans to be a primarily 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:** Hamlet Centers are 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 for Hamlet Centers:*

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.

1. Has or plans to have a population of at least 25 people and not more than 250 people.
2. Has or plans to have a minimum gross housing density of two dwelling units per acre.
3. 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).
4. 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

Centers in Morris County:<sup>8</sup>

- 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. While the Highlands Council originally encouraged Centers to become receiving areas for Transfer of Development Rights, to date, no Morris County municipality has found this to be a viable option.

Centers are important to the farming community as they often host farmers' markets from which produce and other goods from local farms are sold for additional income. The farmers' markets support the local economy focused in these Centers by attracting visitors to these downtown areas. A list of farmers' markets is identified in Chapter Six of this Plan.

#### Endorsed Plans

State Plan Endorsement is a voluntary review process that is designed to assist government agencies at all levels to develop and implement plans that will achieve the goals, policies and strategies of the State Plan. Endorsed plans are entitled to scoring preference and expedited review related to various State grant, loan, and regulatory programs. At present, there are no endorsed plans approved in Morris County.<sup>9</sup>

#### State Planning Endorsement and the New Jersey Highlands Water Protection and Planning Act

The adoption of the New Jersey Highlands Water Protection and Planning Act (Highlands Act) in 2004 (discussed in Section B below) altered endorsement policies for areas identified as "Planning" and "Preservation Areas" as per the Highlands Act. The Highlands Act provides that any portion of a county located in the Highlands Preservation Area is exempt from the State Planning Commission (SPC) Plan Endorsement process. It further provides that once the Highlands Regional Master Plan (RMP), created in conformance with the Highlands Act, has attained Plan Endorsement from the SPC for the Planning Area, Highlands Council approval of Plan Conformance with respect to lands in the Planning Area shall be deemed the equivalent of State Plan Endorsement. In the Preservation Area, local governments conforming to the RMP qualify for any benefits that would be received as part of Plan Endorsement under the State Planning Act; municipalities are exempt from the State Plan Endorsement process.

#### Draft State Strategic Plan (2011)

In 2011, the State released a final draft of the State Strategic Plan intended as an update to the 2001 SDRP. The State Strategic Plan was never adopted; the 2001 Development and Redevelopment Plan is still the official State Plan.

#### Special Resource Areas

The New Jersey Highlands Region is identified in the 2001 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."*<sup>10</sup> Following this

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<sup>8</sup> As of January, 2022

<sup>9</sup> As of January 2022

<sup>10</sup> 2001 State Development and Redevelopment Plan, page 171.

designation in the 2001 State Plan, the Highlands Water Protection and Planning Act was signed into law in August of 2004.<sup>11</sup>

*Highlands Water Protection and Planning Act and the Highlands Regional Master Plan*

It is the intent of the New Jersey Highlands Water Protection and Planning Act (Highlands Act) to protect the drinking water supply generated within the over 800,000 acre New Jersey Highlands Region by limiting development in the region. As defined by the Act, the Highlands Region includes 88 municipalities and portions of seven New Jersey counties. The Highlands Act divides the Highlands Region into the Preservation Area and the Planning Area. In the Preservation Area, future development is limited by enhanced environmental considerations, constraints on allowable septic density and on the extension of sewer, water and transportation infrastructure. In the Planning Area, growth is encouraged where water and sewer capacity are available, but is generally discouraged outside of these areas.

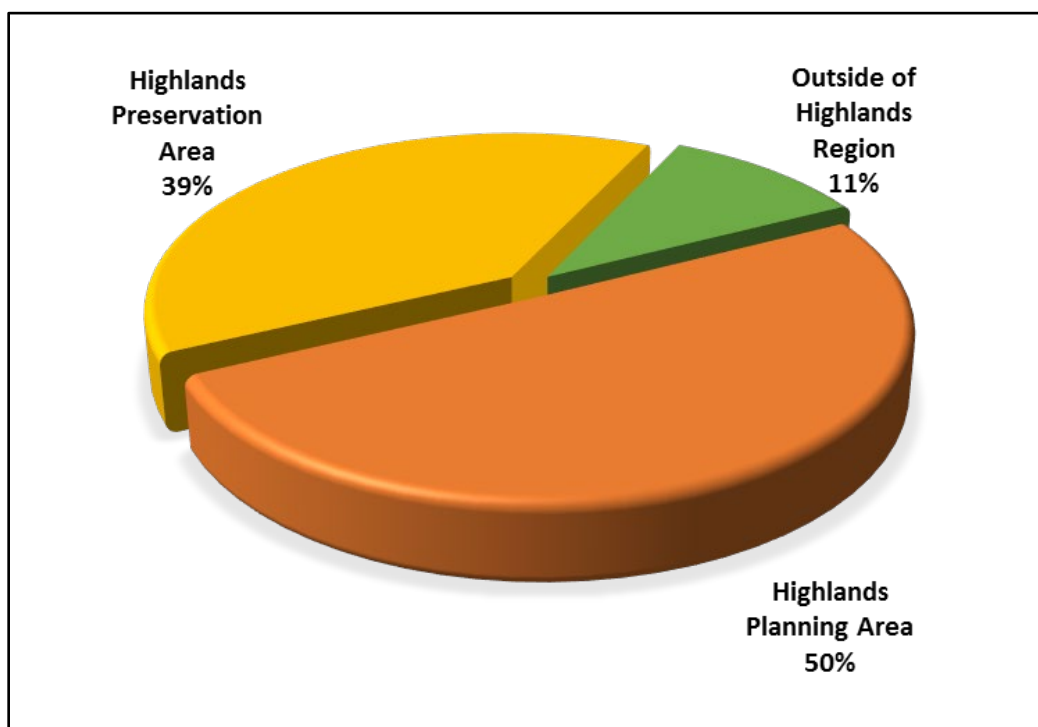
*Highlands Act and Morris County*

- 32 of the county's 39 municipalities are within the Highlands Region.
- 13 municipalities are included, in whole or in part, within the Highlands Preservation Area.
- The Highlands Preservation Area covers 188 square miles (39%) of Morris County's total area.
- The Highlands Preservation Area contains most of Morris County's remaining vacant land and unpreserved farmland.

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<sup>11</sup> Highlands Water Protection and Planning Act, P.L. 2004, c. 120.

Morris County and the Highlands Region



As demonstrated in the chart below, the majority of farmland in Morris County is located in the Highlands Preservation Area. This land is substantially restricted in terms of allowable *non-agricultural* development. Agricultural and Horticultural development, however, as defined in the Highlands Act,<sup>12</sup> is conditionally exempt from Highlands Act and associated NJDEP Highlands Rules.<sup>13</sup>

**Acreage of Farm Assessed Areas in Highlands Planning/Preservation Area<sup>14</sup>**

Acreage of Preserved/ Not Preserved Farm Assessed Areas		
Farm Assessed Areas	Highlands Planning Area	Highlands Preservation Area
Preserved	1,817	6,425
Not Preserved	9,464	11,115
	11,281	17,540

Source: Morris County Office of Planning and Preservation / Morris County Board of Taxation

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 Act<sup>15</sup> 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

<sup>12</sup> Agricultural and Horticultural development are defined at N.J.S.A 13:20-3.

<sup>13</sup> N.J.S.A 13:20-3 and N.J.A.C. 7:38-1.4

<sup>14</sup> Farm assessed includes Tax Code 3a and 3b parcels in this analysis. Preserved Farmland that is not farm assessed is not included in this chart. June 2020.

<sup>15</sup> N.J.S.A. 13:20-29.



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 State Agricultural Development Committee (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.<sup>16</sup> As concerns the NJDEP Highlands-related regulations (N.J.A.C. 7-38 et seq.), the NJDEP has concluded that these regulations 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.<sup>17</sup>
- 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.<sup>18</sup>

#### *Highlands Regional Master Plan*

The Highlands Act established the Highlands Council and tasked it with the responsibility of developing a regional master plan for the entire Highlands Region. The Council adopted the Highlands Regional Master Plan (RMP) in 2008, which includes additional standards for the regulation of land development in the Highlands Region.

In the Preservation Area, the enhanced environmental and land use restrictions contained in the Highlands Act and reflected in the RMP regulate the intensity and location of new development and redevelopment that might otherwise be permitted under local zoning and statewide environmental regulations. In the Preservation Area, local governments are required to conform their plans and regulations to achieve consistency with the Highlands Regional Master Plan. In the Planning Area, conformance to the Highlands Regional Master Plan is generally voluntary<sup>19</sup> and the related NJDEP Highlands rules for the Preservation Area do not apply.<sup>20</sup> 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.

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<sup>16</sup> N.J.S.A. 13:20-6(w).

<sup>17</sup> Highlands Water Protection and Planning Act Rules Proposed Readoption with Amendments: N.J.A.C. 7:38, page 261.

<sup>18</sup> N.J.A.C. 7:38-2.4(b)6-7.

<sup>19</sup> Except in accordance with NJ Executive Order 114, which permits the NJDEP to use enhanced standards to determine whether to issue water allocation permits, approve Water Quality Management Plans, and/or approve other permits related to projects located in the Highlands RMP Land Use Capability Protection, Conservation or Environmentally constrained sub-zones.

<sup>20</sup> NJDEP Highlands Water Protection and Planning Act Rules, N.J.A.C.7:38.

*Municipalities with Land in the Highlands Preservation and Planning Area*

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

*Municipalities with Land in the Planning Area Only:*

- Town of Boonton
- Butler Borough
- Chester Borough
- 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 Borough
- 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

All Morris County municipalities with land in the Preservation Area also have some land in the Planning Area. Municipalities with lands in both the Preservation Area and Planning Area must petition the Highlands Council for conformance for lands in the Preservation Area and may also petition for conformance for lands in the Planning Area. Of the 13 municipalities with lands located in both the Highlands Preservation Area and the Highlands Planning Area, Chester Township, Kinnelon Borough, Randolph Township, Rockaway Township and Washington Township have also chosen to include those portions of their municipalities in the Highlands Planning Area in their conformance petitions to the Highlands Council.<sup>21</sup>

Of the Morris County Planning Area-only municipalities, only Chester Borough and Wharton Borough have petitioned the Highlands Council for conformance and agreed to amend their master plans and development regulations accordingly.<sup>22</sup> As conformance in the Planning Area is voluntary, any municipality may withdraw its Planning Area lands from conformance at any time.

In total, seven municipalities within Morris County have petitioned for conformance for their entire municipality.<sup>23</sup> Conforming municipalities are required to adopt amendments to their master plans and land development ordinances implementing the policies of the Highland Regional Master Plan, including those related to agriculture where appropriate.

#### *Highlands Agricultural Resource Areas and Agricultural Priority Areas*

The Highlands Council utilized unique resource assessment criteria to conduct an agricultural resource assessment for the Highlands Region. This assessment was used to determine Highland priority areas for farmland preservation, which are incorporated into the Highlands RMP, which identifies **Agricultural Resource Areas (ARAs)** and **Agricultural Priority Areas (APAs)**, which are a subset of ARAs. Despite differences in assessment criteria used by the SADC, and in turn the Morris County Agricultural Development Board (MCADB), to define **Agricultural Development Areas (ADAs)**, there is substantial overlap in the ADAs identified in the Morris County Farmland Preservation Plan, and the ARAs identified in the Highlands Regional Master Plan.

There are various provisions in the Highlands RMP that must be adopted by Preservation Area and conforming Planning Area municipalities for the protection and preservation of ARAs and APAs. Implementation of these provisions is achieved through the local adoption of related Highlands Ordinances.<sup>24</sup> For example:

- “In an ARA, where other land preservation techniques are not feasible, clustering is mandatory for residential development through Municipal Plan Conformance, local development review, and Highlands Project Review. The use of clustering must preserve at least 80% of the total cluster project area in perpetuity in agricultural use or for environmental protection. A set aside of 80% for preservation will prevent the fragmentation of agricultural land allowing for contiguous areas of agriculture to sustain and enhance agricultural resources. Preservation of up to 90% of the cluster project area will be achieved where feasible. The agricultural land set aside in the cluster project area must be preserved in perpetuity for agricultural use through a deed of easement enforceable by the Highlands Council and the municipality, the CADB, or the SADC.”<sup>25</sup>

#### *Agricultural Priority Areas*

Agricultural Priority Areas are marked for priority consideration based on the relative value of these agricultural resources, providing a prioritization mechanism for future farmland preservation activities in the Highlands Region. Based on this information, the Highlands Council maintains a confidential inventory of agricultural lands in the

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<sup>21</sup> Conformance status as of May 2019.

<sup>22</sup> Parsippany Troy Hills had petitioned for conformance but the petition has been withdrawn.

<sup>23</sup> Chester Twp., Chester Borough, Kinnelon, Randolph, Rockaway Twp., Washington and Wharton as of December 2021.

<sup>24</sup> Section 6 of the Highlands Model Ordinance.

<sup>25</sup> New Jersey Highlands Regional Master Plan, 2008, pg. 285.

Agricultural Priority Area which identifies farmland (and open space lands) that should not be developed due to their importance for water resource and ecological protection.<sup>26</sup>

Agriculture Priority Areas are defined in three categories: Low-, Medium- and High-Priority. All together, there are about 16,149 acres identified as APA's in Morris County. Land is distributed between these three APA designations as follows: Low: 44%, Medium: 37%, and High: 18%; please see the chart below.<sup>27</sup>

<b>Acreage of Agricultural Priority Area (APA) by Municipality</b>			
<b>District</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>
Chester Borough	25	22	0
Chester Township	1,610	681	455
Harding Township	628	1,243	324
Mendham Borough	555	768	67
Mendham Township	145	354	13
Morris Township	5	3	0
Mount Olive Township	279	579	503
Washington Township	3,931	2,366	1,594
<b>Total</b>	<b>7,178</b>	<b>6,015</b>	<b>2,955</b>

Source: Morris County Office of Planning and Preservation / NJ Highlands Council datasets - 8/2020

About 65% of all Morris County APA lands are located in the Highlands Preservation Area.

<b>Acreage of Agricultural Priority Areas by Highlands Planning/Preservation Area</b>		
<b>APA Designation</b>	<b>Highlands Planning Area</b>	<b>Highlands Preservation Area</b>
Low	2,071	5,107
Medium	3,003	3,012
High	631	2,324
<b>Total</b>	<b>5,705</b>	<b>10,444</b>

Source: Morris County Office of Planning and Preservation / NJ Highlands Council datasets - 8/2020

Farm assessed lands in Morris County located in the Agricultural Priority Area totals 6,858 acres (Planning and Preservation Areas). Approximately 832, or 14%, of these acres are permanently preserved as farmland. A breakdown of this acreage is provided below.

<b>Farm Assessed Acreage within Agricultural Priority Areas by Municipality (Acres) - PRESERVED</b>				
<b>District</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Municipal Total Acres</b>
Chester Borough	0	0	0	0
Chester Township	7	122	254	383
Harding Township	0	7	0	8
Mendham Borough	0	0	0	0
Mendham Township	0	11	9	20
Morris Township	0	0	0	0
Mount Olive Township	1	28	26	55
Washington Township	20	108	238	366
<b>Total</b>	<b>29</b>	<b>276</b>	<b>528</b>	<b>832</b>

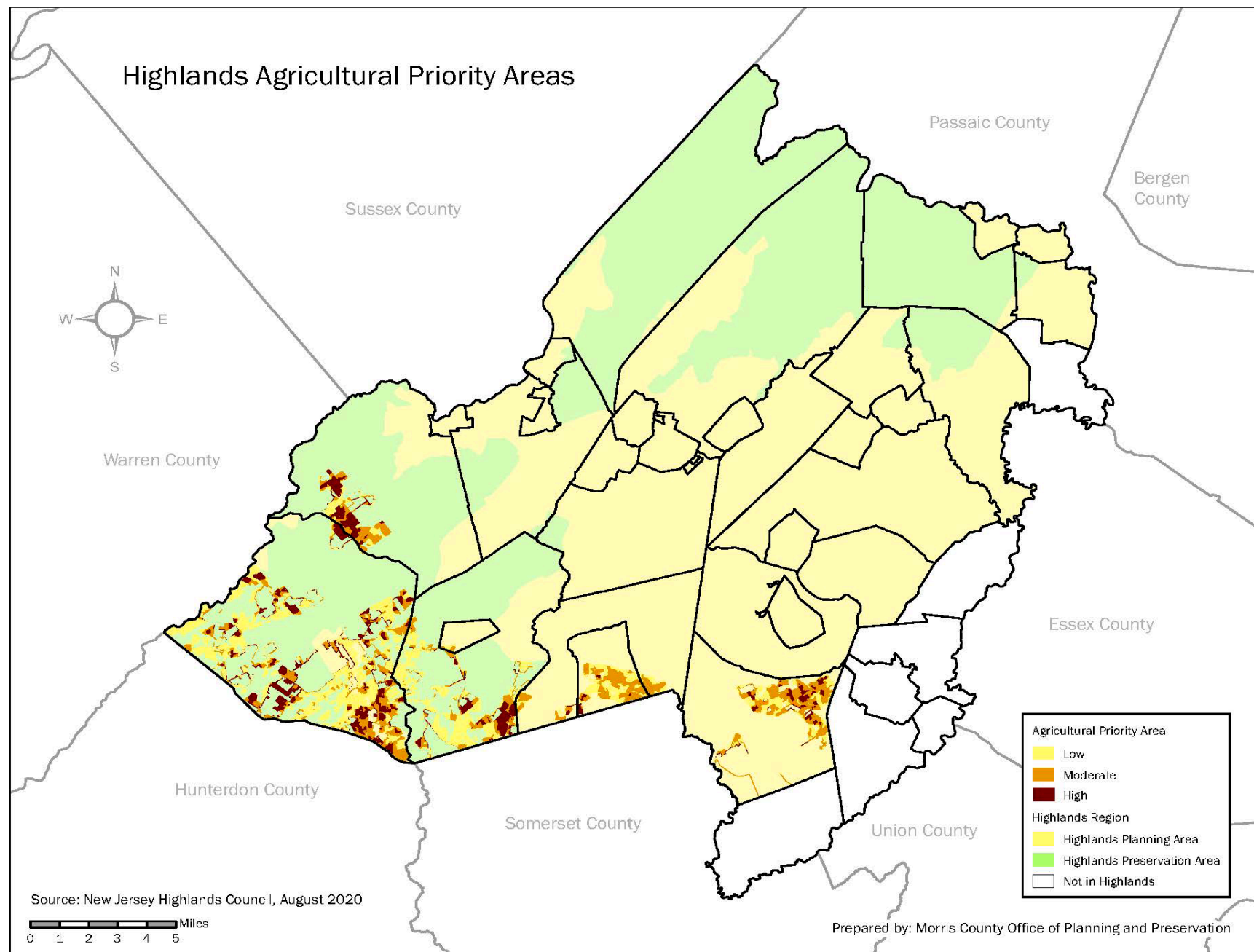
Source: Morris County Office of Planning and Preservation / NJ Highlands Council datasets - 8/2020

<sup>26</sup> New Jersey Highlands Regional Master Plan, 2008, pg. 230.

<sup>27</sup> <http://highlands-data-njhighlands.opendata.arcgis.com/datasets/agricultural-priority-areas>

<b>Farm Assessed Acreage within Agricultural Priority Areas by Municipality (Acres) - <u>UNPRESERVED</u></b>				
<b>District</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Municipal Total Acres</b>
Chester Borough	0	0	0	0
Chester Township	282	226	175	684
Harding Township	147	487	251	885
Mendham Borough	210	423	66	698
Mendham Township	45	200	3	247
Morris Township	0	0	0	0
Mount Olive Township	70	378	434	883
Washington Township	626	957	1,045	2,628
<b>Total</b>	<b>1,380</b>	<b>2,671</b>	<b>1,974</b>	<b>6,026</b>

*Source: Morris County Office of Planning and Preservation / NJ Highlands Council datasets - 8/2020*



*Highlands Regional Master Plan (RMP) Land Use Capability Zones*

The RMP identifies six *Land Use Capability Zones* for the lands within the Highlands Region and defines a series of goals, policies and objectives linked to each zone. These six zones include three major zones, (the Protection Zone, the Conservation Zone and the Existing Community Zone) and three sub-zones (the Lake Community Zone, the Environmentally Constrained Conservation Zone and the Environmentally Constrained Existing Community Zone).<sup>28</sup> These zones and subzones are used to define the land use capability of the various parts of the Highlands Region, as determined by the Highlands Council. The RMP policies for these zones are applied through the conformance process, which requires the adoption of regulations applicable to these areas for lands in the Preservation Area and in conforming municipalities for lands in the Planning Area. These land use capability zones are treated as “overlay zones” at the local level, and impose supplemental regulations to the underlying zoning of a conforming municipality.

Among these zones, the majority of farm-assessed properties are located in the Conservation Zone, the Conservation Zone - Environmentally Constrained Subzone and in the Protection Zone. The planning objectives included for these zones and the associated regulations adopted by conforming municipalities reinforce the agricultural protection policies, particularly in designated Agricultural Resource and Agriculture Priority Areas.

- The Conservation Zone consists of areas with significant agricultural lands interspersed with associated woodlands and environmental features that should be preserved when possible. The Conservation Zone is intended primarily for agricultural use and development, including ancillary and supporting uses and activities. Nonagricultural development activities will be limited in area and intensity due to infrastructure constraints and resource protection goals. Where nonagricultural development does occur it must be compatible with agricultural uses
- The Conservation Zone-Environmentally Constrained Sub-Zone consists of lands containing significant environmental features within the Conservation Zone that should be preserved and protected from nonagricultural development. Development activities will be limited and subject to stringent limitations on consumptive and depletive water use, degradation of water quality, and impacts to environmentally sensitive lands.
- The Protection Zone contains the highest quality natural resource value lands of the Highlands Area. Lands in the Protection Zone are essential to maintaining water quality, water quantity and sensitive ecological resources and processes and have limited or no capacity to support human development without adversely affecting overall ecological function. Land acquisition is a high priority for lands in the Protection Zone and development activities will be extremely limited. Any development will be subject to stringent limitations on consumptive and depletive water use, degradation of water quality, and impacts to environmentally sensitive lands and natural resources.

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<sup>28</sup> Highlands Regional Master Plan, 2008.

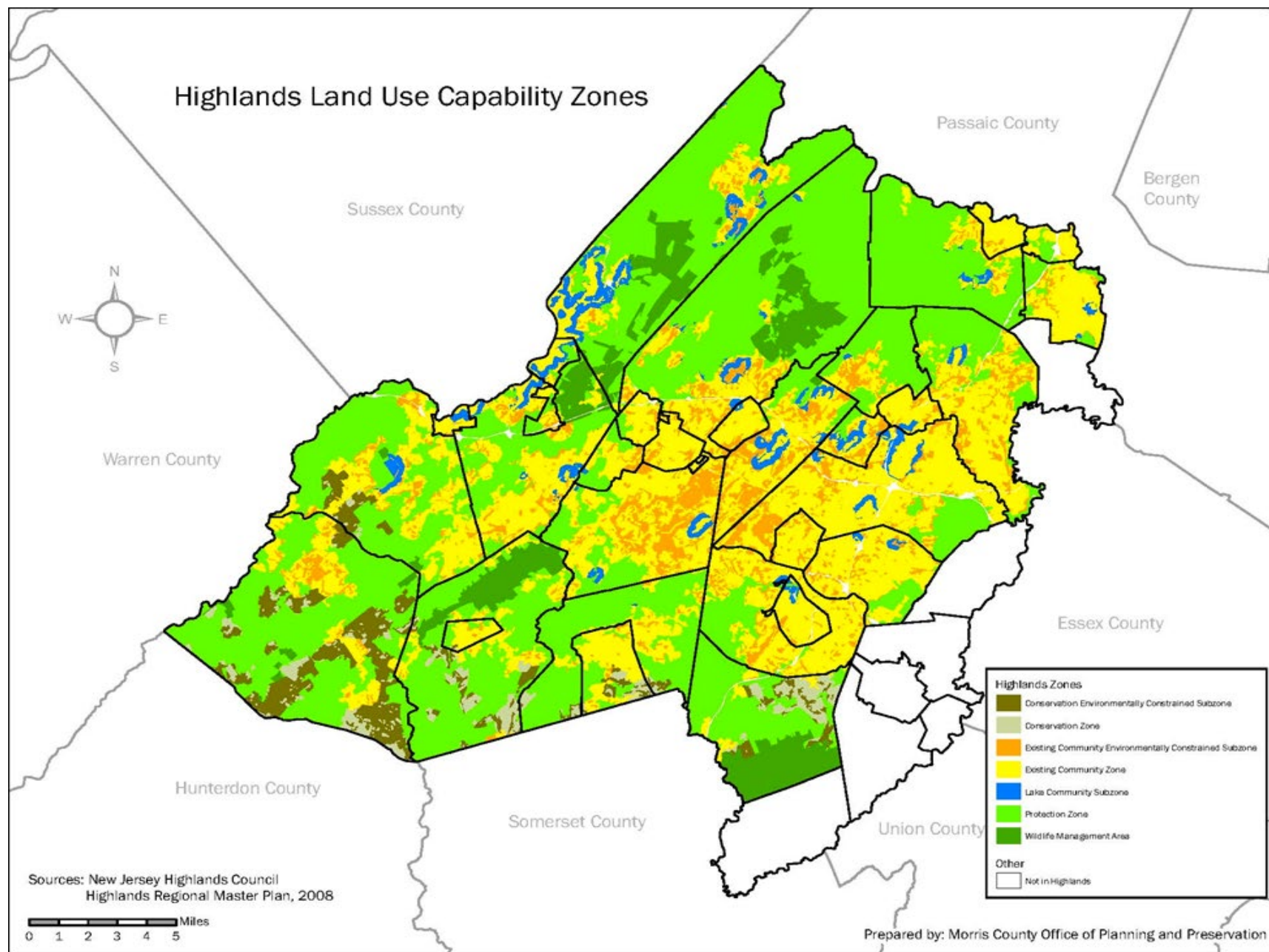
<b>Farm Assessed Property by Highlands Capability Zone - <u>PRESERVED</u></b>		
<b>Highlands Land Use Capability Zone</b>	<b>Acres in Highlands Planning Area</b>	<b>Acres in Highlands Preservation Area</b>
Conservation Environmentally Constrained Subzone	659	2,856
Conservation Zone	227	1,458
Existing Community Environmentally Constrained Subzone	140	11
Protection Zone	659	2,066
Existing Community Zone	132	25
Lake Community Subzone	0	0
Wildlife Management Area	0	8
<b>Total Acres</b>	<b>1,817</b>	<b>6,425</b>

Source: Morris County Office of Planning and Preservation / NJ Highlands Council datasets - 8/2020

<b>Farm Assessed Property in by Highlands Capability Zone - <u>UNPRESERVED</u></b>		
<b>Highlands Land Use Capability Zone</b>	<b>Acres in Highlands Planning Area</b>	<b>Acres in Highlands Preservation Area</b>
Conservation Environmentally Constrained Subzone	1,141	1,693
Conservation Zone	1,023	518
Protection Zone	5,192	8,362
Existing Community Environmentally Constrained Subzone	723	187
Existing Community Zone	1,200	267
Lake Community Subzone	174	47
Wildlife Management Area	0	37
<b>Total Acres</b>	<b>9,453</b>	<b>11,112</b>

Source: Morris County Office of Planning and Preservation / NJ Highlands Council datasets - 8/2020





## County Master Plan and Development Regulations

### Master Plan

The 2022 Farmland Preservation Element of the Morris County Master Plan is an integral part of the overall Morris County Master Plan, which consists of several subcomponents. The 2022 Farmland Preservation Plan Element of the Morris County Master Plan continues Morris County's support for the preservation and maintenance of a strong agricultural economy in the County.

This Plan is also consistent with the 2020 Land Use Element of the Morris County Master Plan. While the Land Use Plan Element does not address specific farmland preservation or agricultural goals (as this is reserved for the Farmland Preservation Element of the Master Plan), it identifies trends, goals, policies, and recommendations consistent with the protection of farmland, agricultural resource areas and the agricultural economy. It also describes the Morris County Farmland Preservation Program and includes a map identifying the general location of preserved, pending and targeted farms for preservation.

Related excerpts from the 2020 Land Use Element of the Morris County Master Plan include:

### *Description of the Farmland Preservation Plan*

**Farmland Preservation Program /County Agricultural Development Board:** The Morris County Farmland Preservation Program began with the permanent preservation of a fourteen-acre parcel in Washington Township in 1987. Since 1994, Morris County's contribution to farmland preservation activity has been funded through the Morris County Preservation Trust Program. The allocation of the funding is overseen by the Morris County Agriculture Development Board (CADB), which was created by the Morris County Board of Chosen Freeholders in 1983.<sup>29</sup>

The CADB oversees the preservation of farmland in accordance with the New Jersey Agriculture Retention and Development Act<sup>30</sup> and administers the Right-to-Farm program.<sup>31</sup> County funding is combined with state and local funds to preserve existing farmland throughout Morris County's agricultural areas. The Farmland Preservation Program has permanently preserved 137 farms totaling 8,066 acres, with six additional farms totaling 238 acres in the preservation pipeline and another three farms totaling about 50 acres in the eight-year term preservation program of farmland in Morris County.<sup>32</sup> There are approximately 20,000 acres of additional farm assessed land in the County, of which about 3,100 have been targeted for potential acquisition as part of this voluntary preservation program.

### *Land Use Element Goals*

- **The efficient use of land and resources:** Encourage the focus of housing and economic growth in areas with existing or planned infrastructure (sewer/water/transportation) and in existing or planned population and employment centers consistent with environmental protection limitations and environmental protection goals. Encourage less intense growth, and focus major land conservation and preservation activities in areas that do not contain existing or planned infrastructure.
- **The protection of natural, historic, agricultural and scenic resources:** Encourage the protection and preservation of environmental resources, unique natural features, open space, historic assets and farmland throughout Morris County, focusing major conservation, preservation and protection activities in areas without existing or planned infrastructure, in which the majority of these resources are located.
- **Development that proceeds only after careful analysis of environmental conditions:** Support desired development that proceeds only after careful analysis of environmental conditions and within the

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<sup>29</sup> The Board of Chosen Freeholders was renamed the Board of County Commissioners in 2021.

<sup>30</sup> N.J.S.A. 4:1C-11 et seq. 1981.

<sup>31</sup> N.J.S.A. 4:1C et seq. 1983.

<sup>32</sup> Morris County Preservation Trust, June 2020.

limitations imposed by such analysis, with emphasis on the mitigation of associated environmental impacts and potential hazards to life and property.

#### *Trends*

- **Development preservation of farmland is anticipated:** Participation in the Trust's Farmland Preservation Program has grown steadily and there are currently 137 farms and 8,065 acres permanently preserved for agriculture.<sup>33</sup> Most of the roughly 20,000 acres of still unpreserved farm-assessed lands are located in areas without infrastructure and with regulatory restrictions limiting substantial development. Therefore, opportunities remain for additional farmland to be permanently preserved under the County's voluntary farmland preservation program.

#### *Recommendations*

- Work with the Morris County Agriculture Development Board to update the Morris County Farmland Preservation Plan.
- Continue to support, oversee and staff the Morris County Open Space Program, Farmland Preservation Program, Historic Preservation Program, and Flood Mitigation Program.

#### Circulation Plan Element, 2018

The Morris County Circulation Element was adopted on October 18, 2018. The Circulation Element was developed as a result of an examination of the patterns in existing demographics and transportation networks. The plan identifies trends in infrastructure, development and technology that have bearing on the County's roads and bridges, public transportation, bicycle and pedestrian, freight and aviation networks. The Circulation Element discusses emerging transportation trends in Morris County, such as the rise of transit-oriented development (TOD) and walkable community design. The County has established a Trail Construction Grant Program to provide support for local walkable community policies. Morris Township was recently awarded funding for the "Blue Gate Farm Preserve Connector Trail," which will provide a pedestrian and bicycle connection between two neighborhoods and to Township parkland.

#### Natural Resource Management Guide, 2000

Morris County's Natural Resource Management Guide was adopted by the Board of Chosen Freeholders in 2000. The Plan takes a deep dive into the factors relating to geology, topography, hydrology, vegetation, wildlife and climatology that make Morris County unique. With this in-depth analysis of these environmental factors, the Plan offers best management practices that its municipalities can utilize in their efforts to become better environmental stewards.

#### Bicycle and Pedestrian Element, 1998

The Morris County Board of Chosen Freeholders adopted the County's Bicycle and Pedestrian Element on December 3, 1998 via Resolution #98-4. The purpose of this plan was to set standards and offer guidance to Morris County municipalities in facilitating the development, expansion and interconnectedness of bicycle and pedestrian networks. The Plan examines the history behind existing networks and facilities and the regulations controlling them. In order to foster connectivity, the municipalities in Morris County have been divided into six regions. The Plan characterizes the most common types of bicycle and pedestrian travel and related facilities, outlines trends and challenges such as those related to children and accidents, and offers design guidelines for municipalities to employ.

#### Water Supply Element, 1994

The Board of Chosen Freeholders adopted Morris County's Water Supply Element on April 7, 1994. The Water Supply Element examines the existing water resources available to Morris County as well as the inventory of municipal

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<sup>33</sup> As of June 2020, excluding three farms and approximate 50 acres in the term (non-permanent) preservation program.

water supply facilities. The Plan then analyzes the patterns and projections for demand and use as well as how regulatory requirements impact water supply in order to make recommendations tailored to the County's unique environmental characteristics. The recommendations cover such topics as distribution of water resources, ground water management, water quality, water supply and distribution, as well as potential actions that could be taken at the County level. The Plan only incorporated projections through 2010, and did not include any information or demand statistics post-2010.

Morris County Multi-Jurisdictional Hazard Mitigation Plan (2020)

The County updated its Multi-Jurisdictional Hazard Mitigation Plan in June 2020. The Plan identified the following Hazards of Concern:

- Dam Failure
- Disease Outbreak (mosquito-borne diseases, tick-borne diseases, campylobacteriosis, influenza, mumps, Ebola, Coronavirus)
- Drought
- Earthquake
- Extreme Temperature (heat and cold)
- Flood (including urban flooding)
- Geological Hazards (landslide, subsidence, and sinkholes)
- Harmful Algal Blooms
- Infestation (Insects [e.g. gypsy moth, mosquitoes, spotted lanternfly, emerald ash borer], white-tailed deer, rodents)
- Severe Weather (hurricanes, tropical storms, high winds, tornadoes, thunderstorms, hail, lightning)
- Severe Winter Storm (heavy snow, blizzards, ice storms)
- Wildfire
- Hazardous Materials (fixed sites and in transit)

Several of these identified hazards have implications on the agricultural community. A summary of these issues is provided below:

*Drought:* The document notes that agriculture-related drought disasters are common. In 2015 Morris County was included in declaration S3930 for excessive heat and drought and in 2016, included in declaration S4071 for combined effects of freeze, excessive heat and drought. The document further states that due to climate change, the State is projected to experience more frequent droughts which may affect the availability of water supplies and increasing the agricultural need. However, if precipitation increases and more efficient irrigation techniques are adopted broadly, the agricultural community may decrease its dependency on water supplies.

*Flood:* Morris County is most susceptible to riverine (inland) flooding, urban flooding as a result of precipitation and insufficient drainage, and flooding as a result of dam failure. The US Secretary of Agriculture is authorized to designate counties as disaster areas to make emergency loans to producers suffering crop losses, which have a significant impact on the economy by reducing produce sales. Between 2015 and 2019, Morris County was not included in any USDA declarations involving flooding, nor were any crop losses reported as a result of flooding.

*Infestation:* Morris County agriculture operations deal with the threat of infestation from gypsy moths, mosquitoes, emerald ash borers, spotted lanternflies, and white-tailed deer, as well as rodents and invasive plants. Overpopulation of white-tailed deer is a byproduct of agriculture and a prevalence of greenways and large building lot sizes, which also causes severe reductions in the diversity of native forest plants. Crop losses spurred by infestation have the capability of stunting economic growth. In 2017, there were 6,659 acres of cropland in Morris County, and 5,904 acres that was harvested (USDA 2017). Therefore, it is reasonable to believe that Morris County farmers have experienced monetary losses from infestations.

*Severe Weather:* As stated above, agriculture-related drought disasters are one of the more common forms of severe weather which threaten Morris County farmers. In 2018, Morris County was included in declaration S4454 for excessive rain and moisture, and declaration S4455 for the combined effects of excessive rainfall, moisture, and storm-force winds from Hurricane Florence. From June 2017 to August 2018, the County declared roughly \$30,040 in indemnities for excessive moisture for all other crops due to severe weather events.

*Wildfire:* Wildfires can dramatically alter the terrain and ground conditions, thereby increasing the probability of other natural disasters such as flood and mudflows. Based on historical records and input from the Steering Committee and Planning Committee, the probability of occurrence for wildfire in the County is considered ‘frequent’ with little impacts due to scale of events and great capabilities in the County, region and State. Based on temperature projections for Northern New Jersey, Morris County can expect warmer and drier conditions, which may contribute to an increase in the frequency and intensity of wildfires.

#### Strategic Plan, 2018

Morris County’s Strategic Plan was adopted by the Board of Chosen Freeholders on August 22, 2018. The aim of the Strategic Plan is to develop a unified vision and mission for the County with a clear set of guiding principles for the County government to employ in working to meet the vision and mission. The County’s mission is as follows:

*“Morris County will protect and preserve the quality of life for all of Morris County, and ensure the effective, efficient, and ethical stewardship of tax dollars.”*

The Strategic Plan offers a set of seven guiding principles for the County government. These broad principles focus on the ways to take advantage of the County’s unique resources to optimize the quality of life for residents while minimizing burdens. The principles of the Strategic Plan encourage the County’s 39 municipalities to coordinate with each other for cohesion in both short- and long-term planning.

#### State of the County Report, 2013

The Morris County Planning Board adopted the State of the County Report in 2013 as a complement to the County Master Plan. Because the elements of the County Master Plan cover different timeframes, the aim of the State of the County Report is to provide a snapshot of existing and various planning conditions and trends into a single comprehensive document.

The Open Space and Farmland Preservation section discusses how the Morris County Open Space and Farmland Preservation Trust Fund has been utilized for various projects across the County related to open space, agriculture and historic preservation, as well as flood mitigation and trail construction.

#### Floodplain Mitigation Program

Due to Hurricane Irene in 2011, the County Commissioners expanded floodplain mitigation efforts, creating the Floodplain Mitigation Program. This program is a grant program that buys flood-prone residential properties, working with funding partners at the local, state, and federal levels. Generally, the structures are demolished, and the land is permanently preserved, helping to create open space that will help to absorb and contain future flooding. The program received the NJ Association of Floodplain Managers Outstanding Floodplain Management Award in 2013 and the 2014 Governor’s Environmental Excellence Award in Land Conservation. County funds used for this program are generated through the County’s Open Space Trust Fund.

### Development Regulations

The Morris County Land Development Standards ensure that land development within the County proceeds in coordination with the County Master Plan, of which this Farmland Preservation Plan is a part, and with the Morris County Farmland Preservation Program.<sup>34</sup> Sections 701 and 703 of the standards apply as follows:

Section 701-F. Morris County Farmland Preservation Program -The Morris County Board of Chosen Freeholders has established the County Agriculture Development Board (CADB) for the purpose of implementing the State Agriculture Retention and Development Act (N.J.S.A. 4:1C-11). The CADB identifies areas of the County where agricultural uses should be retained and enhanced. Specific farm sites are also identified by the CADB for voluntary inclusion in Eight Year Farmland Preservation Programs and\or Permanently Preserved Easement Purchase Programs. Land development applications shall be reviewed for the consistency and compatibility with the Farmland Preservation Programs in accordance with the following provisions:

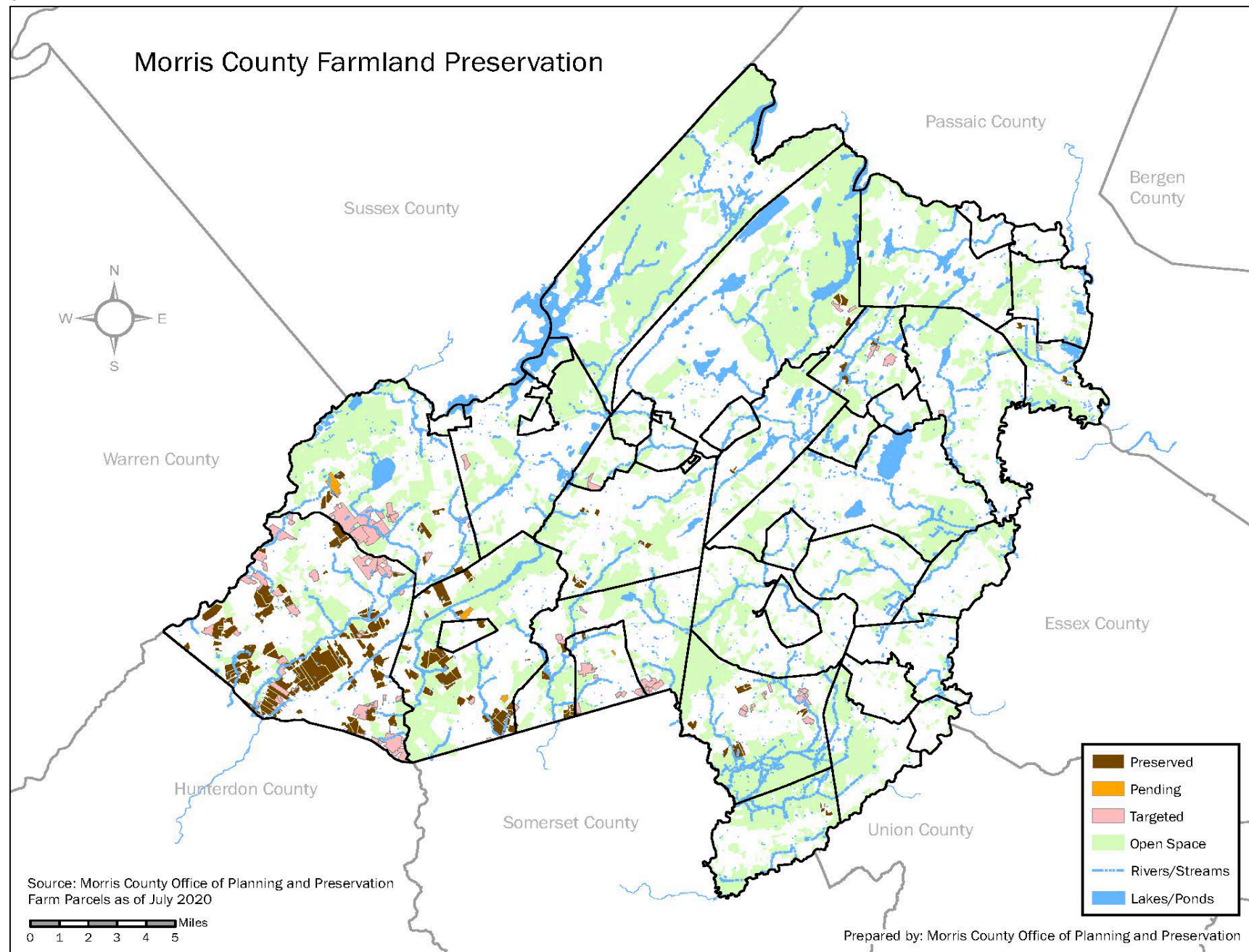
1. The CADB shall be notified of any land development application on a farmland site for which an application has been made to the CADB for participation in a Program.
2. Development applications on land adjacent to or within the general area of deed restricted farms will be reviewed to determine if any impacts will be caused by the proposed development which would be incompatible with existing and future agricultural operations and practices.
3. When necessary, the Planning Board shall consult with the CADB and shall identify, in its report, any conflicts between the proposed development and the County Farmland Preservation Program. Where conflicts seem to exist, the Planning Board will offer recommendations to the applicant and municipality with regard to their resolution.

Section 703 Relationship to Future County Plans and Regulatory Requirements - Any plan adopted by Morris County pursuant to state or federal law subsequent to the adoption of this Resolution assigning to the Planning Board implementation or review coordination responsibilities will be implemented through the applicable provisions of Sections 103, 701 or 702 of these Standards.

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<sup>34</sup> Morris County Land Development Standards, September 23, 1998, as Amended May 12, 2004, Sections 701 and 703, pg. 77-78.





## Land Use and Trends

The boundaries of Morris County encompass roughly 308,000 acres and over the past 40 years, the use of this land has undergone major changes.<sup>35</sup> In 1970, only 37% of the County was considered developed.<sup>36</sup> Presently, 85.3% of the County is either developed or preserved as open space. The remainder is either vacant land (5.1%) or farmland (9.6%). These figures do not accurately reflect remaining “developable” land, however, as remaining vacant land is often constrained by environmental and other factors. In addition, nearly one third of remaining farmland is permanently preserved.

**Existing Land Use 1970 and 2019**

Category	Percent 1970	Percent 2019
Vacant	62.3%	5.1%
Residential	16.4%	34.5%
Farm	8.3% <sup>37</sup>	9.6%
Commercial	0.8%	4.7%
Industrial	1.3%	2.4%
Public / Quasi Public	4.3%	11.9%
Parks & Open Space	2.7%	25.4%
Transportation	3.9%	6.4%

*Morris County Office of Planning and Preservation. All figures rounded.*

### Residential Land

At about 34.5%, residential land use represents the largest category of developed land in Morris County.<sup>38</sup> In 1970, residential use accounted for about 16% of land use in the County. Much of this change came as previously rural and lower density areas located outside of more traditional centers were suburbanized. The highest concentrations of housing (and population) are generally located in the central and eastern portions of the County, which also include the majority of higher density development and the infrastructure necessary to support more intense land use of all types. In 1970, there were 113,033 housing units of all types in the County, resulting in a housing density of 246 units per square mile.<sup>39</sup> By 2018, the number of housing units in the County rose to 194,282 and overall housing density was 422 units per square mile.<sup>40</sup>

### Vacant Land

In 1970, 63% of Morris County was considered vacant, a category of land that has now been reduced to just 5.1%, generally scattered in relatively small parcels throughout the County. For the purposes of this report, vacant land is defined as undeveloped properties in private ownership listed as vacant in County tax records.<sup>41</sup> In this analysis, vacant land does not include lands reserved for watershed protection or devoted to wellhead protection; such lands are classified as public /quasi-public. Agricultural lands are also not considered vacant and are identified separately herein.

<sup>35</sup> Total Acres in GIS Morris County File 308,125.

<sup>36</sup> Morris County Master Plan, Future Land Use Element, 1975.

<sup>37</sup> Land devoted to farmland for the dates 1970 to 2019 not directly comparable due to differences in review methodology.

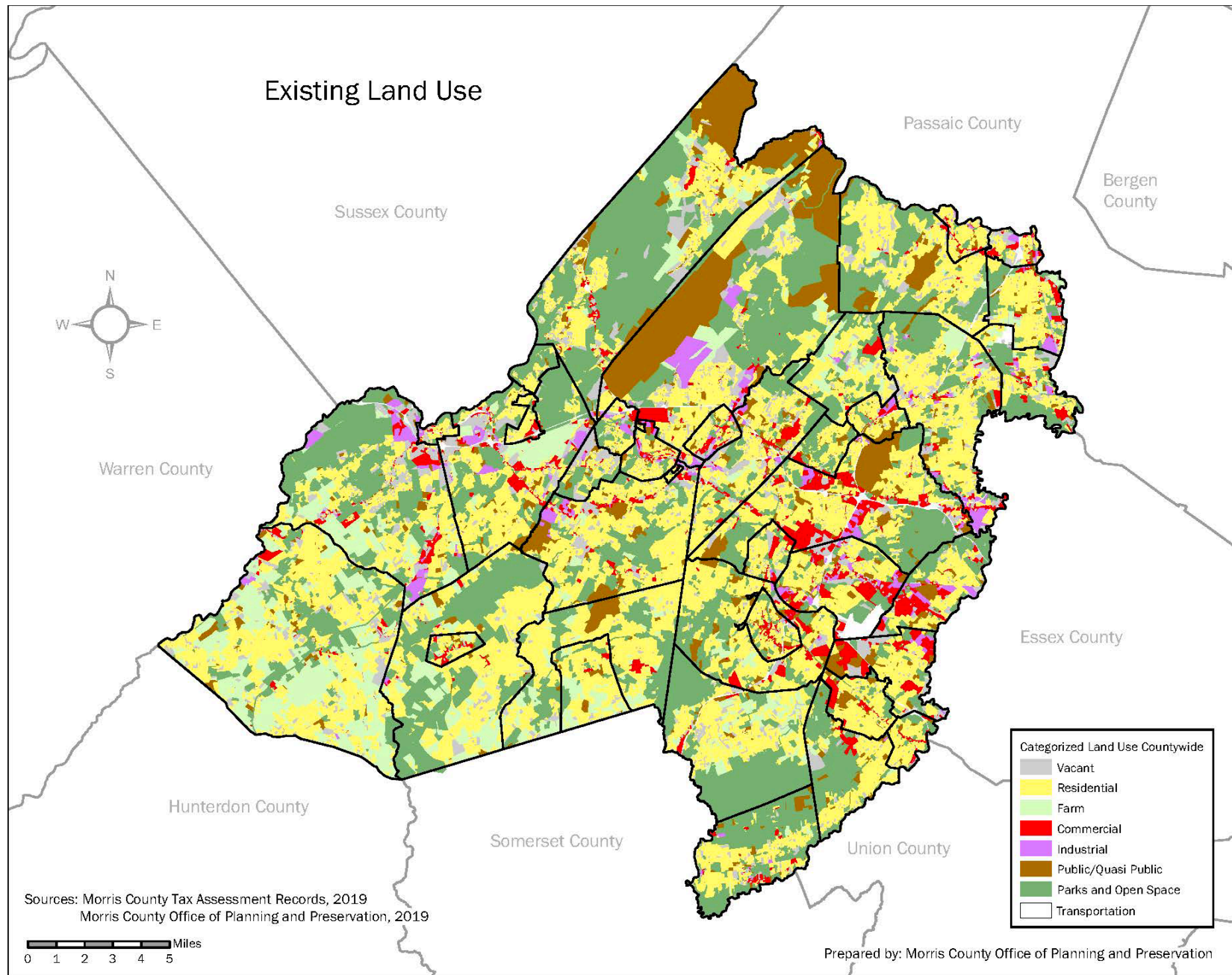
<sup>38</sup> Excludes farm residence acreage coded (3A), which are included with farmlands calculations. This accounts for approximately 138 acres as per MODIV records May 2019.

<sup>39</sup> Morris County Census Trends 1970-1980, State Data Center, pg. 34, US Census of Population and Housing.

<sup>40</sup> U.S. Census ACS 2018 1 Year Estimate of Housing Units.

<sup>41</sup> Vacant land figures from County tax records are reviewed and revised by staff to adjust for variations in identification, e.g. common area associated with multifamily development is sometimes identified as vacant as per MODIV, but is adjusted in this analysis as part of residential land area.





### Industrial Land

About 2.4% of the County is devoted to industrial use compared to 1.3% identified in 1970. Historically, industrial and warehouse uses were primarily located along rail corridors and major waterways (e.g. Whippany or Rockaway Rivers). Some of these uses remain, while others moved out of the region and/or have been replaced by mixed-use and multifamily housing through redevelopment projects. More recent industrial, manufacturing and/or warehouse use has typically located along or near major highway corridors. Smaller scale industrial/manufacturing use can be found in downtown areas, often near existing rail facilities. While traditional heavy manufacturing use has declined, current “industrial” development is focusing on advanced manufacturing (e.g. drugs and chemicals, medical equipment, computer/electronic), smaller specialty manufacturing, assembly operations, warehousing and distribution centers. Larger, stand-alone warehouse development has been particularly strong in recent years, as the growth in online shopping has intensified, creating demand for large distribution or “fulfillment” centers for storage and management of goods and direct delivery to consumers based on internet sales.

Between 1995 and 2018, approximately 59.4 million square feet of new nonresidential square footage was authorized by building permit in Morris County. Of this, about 21.3 million was designated as office, 6.2 million as retail and 31.8 million as “Other” nonresidential, a category that includes industrial and warehouse use, as well as other miscellaneous nonresidential uses.<sup>42</sup> While not all approved development was constructed, these figures demonstrate the pace of general commercial, industrial and other nonresidential use over this review period. The Great Recession (Dec.2007 - June 2009) marked a turning point in activity, with figures in more recent years totaling well below that authorized prior to 2007.

### Public /Quasi-Public Land

Public / Quasi-Public lands comprised about 11.9% of the County in 2019, compared to approximately 4.3% in 1970. This broad land use category encompasses a variety of public and other semi-public uses including schools, libraries, municipal, county, state and federal non-park facilities and properties, communications facilities, churches, correctional facilities and cemeteries.<sup>43</sup> This category also includes all utility authority properties, including lands used for watershed and wellhead protection. The federally owned Picatinny Arsenal, which covers nearly 6,300 acres, is also classified in this study as Public/Quasi-Public lands.

### Agricultural Lands

Lands assessed for agricultural purposes made up approximately 9.6% of Morris County in 2019. For this study, “agricultural land” was defined as farm-assessed property, which includes both lands devoted to active farming and related residential dwellings.<sup>44</sup> The majority of these farm-assessed properties are located in the northern and southwestern areas of the County. The 2019 figure exceeds but is not directly comparable to 1970, as the 8.3% of the County identified as agricultural land reported at that time was defined using aerial interpretation, not farmland assessment/tax records.

### Parks and Open Space

Lands dedicated to parks and open space comprised approximately 25.4% of the County in 2019.<sup>45</sup> Municipal and County government have long been active in open space preservation, initiating open space funding initiatives and aggressively pursuing open space acquisition. As a result, Morris County has more acres in county parks and more

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<sup>42</sup>New Jersey Department of Community Affairs Construction Reports. “Other Nonresidential” uses also includes but are not limited to hotels/motels, education, assembly (e.g. churches, arenas, theaters,) parking garages, institutional (e.g. jails, nursing care), and utilities. This category also includes multi-family housing development, however, that square footage was removed from this calculation for the purposes of this report.

<sup>43</sup> Semi-public uses are often tax exempt, provide a specific public benefit and may be publicly or privately owned.

<sup>44</sup> New Jersey Farmland Assessment Act of 1964, P.L. 1964, c.48 Based on tax assessment of farm qualified (3B) lands - Morris County GIS Database – January 2019. Includes related farmhouse “exception” (3A) properties.

<sup>45</sup>Excludes farmland, water authority, MUA watershed properties, private recreation. Approx. 78,270 ac.

acres in municipal parks than any other county in New Jersey.<sup>46</sup> There are also sizeable federal and state open space land holdings within the County, including national parks and wildlife management areas.

Examples of federal open space holdings include the Great Swamp National Wildlife Refuge and the Morristown National Historic Park. Examples of State Parks include Farny State Park in Rockaway Township and Hacklebarney State Park located in Chester and Washington Townships. Examples of State wildlife management areas include the Black River Fish and Wildlife Management Area (Chester Township), Berkshire Valley Wildlife Management Area (Roxbury Township) and the Wildcat Ridge Wildlife Management Area (Rockaway Township). Federal and state open space lands combined account for about 47.6% of all parks and open space lands in the County. Local and County parks are dispersed throughout the County.

#### Transportation

As defined in this report, transportation properties include road rights-of-way, railroads and airports. Approximately 6.4% of the County is devoted to transportation purposes. Due to the relatively developed state of the County coupled with the fiscal, regulatory and political difficulties associated with new highway construction, significant additions to this land use category are unlikely.

#### **Sewer Service Areas / Public Water Supply Service Areas**

##### Public Wastewater Treatment

The type of wastewater infrastructure available largely dictates the intensity and density of potential growth and development. The ability to adequately treat wastewater is critical to development and redevelopment. The location and particularly, the intensity of new development has been and will continue to be guided by sewer service availability, treatment plant capacities and septic systems standards. In non-sewered areas, concerns over groundwater contamination from individual on-site septic systems have resulted in increasing minimum required lot sizes for new lots.

Wastewater treatment is generally accomplished through one of three main systems: municipal/regional systems, package plants and septic systems. The limits of treatment and disposal are governed by 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.

##### Municipal and Regional Systems

Municipal/regional systems include a 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” (SSA) includes areas that are sewerred or are sewerable as per a NJDEP approved Wastewater Management Plan (WMP).

During the late 1960’s and early 1970’s, Morris County was served by 15 major municipal/regional sanitary sewer facilities, providing approximately 25 million gallons of wastewater treatment per day.<sup>47</sup> These major systems served about 20% of the County.<sup>48</sup> Morris County also contained many smaller “package” plants that served individual industries, schools and medical institutions and residential developments. The Clean Water Act, also known as the Federal Water Pollution Control Act of 1972, provided both the financial and the regulatory support for the expansion and upgrade of many public sewer treatment facilities and the expansion of sewer service areas. Following passage of this Act and subsequent amendments, on-going facility upgrade and expansion allowed sewer service to areas not previously served. These changes allowed the elimination of many small package treatment plants as the users of these systems began connecting to the new or expanded municipal and regional sewage treatment systems.

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<sup>46</sup> 2018-2022 New Jersey Statewide Comprehensive Outdoor Recreation Plan, NJDEP, Green Acres Program, April 2018, pg. 12.

<sup>47</sup> 1971 Morris County Master Plan – Sanitary Sewerage Facilities Element, Table 1.

<sup>48</sup> 1971 Ibid pg. 3.

It also allowed many homes with individual septic systems to connect to public sewage treatment and facilitated additional residential and nonresidential development in these newly served areas.

Current Sewer Service Areas and Facilities

Approximately 36% of the area within Morris County is currently in a sewer service area, i.e. an area that is or can be sewered as per current NJDEP regulations. There are 24 regional and municipal sewage treatment plants (STPs) providing service in Morris County.<sup>49</sup> These plants may serve a single municipality or multiple municipalities, and, in some instances, a single municipality may be served by multiple STPs.

**Current Sewer Service Facilities and Municipalities Served**

<b>Wastewater Utility</b>	<b>Municipalities Served in Morris County</b>
Ajax Terrace Water Pollution Control Plant	Roxbury Twp.
Butterworth Sewage Treatment Plant	Morris Plains Boro., Parsippany-Troy Hills Twp., Randolph Twp.
Chatham Twp. WPCP #1 (Chatham Main)	Chatham Twp.
Chester Boro. Wastewater Treatment Plant	Chester Boro.
Clover Hill Sewage Treatment Plant	Mount Olive Twp.
Florham Park Sewerage Utility	Florham Park Boro., East Hanover Twp., Morris Twp.
Greystone Park Psychiatric Hospital	Parsippany-Troy Hills Twp.
Hackettstown Municipal Utilities Authority Sewage Treatment Plant	Mount Olive Twp., Washington Twp.
Hanover Municipal Utilities Authority Sewage Treatment Plant	East Hanover Twp., Hanover Twp., Morris Plains Boro., Morris Twp., Parsippany-Troy Hills Twp.
Hercules Company WPCP	Roxbury Twp.
Long Hill Twp. Sewage Treatment Plant	Long Hill Twp.
Long Valley Wastewater Treatment Plant	Washington Twp.
Mendham Boro. Sewage Treatment Plant	Mendham Boro.
Molitor Water Pollution Control Facility (Madison-Chatham Joint Meeting)	Chatham Boro., Chatham Twp., Madison Boro.
Morristown Sewer Utility Sewage Treatment Plant	Hanover Twp., Morris Twp., Morristown
Mount Olive Villages Sewer Company Sewage Treatment Plant	Mount Olive Twp.
Musconetcong Sewerage Authority Sewage Treatment Plant (MSA)	Mount Arlington Boro., Mount Olive Twp., Netcong Boro., Roxbury Twp., Jefferson Twp.
Parsippany-Troy Hills Sewage Treatment Plant	Denville Twp., East Hanover Twp., Montville Twp., Mountain Lakes Boro., Parsippany-Troy Hills Twp.
Rockaway Valley Regional Sewerage Authority Sewage Treatment Plan (RVRSA)	Boonton Town, Boonton Twp., Denville Twp., Dover Town, Mine Hill Twp., Montville Twp., Parsippany-Troy Hills Twp., Randolph Twp., Rockaway Boro., Rockaway Twp., Victory Gardens Boro., Wharton Boro.
Two Bridges Wastewater Treatment Plant	Butler Boro., Kinnelon Boro., Lincoln Park Boro., Pequannock Twp., Riverdale Boro.
United Water (Suez) Mid-Atlantic (Arlington Hills) Sewage Treatment Plant	Mount Arlington Boro., Roxbury Twp.
Schooley's Mountain Wastewater Treatment Plant	Washington Twp.
White Rock Lake Sewage Treatment Plant	Jefferson Twp.
Woodland Sewage Treatment Plant	Florham Park Boro., Madison Boro., Harding Twp., Morris Twp., Morristown Town.

*Source: NJDEP Office of Water Resource Management Coordination*

<sup>49</sup>Based on assessment of the approved Morris County Future Wastewater Service Area Map, May 2019.

### Package Plants

Despite the existence of regional facilities, many areas of the County remain outside sewer service areas. As a result, many commercial and housing developments are served by small on-site discharge to groundwater (DGWs) and discharge to surface water (DSWs) systems that provide treatment for individual or small sites. Typically identified as “package plants,” these small, dedicated treatment systems are designed to serve specific users that typically generate over 2,000 gallons per day (gpd); they are not part of a regional system capable of addressing multiple users.<sup>50</sup> These facilities provide a level of sewage treatment, which may be less rigorous than the treatment provided by the regional systems, but more effective than that provided by individual septic systems. There are approximately 110 of these sites located throughout the County.<sup>51</sup>

### On-Site Disposal – Septic Systems

Uses not served by municipal and regional sewage treatment plants or package plants are served by on-site individual subsurface sewage disposal systems (ISSDS).<sup>52</sup> Septic systems are the most common ISSDS used outside sewer service areas.<sup>53</sup> Septic systems are absorption systems that transport wastewater effluent to groundwater by means of subsurface percolation, filtration, and bacterial degradation. Septic system design, construction, and operation are governed by the New Jersey Standards for Individual Subsurface Sewage Disposal Systems.<sup>54</sup> Maintenance (and the subsequent efficacy) of these systems is the responsibility of individual homeowners or others with such systems, as overseen by local health departments.

The allowable density of septic systems often serves as the basis for minimum lot size requirements associated with subdivisions and new construction. The NJDEP Water Quality Management Planning (WQMP) rules state that nitrates cannot exceed two milligrams per liter (2mg/L) and has developed a Nitrate Dilution model to calculate the maximum number of septic systems that will be allowed in a watershed.<sup>55</sup>

### Wastewater Management Planning

The NJDEP issues [Water Quality Management Planning Rules](#) (WQMP),<sup>56</sup> which establish the requirements for wastewater management planning in New Jersey in accordance with the Water Quality Planning Act.<sup>57</sup> Prior to the adoption of the 2008 revisions to the rules, each municipality and regional sewage authority were responsible for developing their own wastewater management plans (WMP). With the adoption of the 2008 Rules, the County of Morris became a “WMP entity” and assumed the responsibility for developing the plans for participating municipalities and sewer authorities in Morris County, providing substantial cost savings to local municipalities.<sup>58</sup> The Morris County Office of Planning and Preservation (Office of Planning and Preservation) is responsible for the development of the Morris County WMP in cooperation with participating municipalities and the NJDEP.

Under certain circumstances, municipalities may develop individual WMPs. In Morris County, Florham Park Borough and Washington Township have each developed their own WMPs that have been adopted by the NJDEP.<sup>59</sup> In the Highlands Region, the Highlands Council is responsible for developing WMP chapters for municipalities conforming

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<sup>50</sup> Some older package treatment systems may treat less than 2,000 gpd.

<sup>51</sup> Morris County Office of Planning and Preservation Analysis, 10/2019.

<sup>52</sup> ISSDS must have a flow of less than 2,000 gpd.

<sup>53</sup> NJDEP classifies areas outside of sewer service areas as General Service Areas.

<sup>54</sup> [N.J.A.C. 7:9A](#).

<sup>55</sup> N.J.A.C. 7:15. July 7, 2008.

<sup>56</sup> Ibid.

<sup>57</sup> N.J.S.A. 58:11A-1 et seq.

<sup>58</sup> Several municipalities have undertaken their own Wastewater Management Planning efforts and are working or have worked with the NJDEP directly for approval of their plans. Other municipalities are working with the Highlands Council to develop their plans as the Highlands Council is responsible for wastewater management planning for conforming municipalities in the Highlands Region.

<sup>59</sup> Washington Township requested to be its own WMP entity and Florham Park Borough completed its chapter before the 2008 Rules assigned WMP responsibility to the County.

to the Highlands Regional Master Plan (RMP). The chapters and maps for municipalities conforming to the RMP will eventually be incorporated into the overall Morris County WMP.<sup>60</sup>

The Office of Planning and Preservation is currently developing individual municipal WMP chapters for eventual incorporation into an overall Morris County Wastewater Management Plan. It has completed various aspects of mapping and municipal chapter development and continues to engage in the ongoing process of completing the sections of the WMP with participating municipalities. It is important to note, however, that the County does not have the authority to approve the WMP chapters or any amendments; this power is reserved by the NJDEP.

The following map of Morris County Sewer Service Areas (SSA) identifies all areas where there is existing sewer treatment infrastructure and/or areas approved for future sewer service by the NJDEP. Included are the *service areas* of regional and package treatment systems. It should be noted that not all areas in the service area have existing sewer infrastructure, but in this area, new connections to regional facilities can be made and new package treatment systems may be installed. Locations outside of this area are not approved for regional or package system treatment and may only be served by individual septic systems unless an amendment to the sewer service area is approved by the NJDEP.

#### Water Supply

Continued development and redevelopment requires the availability of potable water, which is obtained from either surface water sources (reservoirs, lakes, rivers, etc.) or ground water sources (public or private wells). Morris County's water supply is almost entirely from public or private wells. Several large water supply reservoirs are located in the County, but these are owned by the cities of Newark and Jersey City and most of this water is transferred out of the County.<sup>61</sup> In fact, the majority of all water generated in Morris County is exported out of the County. In 2015, 102.5 million gallons of water per day (MGD) were withdrawn from Morris County's surface and groundwater resources and of this amount, only 40.1 MGD were used in Morris County. The remaining 62.4 MGD was exported out of the County eastward to support major urban areas.<sup>62</sup>

Based on current figures, the highest recorded Morris County water use over the last 25 years was 59.4 MGD in 2011, accounting for only 59.8% of the total water withdrawal from Morris County that year. The lowest County water use was in 1990 at 34.2 MGD, which was only 30.7% of the water withdrawn for that year. Between 1990 and 2015, Morris County used an annual average of just 43% of the total water withdrawn from Morris County's surface and groundwater resources.

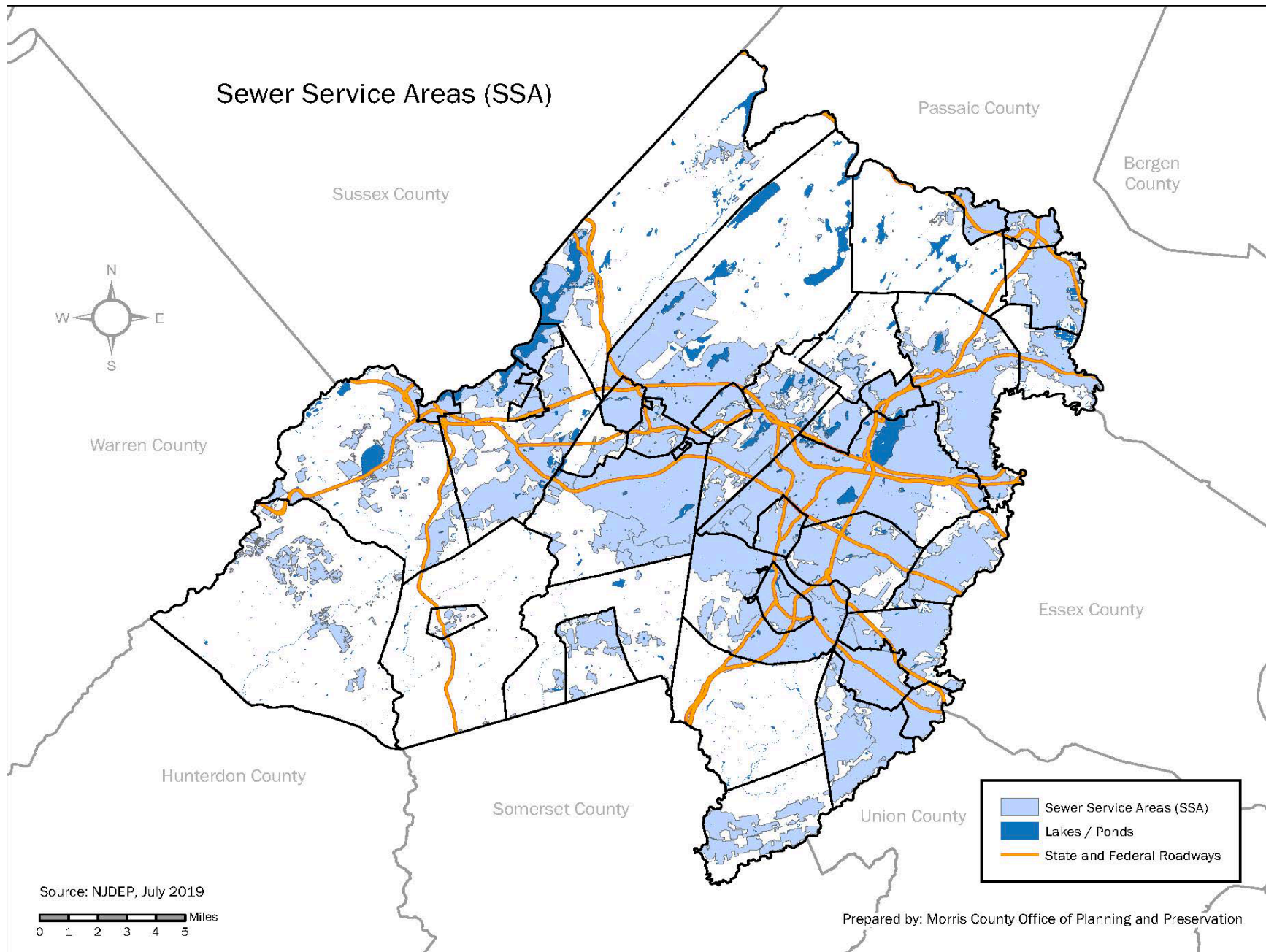
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<sup>60</sup> Municipalities conforming to the Highlands Regional Master Plan for both the Planning and Preservation areas include Chester Borough, Chester Township, Kinnelon Borough, Parsippany-Troy Hills Township, Randolph Township, Rockaway Township, Washington Township and Wharton Borough.

<sup>61</sup> In 1992, the MCMUA signed a purchase agreement with Jersey City to divert 7.5 MPG from the Boonton Reservoir for 40 years. Morris County Water Supply Element, 1994 pg. vi.

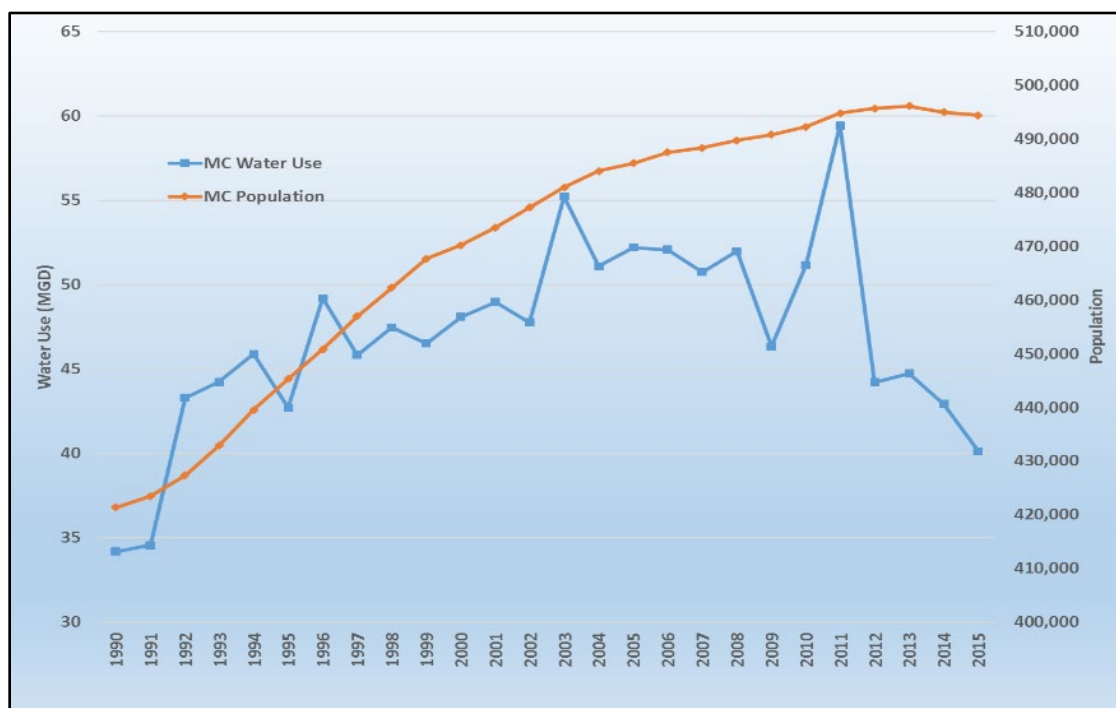
<sup>62</sup> New Jersey Geological Survey Water Transfer Model, Withdrawal, Use and Return Data Summaries as calculated by the NJDEP on 9/10/2019.





During the 1990s, increases in water use was loosely tracked with increases in Morris County population, however more recent years have seen a general drop in overall water use, even as the population increased.<sup>63</sup> Variations in demand are caused by a number of factors. Population growth is one factor, but rainfall amounts, temperature, economic changes, technological improvements and improved water conservation are also factors.

### Morris County Water Use and Morris County Population Growth



Source: NJGS, NJ Water Transfer Model, Withdrawal, Use and Return Data Summaries

From a land use perspective, economic changes impacting water supply in Morris County have included the decline in heavy industry and declines in office use. While housing growth and population growth are directly linked, the reduction in persons per household means that fewer persons are being added per new housing unit created. Housing type also influences related water use. For example, multi-family and attached housing uses much less water on a per unit basis when compared to single-family detached homes; there is much less water used for lawn or garden watering or pools on a per unit basis. Technological changes such as the introduction and widespread use of more water efficient appliances (e.g. washing machines, dishwashers, low flow toilets) in both residential and nonresidential uses has also reduced per capita water consumption.<sup>64</sup> Improvements in water conservation and stormwater management by municipalities will also improve water availability.

<sup>63</sup>The reasons for the spike in water use in 2011 are not identified.

<sup>64</sup>Decreasing per capita water use is occurring statewide. The NJ Water Supply Master Plan 2017-2022 reports a statewide drop from 155 gpd to 125 gpd between 1990 and 2015, due in part to diminished indoor usage associated with more efficient plumbing fixtures (page vii). The Energy Policy Act of 1992, set minimum efficiency standards for all toilets, showers, urinals and faucets manufactured in the United States. In 2006, the USEPA created the WaterSense Program, a voluntary labeling program which defines water efficient products that use at least 20% less water than a regular model, operating similar to the energy star consumer-targeted rating system.



### Morris County Water Use v. Water Withdrawal

Year	Water Used in Morris County (MGD)	Water Withdrawn from Morris County (MGD)	Percent Water Used by Morris County
1990	34.2	111.4	30.70%
1991	34.6	112.4	30.70%
1992	43.3	109.9	39.40%
1993	44.2	113.1	39.10%
1994	45.9	110.3	41.60%
1995	42.7	108.9	39.20%
1996	49.2	112.6	43.70%
1997	45.8	121	37.90%
1998	47.5	121.7	30.00%
1999	46.5	125	37.20%
2000	48.1	124.6	38.60%
2001	49	125.6	39.00%
2002	47.8	105.4	45.30%
2003	55.2	111	49.80%
2004	51.1	112.5	45.40%
2005	52.2	114.3	45.70%
2006	52.1	109.6	47.50%
2007	50.7	107.7	47.10%
2008	52	109.3	47.50%
2009	46.3	102.6	45.10%
2010	51.2	103.7	49.30%
2011	59.4	99.4	59.80%
2012	44.2	97.7	45.30%
2013	44.7	88.1	50.80%
2014	42.9	95.3	45.10%
2015	40.1	102.5	39.20%

Source: NJGS, NJ Water Transfer Model, Withdrawal, Use and Return Data Summaries

#### Public Water vs. Private Wells

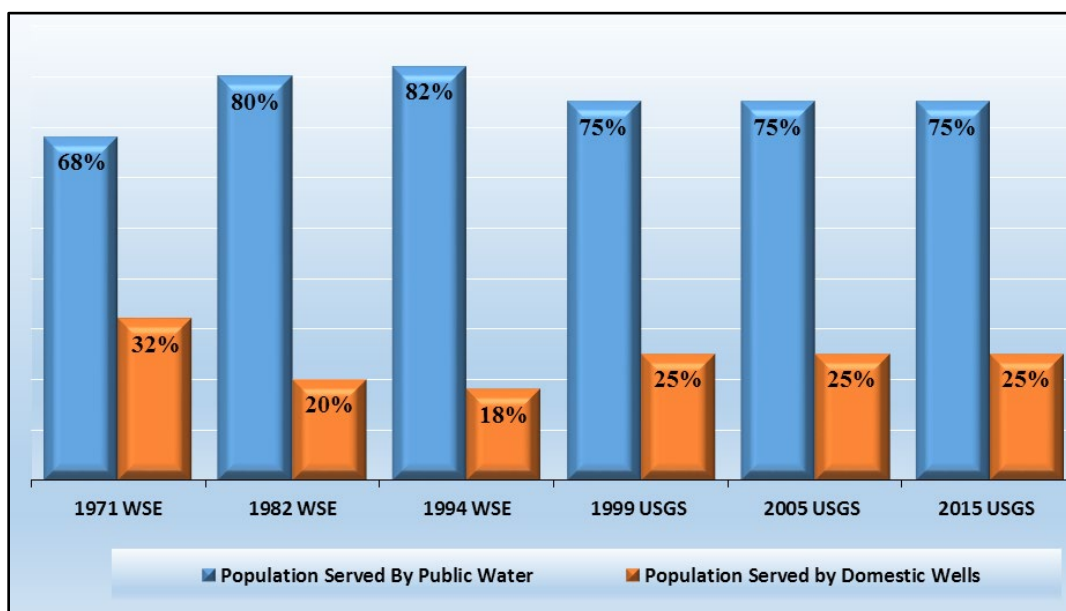
In the early 1970's, about 68% of Morris County's population received its water from a public water supply provider. The remainder relied on individual onsite wells.<sup>65</sup> Over the next two decades, the population served by domestic wells decreased as opportunities to connect to a public water supply system increased. This trend reversed itself during the late 1990's, as development continued into areas where public water supply was unavailable.

The percentage of development served by public vs. domestic water supply (on-site wells) has remained stable in recent years. However, the decline in available "greenfield" land<sup>66</sup> for new development and subsequent increase in redevelopment in areas with existing public water supply will eventually result in an increase in the percentage of County residents relying on public water.

<sup>65</sup> 1971 Morris County Master Plan – Water Supply Element, Elson T. Killam Associates, Inc. May 1969, May 1970, reprinted Oct. 1971.

<sup>66</sup> Greenfield: land that has not experienced previous development, e.g. forest, meadow, also including agricultural lands.

### Public vs. Domestic Water Supply



Sources: Morris County Master Plan – Water Supply Element(s) 1971, 1982, 1994

United States Geological and Water Survey 1999, 2005, 2015

### Public Water Supply Systems

Public water systems serving Morris County include municipal water departments (WD), wholesalers, and systems that serve specific developments or sections of municipalities. These water systems may obtain their supplies from sources located inside and/or outside of the County.

#### Public Water Supply Systems

Municipality	Major Water Systems <sup>67 68</sup>
Boonton Town	Boonton WD
Boonton Twp.	Denville 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. (Passaic Basin), Southeast Morris County MUA
Chester Boro.	NJ American Water Co. (Raritan and Passaic Basin), Washington Twp. MUA-Hager
Chester Twp.	NJ American Water Co. (Passaic Basin), AWM Four Seasons at Chester
Denville Twp.	Denville WD, Mt. Lakes WD, Rockaway Boro. WD
Dover Town	Dover Water Commission
East Hanover Twp.	East Hanover WD
Florham Park Boro.	NJ American Water Co. (Passaic Basin), Florham Park WD
Hanover Twp.	Southeast Morris County MUA
Harding Twp.	Southeast Morris County MUA, NJ American Water Co. (Passaic Basin), Lake Shore Water Co.
Jefferson Twp.	Sparta Twp. Water Utility, Jefferson Twp. Water Utility (Lake Hopatcong, Milton & Vassar Road), Sun Valley Park
Kinnelon Boro.	Kinnelon WD, Butler WD, Fayson Lakes Water Co.

<sup>67</sup> NJDEP Data Miner, [http://datamine2.state.nj.us/DEP\\_OPRA/OpraMain/categories?category=Safe+Drinking+Water](http://datamine2.state.nj.us/DEP_OPRA/OpraMain/categories?category=Safe+Drinking+Water), last accessed on September 24, 2019.

<sup>68</sup> Mobile Home Parks excluded.

Municipality	Major Water Systems <sup>67 68</sup>
Lincoln Park Boro.	Lincoln Park WD, Lincoln Park Jacksonville System, Pequannock WD, Pequannock Twp. WD-Cedar Crest
Madison Boro.	Madison WD
Mendham Boro.	NJ American Water Co. (Passaic Basin)
Mendham Twp.	Southeast Morris County MUA, NJ American Water Co. (Passaic Basin)
Mine Hill Twp.	Mine Hill WD, Dover Water Commission, Wharton WD
Montville Twp.	Montville MUA, Jersey City MUA, Green Briar Res Health, Signature Care Home@Montville
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), Suez Water (Arlington Hills)
Mount Olive Twp.	Mt. Olive WD (Goldmine, Sand, Pinecrest, Lynwood, Tinc Farm, Carlton Hills, Village and Main Systems Flanders), AWM Country Oaks, Mt. Olive Villages WD, NJ American Water Co. (West Jersey, Passaic Basin and ITC) NJ Vasa Home Water, Hackettstown MUA, Morris Chase/Morris Hunt Water System, Netcong WD, Mount Olive Twp.-Flanders, NJ American Water-Mount Olive/West Jersey
Netcong Boro.	Netcong WD
Parsippany Troy Hills Twp.	Parsippany Troy Hills WD, Denville WD, Mt. Lakes WD,
Long Hill Twp.	NJ American Water Co. (Passaic Basin)
Pequannock Twp.	Pequannock WD (Main and Cedar Crest)
Randolph Twp.	Randolph WD, Denville WD, Morris County MUA, Dover Water Commission
Riverdale Boro.	Riverdale WD
Rockaway Boro.	Rockaway Boro WD, Denville Twp. WD
Rockaway Twp.	Rockaway Twp. WD, Denville WD, Wharton WD, Picatinny Arsenal, Hoffman Homes Community LLC, Rockaway Boro WD, Dover WD
Roxbury Twp.	Roxbury WD (Evergreen, Sky View, Shore), Netcong WD, NJ American Water-Roxbury
Victory Gardens Boro.	Dover Water Commission
Washington Twp.	Washington MUA (Hager and Schooley's Mountain), Hackettstown MUA, Sherwood Village, Aqua, Cliffside Park Assoc. Inc.
Wharton Boro.	Dover Water Commission, Wharton WD

Source: NJDEP

#### Morris County Municipal Utilities Authority

The Morris County Board of Chosen Freeholders<sup>69</sup> created the Morris County Municipal Utilities Authority (MCMUA) in 1958 for the primary purpose of developing and distributing an adequate supply of water for the use of the County's inhabitants.<sup>70</sup> To this end, the MCMUA obtained control of various lands and developed a water distribution system enabling them to supply bulk water to the many water supply systems existing throughout Morris County.<sup>71</sup> At present, the MCMUA (Water Supply Division)<sup>72</sup> maintains a complex system of wells in the Townships of Mount Olive, Roxbury, Randolph and Chester, drawing on underground aquifers, with a maximum production capacity of approximately 11.3 million gallons of water per day, serving approximately 35,000 people or 8% of Morris County.

<sup>69</sup> Now County Board of Commissioners

<sup>70</sup> 1994 Morris County Master Plan Water Supply Element, pg. iv.

<sup>71</sup> The MCMUA also receives funding from the Preservation Trust, using such funding to preserve buffer areas to protect its wells and water supply facilities.

<sup>72</sup> The MCMUA also implements the County's solid waste, recycling and hazardous waste programs through its Solid Waste Division.

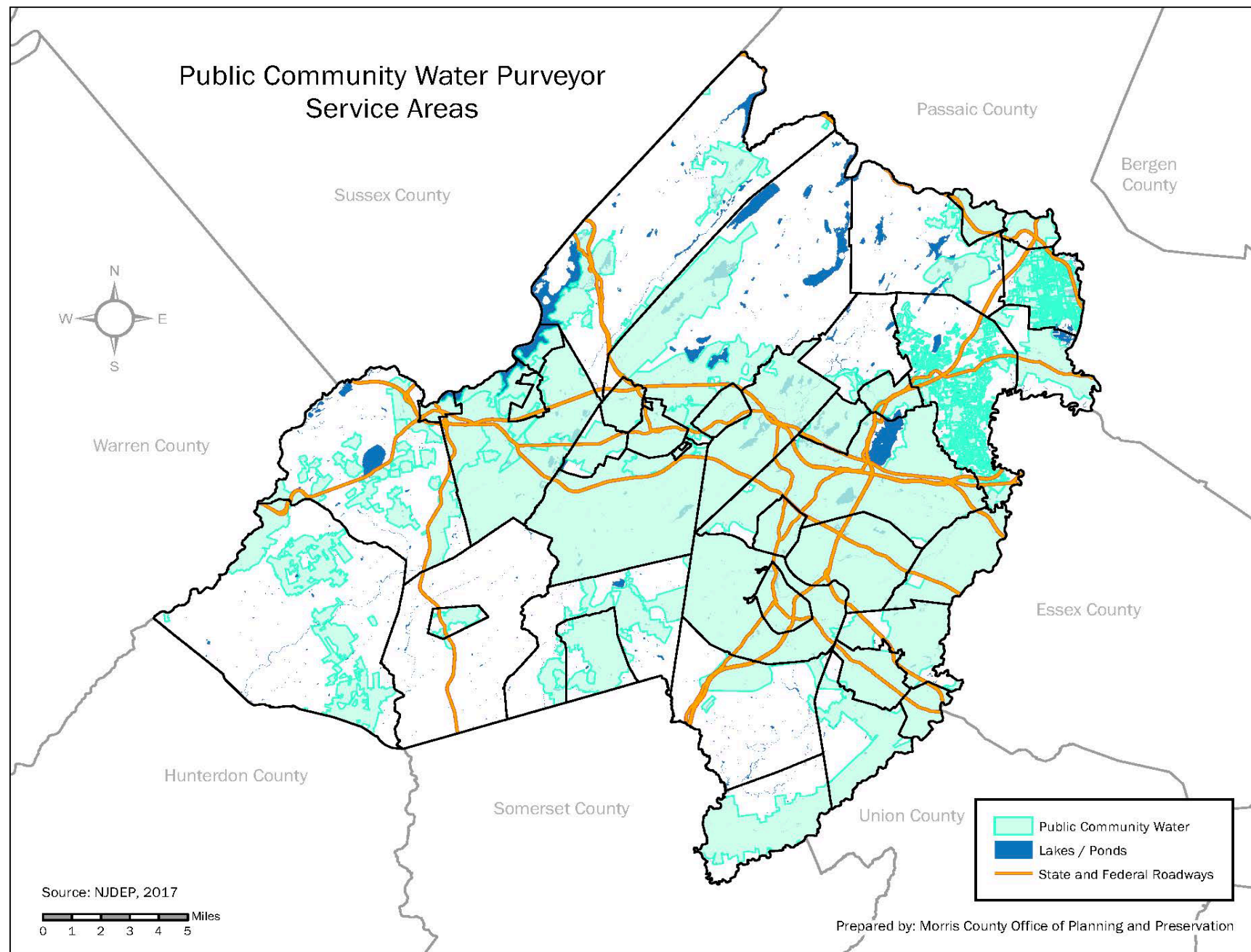
The MCMUA uses its system of wells, booster stations, pipelines and water storage tanks to transmit water to the following ten municipal and commercial water purveyors located in the MCMUA service area:<sup>73</sup>

**MCMUA Supported Water 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

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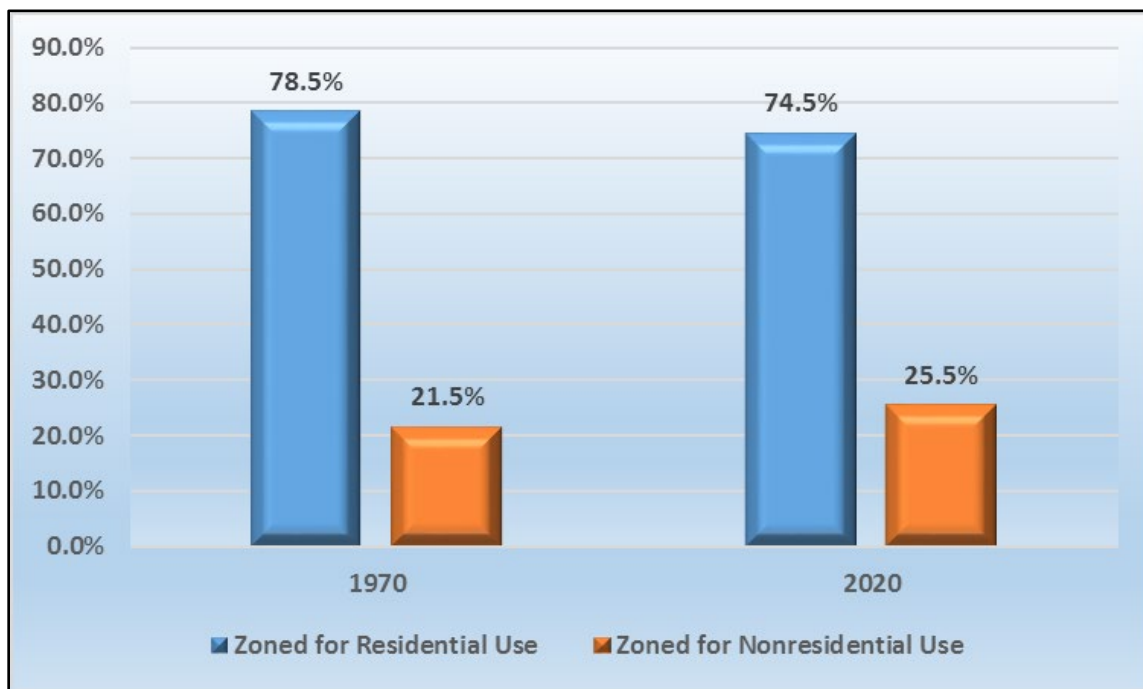
<sup>73</sup> Morris County MUA, 9/2019.



### Municipal Master Plan and Zoning – Overview

Most land in the County (74.5 %) is zoned for residential use. This percentage has varied by only 4.0% since 1970 and does relate the full range and complexity of zoning in Morris County.

**Residential and Nonresidential Zoning 1970 - 2020**



Source: 1975 Morris County Master Plan Future Land Use Element and 2020 Generalized Zoning Data 1/6/2020,

Morris County Office of Planning and Preservation. Figures rounded

### General Use Types and Minimum Lot Size Categories

Over the years, zoning has become increasingly complex as municipalities have responded to continually evolving development needs and residential/nonresidential market demands. Municipalities make ongoing modifications to their zoning as they attempt to respond to these changes while protecting established residential neighborhoods and areas of commerce from potentially incompatible development. At the time of this writing, Morris County's 39 municipalities have collectively created 759 distinct *primary* zoning districts.<sup>74</sup> There are also an additional 128 *overlay* zones in the County, i.e. zones that "overlay" the primary zoning designation, providing an optional development alternative.

For the purpose of relating overall zoning characteristics for the County, the overwhelming complexity and variation of these districts have been distilled into their most basic characteristics. As such, the primary districts have been compiled into eleven *generalized* zoning categories as noted below and on the following map.<sup>75</sup>

<sup>74</sup> As of January 2020.

<sup>75</sup> Optional overlay zoning categories are not included in the calculation of zoning by generalized category.

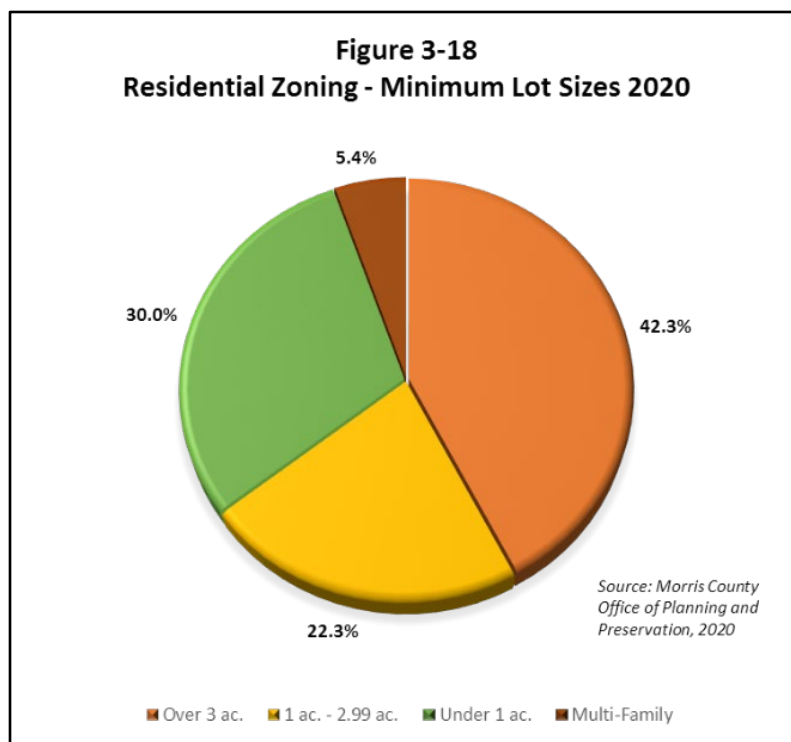
### Generalized Zoning

Generalized Zoning January 2020	Acres	Percentage
Large Lot Single-family (> = 3 acres)	95,922	31.5%
Medium Lot Single-family (1 acre to < 3 acres)	50,645	16.7%
Small Lot Single-family (< 1 acre)	67,863	22.3%
Low Density Multi-Family (< = 4 units/acre)	5,554	1.8%
Medium Density Multi-Family (> 4 units/acre to 10 units/acre)	4,083	1.3%
High Density Multi-Family (> 10 units/acre)	2,584	0.8%
Retail/Service	6,871	2.3%
Commercial/Private Recreation	2,304	0.8%
Commercial/Industrial	24,122	7.9%
Public/Institutional	41,213	13.6%
Mixed Use	2,995	1.0%
<b>TOTAL</b>	<b>304,156</b>	<b>100.0%</b>

Source: Morris County Office of Planning and Preservation, January 2020

### Residentially Zoned Land

The amount of land zoned for residential use in Morris County has not changed significantly over the last 50 years but there have been significant changes in minimum lot size requirements. Of the land in Morris County presently zoned primarily for residential use,<sup>76</sup> 42.3% requires a minimum lot size of three acres or greater, compared to just over 16.2% of land similarly zoned in 1970.<sup>77</sup> This rise in large lot zoning came through changes to residential land previously zoned for minimum lot sizes of one to 2.99 acres. In 1970, this category accounted for 51.8% of all residentially zoned land; presently it accounts for less than half that figure, coming in at 22.3%.

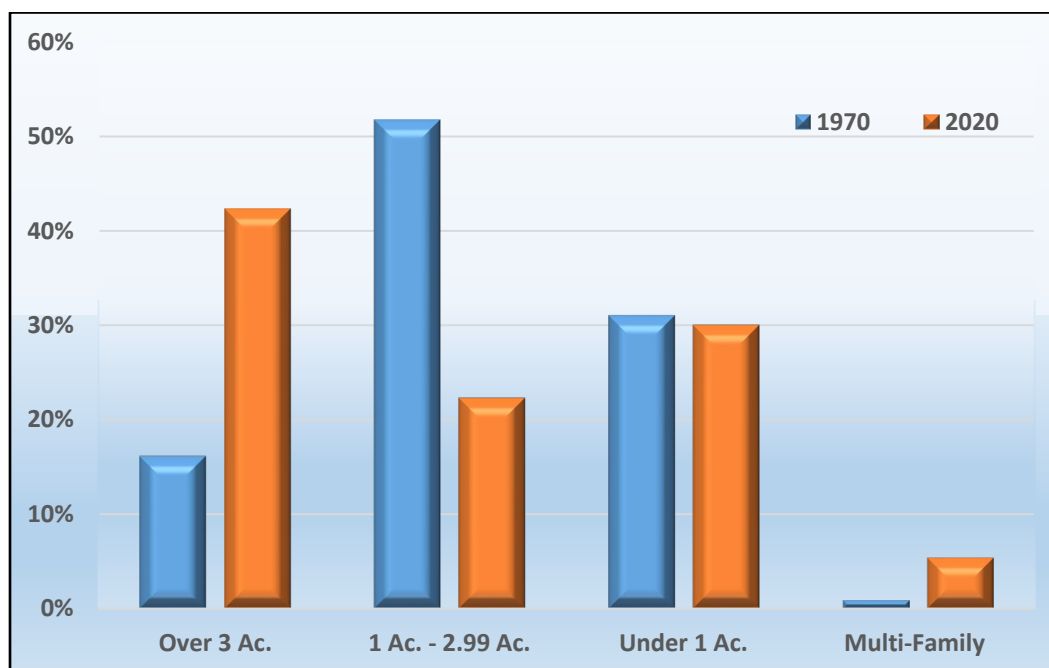


<sup>76</sup> Areas defined as mixed use not included. Other uses may also be permitted in residentially zoned areas, e.g. agriculture, utilities, houses of worship, etc.

<sup>77</sup> Morris County Future Land Use Element, 1975.



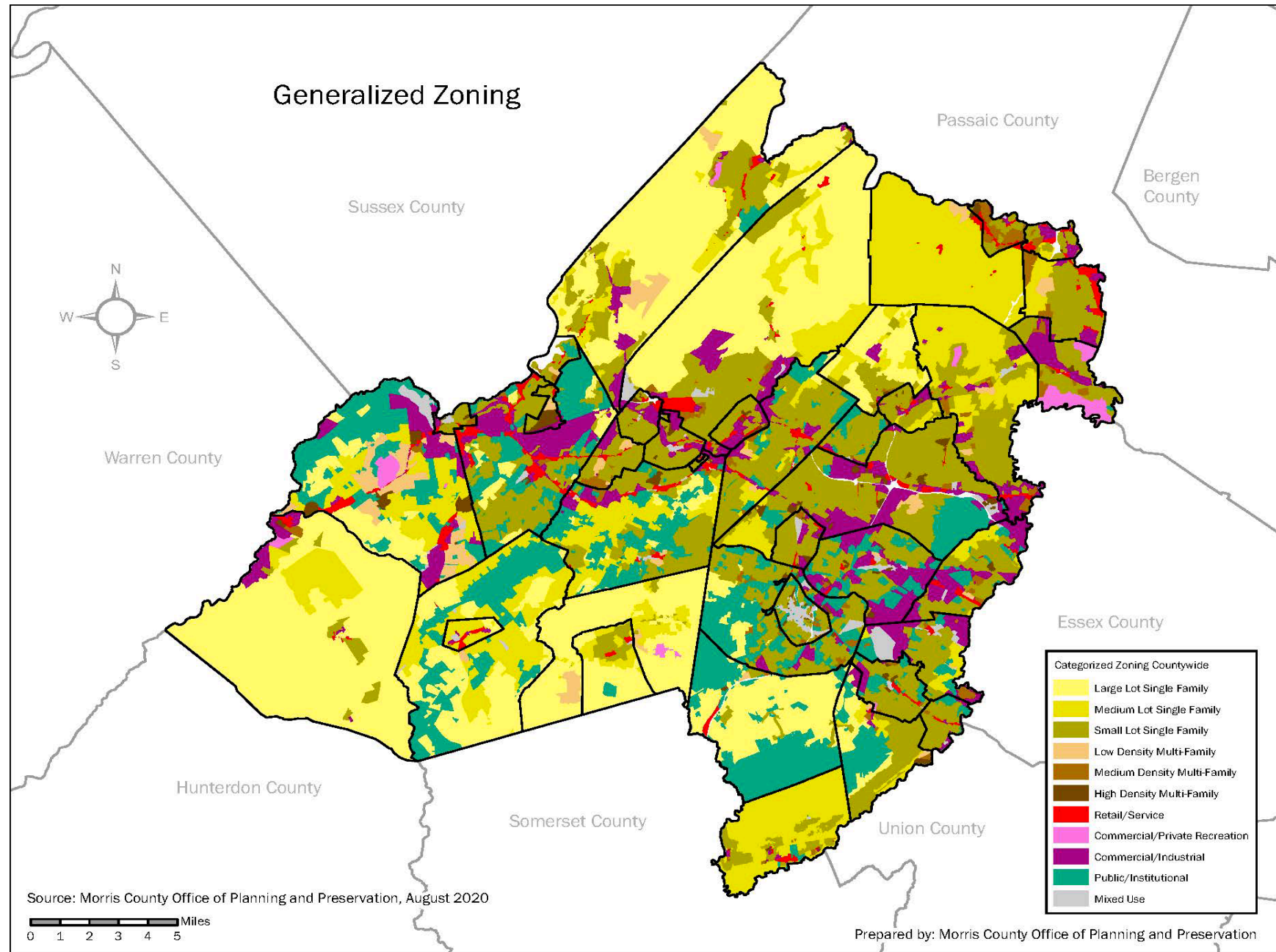
### Residential Zoning - Minimum Required Lot Sizes/Multi-Family



Source: Morris County 1975 Future Land Use Plan and Morris County Office of Planning and Preservation, January 2020

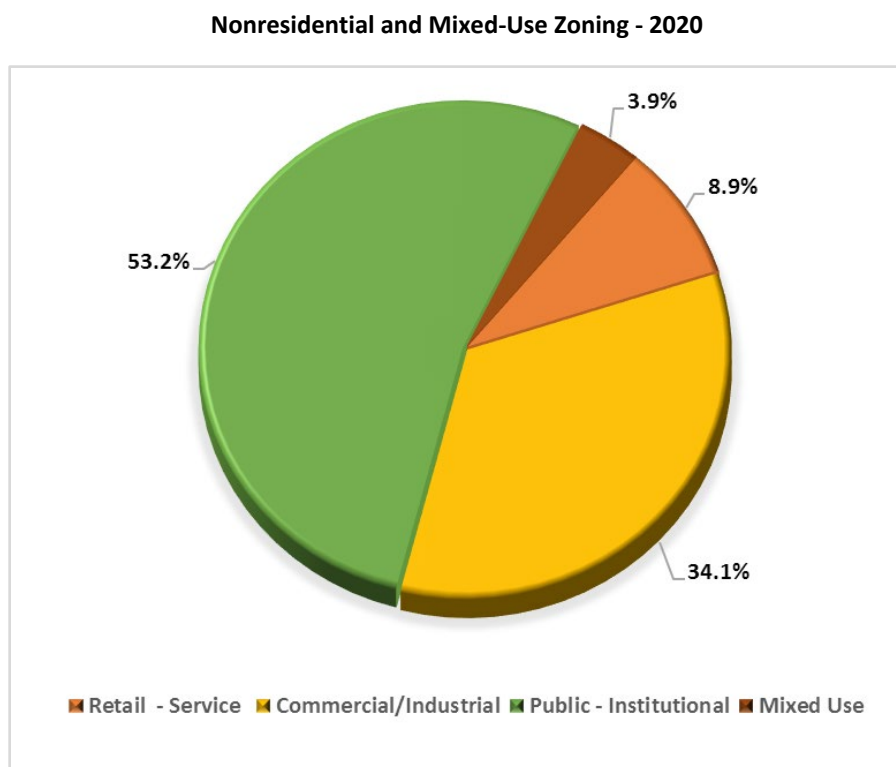
Zoning for single-family lots of less than one acre has changed little, dropping 1.1% overall (from 31.1% to 30.0%). It is likely that most of the housing built on these lots, found primarily in the more compact towns and boroughs, was already in place as of 1970. Residential land zoned exclusively for multi-family development rose from 0.9% in 1970 to 5.4% in 2020. This type of zoning is currently gaining ground as redevelopment becomes more important as a generator of new housing and other uses.





Nonresidential and Mixed-Use Zoned Land

The majority of non-residentially zoned lands (53.2%) are found in the “Public/Institutional” category, which includes lands zoned for government, public or institutional uses. Examples of lands in this category include the Great Swamp National Wildlife Refuge and Morristown National Historic Park, the Black River and Berkshire Valley Wildlife Management Areas, and various County-owned and non-profit owned lands. Commercial/Industrial zoning (e.g. office, research, manufacturing, warehousing, private recreation) accounts for 34.1% of all non-residentially zoned lands, followed by lands zoned for Retail/Service, accounting for about 8.9% of nonresidential zoning.<sup>78</sup> Mixed-Use zoning accounts for 3.9% and includes districts where both nonresidential and residential use is permitted or required.



*Source: Morris County Office of Planning and Preservation, January 2020*

Description of Innovative Planning Techniques Employed

*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.

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<sup>78</sup> Zones permitting both industrial and retail are included in the Commercial/Industrial category.

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 (e.g. 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 the number of lots being proposed is no greater than that which could be created with a conventional development layout.

The actual use of cluster development has waned in recent years, particularly as the amount of land available for development has been significantly reduced. However, as previously discussed, the majority of remaining vacant land is located in the Highlands Region and conforming municipalities are required to use clustering or some variation of technique in residential areas, where possible, in identified Agricultural Resource Areas.

#### *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 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 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.

#### *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 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.

*Transfer of Development Rights (TDR)*

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 landowners 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.

*Use of Mandatory vs. Voluntary Options*

The majority of innovative planning techniques implemented at the local level to benefit/protect open space and/or farmland, (i.e. clustering, lot size averaging and others) are voluntary or optional in nature. Municipalities that are conforming their regulations to the Highlands Regional Master Plan (RMP) present one major exception. As previously described, such municipalities must adopt regulations ensuring consistency with the Highlands Regional Master Plan, which includes provisions requiring the use of residential clustering or other forms of “Open Space Subdivision Design,” to protect identified Agricultural Resource Areas in any underlying zoning district that permits single-family residential development. This mandatory cluster provision applies only if other minimum threshold requirements for residential cluster development can be satisfied. If not permitted, principal residential uses shall remain as permitted by the underlying municipal zoning ordinance.

Conforming municipalities have adopted regulations in their land development ordinances deeming applications for development incomplete unless a determination of consistency with the Highlands Regional Master Plan is obtained from the Highlands Council, including consistency with ARA protection policies. Some conforming municipalities have adopted additional ordinance amendments consistent with RMP ARA policies. The inclusion of Highlands Consistency regulations and/or Ordinances are noted in the list of Zoning and Subdivision Regulations: Techniques Supportive of Agriculture/Farmland Preservation.

Both State and Highlands TDR options are voluntary. At the time of this writing, no municipalities in Morris County have identified TDR sending or receiving areas as part of State or Highlands TDR programs.

**Zoning & Subdivision Regulations: Techniques Supportive of Agriculture/Farmland Preservation** <sup>79</sup>

**Boonton Town**

- Townhouse and multi-family residential clusters (mandatory in multiple zones).

**Boonton Township**

- Agriculture is permitted in multiple zones.

**Chatham Township**

- Residential cluster developments are a permitted option in multiple zones.
- Lot size averaging is a permitted option in multiple zones.
- Open Space Trust Fund to purchase development rights.

**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.
- Open Space Trust Fund to purchase development rights.
- Highlands Act Regulations - Consistency Review and/or Ordinance Amendments.

**Chester Township**

- Cluster developments are permitted as an option in multiple zones.
- An Open Space Development Option is permitted in multiple zones (a type of cluster zoning).
- Agriculture is permitted in all zones.
- Farm stands are permitted in multiple zones.
- Open Space Trust Fund to purchase development rights.
- Highlands Act Regulations - Consistency Review and/or Ordinance Amendments.

**Denville Township**

- Cluster development option is permitted in multiple zones.
- Agriculture is a permitted use in multiple zones.
- Farmer's Market Sales is a permitted use in multiple zones.

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<sup>79</sup> List includes only those Morris County municipalities with identified zoning and/or subdivision regulations related to agriculture/farmland preservation. Morris County Office of Planning and Preservation ordinance review, June 2020.

#### **Dover Town**

- Cluster development option is permitted in one zone.

#### **East Hanover Township**

- Cluster residential developments are a permitted option in multiple zones.
- Farms are a permitted use in three zones.
- Open Space Trust Fund to purchase development rights.

#### **Florham Park Borough**

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

#### **Hanover Township**

- Intra-Municipal Transfer of Development Credits.<sup>80</sup>
- The keeping of agricultural animals is permitted in single-family districts.

#### **Harding Township**

- Residential clusters are permitted in one zone.
- Lot averaged subdivision permitted as an option in one zone.
- Farm stands and farm markets permitted as a conditional use in multiple residential zones.
- Farming is permitted use in all zones.

#### **Jefferson Township**

- Residential clusters permitted as an option multiple zones.
- Farm stands as an accessory use in one zone.
- Open Space Trust Fund to purchase development rights.
- Highlands Act Regulations - Consistency Review and/or Ordinance Amendments.

#### **Kinnelon Borough**

- Highlands Act Regulations - Consistency Review and/or Ordinance Amendments.

#### **Lincoln Park Borough**

- Residential lot cluster developments are a permitted option in multiple zones.
- Commercial farms are permitted in multiple zones.
- Farm markets are permitted in multiple zones.

#### **Long Hill Township**

- Density modification subdivisions (a type of cluster subdivision) are a permitted option in multiple 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 multiple zones.

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<sup>80</sup> To add flexibility to development proposals, to preserve land for public purposes and to prevent development on environmentally sensitive areas, owners of noncontiguous tracts of land may increase the density of development on one tract in exchange for dedicating lands to the Township for either open space, recreational use or other limited public use. The preservation of farmland is not listed as a qualifying purpose.

- Farms stands are a permitted accessory use to an agricultural use.

#### **Madison Borough**

- Residential cluster developments are permitted as an option in one zone.
- Open Space Trust Fund to purchase development rights.

#### **Mendham Borough**

- Village center cluster development option permitted on three specified tracts.
- Permits Density Zoning in multiple zones. i.e. "a permitted reduction in lot size and lot area requirements in major subdivisions in which the density requirements as per dwelling unit per acre are maintained and where all resulting undeveloped land within said subdivision is deeded to the Borough for public purposes, the Board of Education for school purposes or to a homeowners association owners of said subdivision.
- Open Space Trust Fund to purchase development rights.
- Agriculture permitted in all residential zones.

#### **Mendham Township**

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

#### **Mine Hill Township**

- Cluster subdivisions are a conditional use in multiple zones.
- Commercial farms are a permitted use in one zone.
- Open Space Trust Fund to purchase development rights.

#### **Montville Township**

- Residential cluster developments are a permitted option in multiple zones.
- Agricultural uses are permitted in all zones.
- Highlands Act Regulations - Consistency Review and/or Ordinance Amendments.

#### **Morris Plains Borough**

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

#### **Morris Township**

- Cluster Development Option permitted in multiple zones.
- Agricultural uses are permitted in all residential zones as well as the AOZ Agricultural Overlay Zone.
- Farm stands are permitted.
- Open Space Trust Fund to purchase development rights.

#### **Mountain Lakes Borough**

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

#### **Mount Arlington Borough**

- Residential clusters are a permitted option in all residential zones.
- Agriculture is a permitted use in all residential zones.
- Highlands Act Regulations - Consistency Review and/or Ordinance Amendments.

#### **Mount Olive Township**

- Intra-municipal Transfer of Development Credits.<sup>81</sup>
- Residential clusters are a permitted option in multiple zones.
- Lot size averaging is a permitted option in multiple non-residential zones. Lot coverage and floor area ratio averaging is a permitted option in one non-residential zone.
- Transfer of Development Credits.
- Farm stands are permitted accessory uses in multiple zones.
- Highlands Act Regulations - Consistency Review and/or Ordinance Amendments.

#### **Parsippany-Troy Hills Township**

- Townhouse residential clusters are a permitted option in multiple zones (clusters are mandatory for all townhouse developments).
- A cluster option is permitted in one non-residential zone.
- Agricultural buildings are permitted in multiple zones.
- Open Space Trust Fund to purchase development rights.

#### **Pequannock Township**

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

#### **Randolph Township**

- The cluster development option is a conditional use in multiple zones.
- The right to agriculture is established and is a permitted use in all zones.
- Open Space Trust Fund to purchase development rights.

#### **Riverdale Borough**

- The cluster development option is permitted in one zone.

#### **Rockaway Township**

- Cluster developments are an option in multiple zones.
- Agriculture is a permitted use in multiple zones.
- Farm markets are permitted in multiple zones.
- Highlands Act Regulations - Consistency Review and/or Ordinance Amendments.

#### **Roxbury Township**

- The cluster residential development option is permitted in multiple zones.
- Lot averaging is permitted in multiple non-residential zones.
- Agriculture is a permitted use in multiple zones.
- Open Space, Recreation, Farmland, and Historic Preservation Trust Fund to purchase development rights.

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<sup>81</sup> 550-98A. Transfer of development credits. Purpose to add flexibility to development proposals, to preserve land for public **and agricultural purposes**, to prevent development on environmentally sensitive areas and to aid in reducing the cost of providing streets, utilities and services in residential development, this section permits the owner of lands in certain residential districts to increase the density of development on that tract in exchange for dedicating separate and properly subdivided lots for either open space or other public use.



### **Washington Township**

- 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).
- Open space and open lands guidelines require open space or open lands to be configured in such a manner as to facilitate agricultural use. Factors include proximity to adjacent farming operations, the ability to create contiguous tracts of farmland and desirability of maximizing separation between farming operations and residential units.
- 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.
- Highlands Act Regulations - Consistency Review and/or Ordinance Amendments.

### Development Pressures and Land Value Trends

#### *Development Pressure – Spatial / Temporal*

Spatial and temporal development patterns in the County can best be expressed through the following tables. 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, developable land diminishes. Highlands Act restrictions placed on the extension of infrastructure, limitations on new septic systems and implementation of enhanced environmental regulations by the Highlands Council and New Jersey Department of Environmental Protection will continue to limit new residential and nonresidential construction throughout the Highlands Preservation Area and in conforming Highlands Planning Area municipalities. These areas also include the majority of the County’s vacant land so new development from vacant land will be very limited.

Redevelopment of the County’s established centers with multi-family and mixed-use projects has accounted for the majority of new housing in the County in recent years, revitalizing many of these areas, where infrastructure and services already exist to support increases in density. Much of this redevelopment has also included new commercial, industrial and office space square footage, with concentrations occurring primarily in the eastern portion of the County and along certain commercial corridors.

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

<b>Municipality*</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>5 Year Total</b>
Chester	-	-	-	2	-	2
Denville	-	5	-	-	-	5
Dover	-	4	-	-	-	4
East Hanover	4	-	-	6	-	10
Florham Park	-	-	-	114	110	224
Hanover	-	4	-	-	-	4
Jefferson	-	4	-	-	-	4
Madison	-	-	9	-	-	9
Mendham	-	-	-	3	-	3
Mendham Twp.	-	-	-	3	-	3
Mine Hill	-	-	-	4	-	4
Montville	5	3	15	-	7	30
Morris Twp.	6	-	-	3	4	13
Mt. Olive	76	77	-	77	-	230
Netcong	-	-	-	-	8	8
Parsippany-Troy Hills	3	-	32	-	-	35
Rockaway Twp.	-	10	-	-	-	10
Roxbury	-	5	-	-	-	5
<b>Total</b>	<b>94</b>	<b>112</b>	<b>56</b>	<b>212</b>	<b>129</b>	<b>603</b>

\*Municipalities not shown recorded no subject activity during reporting period.

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

<b>Municipality**</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>5 Year Total*</b>
Boonton Twp.		1/38	-	-	-	1/38
Chatham Twp.	-	-	-	-	2/77	2/77
Denville	-		-	-	2/171	2/171
Dover	1/214	1/214*	1/68	1/68*	-	4/564
East Hanover	-	2/485	-	-	-	2/485
Florham Park	-	-	2/224	3/437*	1/126	6/787
Hanover	1/25	1/25*	1/141		1/46	4/237
Lincoln Park	-	1/24	1/24*	-	1/46*	3/94
Long Hill	-	-	-	1/30	-	1/30
Madison	1/135	-	-	-	-	1/135
Mine Hill	-	-	-	-	1/50	1/50
Mendham Twp.	1/53	-		-	-	1/53
Montville	1/26	-	1/26*	2/110	1/295	5/257
Morris Plains	2/253*	-	-	2/715	2/715*	6/1,683
Morris Twp.	1/235		1/179	1/209*	-	4/623
Morristown	1/185	1/185*	1/38	1/38*	2/123*	6/569
Mountain Lakes	-	1/40	-	1/40*	1/90	3/170
Mt. Arlington	1/300*	-	-	-	-	1/300
Mt. Olive	-	1/269	-	1/126	-	2/395
Netcong	-	-	1/126	-	2/206*	3/332
Parsippany-Troy Hills	3/264	2/130*	-	1/31*	1/325	7/750
Pequannock	1/35*	-	-	-	-	1/35
Randolph	-		-	1/84	1/84*	2/168
Rockaway Twp.	-	1/140*	-	1/345	2/1,091	3/1,576
Roxbury	1/230*	-	-	-	1/230*	2/260
Washington	-	-	-	1/134	-	1/134
Wharton	2/116	1/49*	-	-	1/24	4/189
<b>Total*</b>	<b>17/2,071</b>	<b>13/1,599</b>	<b>9/826</b>	<b>17/1,237</b>	<b>22/3,653</b>	<b>78/9,386</b>

\*\*Municipalities not shown recorded no subject activity during reporting period.

\*Includes resubmission(s)

**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)**

<b>Municipality*</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>5 Year Total*</b>
Boonton Twp.	-	-	-	-	1/117,008	1/117,008
Denville	-	-	-	-	1/63,315	1/63,315
East Hanover	1/51,627	-	-	1/322,219	2/392,838*	4/766,684*
Florham Park	2/461,899	1/129,741	2/189,741*	1/112,555	-	6/893,936*
Hanover	2/355,510*	2/222,131	1/117,620*	2/315,089*	3/340,525*	10/1,350,875*
Montville	-	1/59,030*	2/152,030*	1/93,000*	-	4/304,060*
Morris Plains	-	-	1/69,300	3/362,122*	2/709,940*	6/1,141,362*
Morris Twp.	-	-	1/120,000	1/120,000*	-	2/240,000*
Mt. Olive	-	-	-	1/228,755	3/349,240*	4/577,995*
Parsippany-Troy Hills	2/259,109	2/353,510*	1/200,000*	-	1/80,167*	6/892,786*
Randolph	-	-	1/118,272	2/198,272*	-	3/316,544*
Roxbury	-	1/52,610*	-	2/380,593	1/470,044	4/903,247*
<b>Total*</b>	<b>7/1,128,145</b>	<b>7/817,022</b>	<b>9/966,963</b>	<b>14/2,132,605</b>	<b>14/2,523,077</b>	<b>51/7,567,812</b>

\*\*Municipalities not shown recorded no subject activity during reporting period.

\*Includes resubmission(s)

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

<b>Morris County</b>	<b>1990</b>	<b>2000</b>	<b>2010</b>	<b>2020</b>
Vacant (1)	\$942,015,581	\$1,042,911,835	\$1,218,511,451	\$1,032,813,400
Farm Regular (3A)	\$135,476,725	\$256,834,690	\$652,147,200	\$725,724,400
Farm Qualified (3B)	\$11,619,240	\$14,916,507	\$12,013,308	\$11,110,938
Total Vacant and Farm Assessed	\$1,089,111,546	\$1,314,663,032	\$1,882,671,959	\$1,769,648,738
<b>All Taxable Land (1, 2, 3A, 3B, 4A, 4B, 4C)</b>	<b>\$24,133,181,860</b>	<b>\$40,734,495,994</b>	<b>\$76,116,569,640</b>	<b>\$87,744,672,115</b>

Source: Morris County Board of Taxation

The following chart illustrates the value of farmland real estate in New Jersey over the last ten years as reported by the USDA annual land value statistics.

**Farm Real Estate: Average Value Per Acre for New Jersey 2009 - 2019**

<b>Year</b>	<b>NJ Average Value Per Acre</b>
2009	\$13,800
2010	\$13,100
2011	\$12,800
2012	\$12,300
2013	\$12,800
2014	\$12,800
2015	\$13,300
2016	\$13,300
2017	\$13,400
2018	\$13,500
2019	\$13,500

Source: USDA, National Agriculture Statistics Survey Land Value Summaries, August 2013, 2014 and 2019.<sup>82</sup>

<sup>82</sup> <https://usda.library.cornell.edu/concern/publications/pn89d6567?locale=en>

The Morris CADB keeps statistics for farm easements purchased in Morris County. The numbers presented below represent the per acre purchase price.<sup>83</sup>

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

<b>Municipality</b>	<b>Average per acre easement value</b>	<b>Number of preserved farms</b>	<b>Preserved Acres</b>
Boonton Twp.	\$15,052	3	141
Chester Boro.	\$31,500	1	53
Chester Twp.	\$29,491	22	1,354
Chester Twp. & Chester Boro.	\$33,000	1	90
Chester Twp. & Mendham Twp.	\$27,536	2	123
Chester Twp. & Mt. Olive	\$29,000	1	88
Denville Twp.	\$54,000	1	20
Harding Twp.	\$87,905	8	276
Lincoln Park Boro.	\$64,276	2	77
Long Hill Twp.	\$13,657	1	54
Mendham Boro.	\$12,581	1	29
Mendham Twp.	\$26,948	5	174
Mendham Twp. & Mendham Boro.	\$50,000	1	30
Montville Twp.	\$11,320	1	27
Mt. Olive Twp.	\$20,997	7	313
Randolph Twp.	\$27,761	4	147
Rockaway Twp.	\$26,665	2	123
Washington Twp.	\$11,606	75	4,947
<b>County-wide</b>	<b>\$20,069</b>	<b>138</b>	<b>8,066</b>

#### **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.

In 2004, the NJ Legislature passed the State Transfer of Development Rights Act, allowing the use of TDR statewide.<sup>84</sup> 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 use of this TDR program in Morris County.

The Highlands Water Protection and Planning Act includes a requirement for establishment of a TDR program, 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 and the Highlands Council adopted a TDR program as part of the Highlands Regional Master Plan in 2008.

As part of this program, the Highlands Council established a Highlands Development Credit Bank for the purpose of assigning Highlands Development Credits (HDC), and buying such credits from willing sellers for the eventual transfer to receiving areas that may be established by municipalities. The nine member HDC Bank works in conjunction with the Highlands Council to implement the Highlands Transfer of Development Rights (TDR) Program. In theory, HDCs

<sup>83</sup> Data as of July, 2020. The per acre purchase price is not always reflective of appraised value.

<sup>84</sup> N.J.S.A. 40:55D-13.7 et. seq.

may be sold to developers for use in appropriate voluntary receiving zones that would permit developers to increase the density or intensity of proposed projects in those zones

Despite numerous feasibility studies financed by the Highlands Council and conducted by various municipalities, both inside and outside the Highlands Region, no municipalities have designated receiving areas as part of the Highlands TDR program. Until such time appropriate receiving areas are identified, the Highlands TDR program, through the Highlands Development Credit Bank, remains essentially restricted to buying voluntarily offered credits which are then banked for the foreseeable future.