

# **OPEN SPACE & RECREATION PLAN ELEMENT**

Township of Harding

Morris County

New Jersey

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*Dedicated to David W. Dietz*

*Devoted member of the  
Harding Township Planning Board from 1997-2020*

## Table of Contents

Introduction .....	3
Public Participation.....	3
Public Meetings.....	3
Additional Public Outreach Mechanisms .....	4
Open Space Plan Goals.....	5
Significant Events in Open Space Preservation.....	5
Support for Open Space Preservation.....	9
Open Space Inventory .....	10
Federal Parks .....	11
Great Swamp National Wildlife Refuge .....	11
Morristown National Historical Park (Jockey Hollow).....	13
State-owned Land.....	13
County Parks .....	13
Township Open Space and Recreation Sites .....	14
Bayne Park: Community Focal Point.....	16
Municipal & Non-Profit Owned Lands .....	17
Board of Education- Harding Elementary School.....	18
Nonprofit-Owned Lands.....	18
The Harding Land Trust.....	19
Bridle Trails .....	20
New Jersey Audubon and Morris Area Girl Scouts .....	21
Great Swamp Watershed Association and New Jersey Conservation Foundation.....	21
Privately Owned Open Space.....	22
Lakeshore Company (Mt. Kemble Lake).....	22
Harding Green, Shadowbrook and Hartley Farms .....	22
Conservation Easements .....	22
Recreation Facilities .....	23
Environmental Protections.....	24
Stream Corridor Protection .....	24
Tree Protection .....	25
Green Acres .....	26
Morris County Preservation Trust and Farmland Preservation.....	27
Open Space Preservation Needs and Resource Assessment .....	29
Balanced Land Use Standard .....	29
Geographic Service Area Standard for Recreational Facilities .....	29
Facilities for Specific Populations.....	31
Planning Framework .....	33
Assessment of Lands Important to the Preservation of the Township’s Character .....	33
Assessment of Lands Important to Environmental Protection .....	34
Open Space Preservation Priorities .....	34
Protection of Water Resources .....	34
Prime Groundwater Recharge Areas.....	35
Greenways and Wildlife Habitat .....	35
Landscape Project .....	35
Rural Streetscapes .....	37
Viewsheds and Gateways.....	37
Historic Areas.....	38
Bridle Trails .....	38
Open Space Plan Implementation.....	38
Open Space Trust Committee (“HOST”) .....	38
Partnerships and Funding for Open Space Preservation.....	39
Open Space Maintenance and Stewardship .....	39
Open Space Action Plan .....	40

## **INTRODUCTION**

Harding has a long history of open space preservation with over 6,200 acres or 47.1% of the Township preserved.<sup>1</sup> This achievement has protected the Township's traditional rural development pattern and its high quality natural resources, the two over-riding goals of the Township's Master Plan. The foundation for this Plan goes back many decades with the federal and county preservation of the four largest open space areas, the Great Swamp, Morristown National Historical Park (Jockey Hollow), Lewis Morris Park and Loantaka Brook Reservation, which together comprise many thousands of acres.

In 1997, the Township established the Harding Open Space Trust Committee, also referred to as HOST, to coordinate and advise the Township committee about future land acquisition by the Township. HOST has remained active within the Township of Harding by continuing to advocate for the preservation of lands and preparing several Stewardship Plans for purchased open space land. The major finding of this Plan is that open space preservation is needed in order to achieve the Master Plan's overall goals. Additionally, stewardship/management plans are also needed for the restoration, maintenance, and/or conservation of these pristine properties. The major goal of this Open Space Plan is to promote additional open space preservation in strategic locations that support the overall Master Plan goals of preserving the Township's rural character and protecting the high quality of our natural environment.

This Plan also supports continuing Township efforts to acquire the development rights over important tracts of land that were planned for development and establish conservation easements in portions of lots that contain environmentally sensitive areas. With 44 miles of streams, the abundance of high-quality water resources within the Township indirectly results in additional open space preservation because of the myriad of state regulations designed to protect them.

## **PUBLIC PARTICIPATION**

### **PUBLIC MEETINGS**

On October 28, 2019, the Planning Board conducted a public outreach meeting during a regularly scheduled meeting which had the form of a Town Hall meeting. The meeting was noticed on the Township's bulletin board, in the local newsletter, and on the Township's website. The meeting served as a platform where residents and community members shared their goals and vision for the Township related to the Open Space and Recreation Plan and Master Plan Reexamination Report. Fifteen community members attended in addition to the Planning Board. Topics of interest included Agriculture & Farming, Open Space/Recreation & Natural Areas, Historic Resources, Economic Development & Growth, Density, Rural Character, and Sustainability and Green Infrastructure. The attendees were encouraged to participate throughout

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<sup>1</sup> This includes land owned by federal, state, county, and local governments as well as community/nonprofit-owned lands preserved as open space.

the meeting and were asked to provide comments pertaining to what they liked or didn't like about each topic which were then written on the poster that was displayed in the room.

Another poster was presented at the meeting, which was entitled "Goals, Targets, and Visioning for 2030". This board posed several questions, which included:

- How would you describe Harding to someone who has never been here?
- Are there any open space or recreation amenities you feel are missing or could be improved upon?
- What are the challenges facing Harding?
- What are potential solutions for these challenges?

Comments from attendees indicated that they would like to prioritize the maintenance of existing farms in the Township; in particular, they feel that the historic farms should be protected. Attendees also like the walking path in Bayne Park and recommend that the loop should become a continuing trail. Bridle trails are another asset to the Township which the residents feel should be protected. The attendees expressed interest in providing a safe connection that allows children to walk from the elementary school to the library as well as to the New Vernon district. Residents value the protection of diverse open space areas in Harding and appreciate the existing dark skies. Residents also expressed favorability to the curved, meandering roadways without curbs that contribute to the rural character of the Township.

Residents also participated in a Visual Preference Survey for Open Space and Recreation consisting of twelve images of open space and recreation facilities. Attendees placed yellow stickers on images they felt reflected the community vision for Harding, and red stickers for images they felt were inconsistent with Harding's community vision. Images that received the most positive feedback from residents were pictures of bridle trails, sports fields and tennis courts without lighting, paths through open parks, a bench in front of the pond at Bayne Park, a community garden, hiking trails, and kayaking. All participants disliked the photo of a baseball field illuminated at night, and the majority of participants disliked the image of the dog park.

#### **ADDITIONAL PUBLIC OUTREACH MECHANISMS**

The Planning Board reached out to municipal Boards and Committees, including the Board of Adjustment, Environmental Commission, Harding Open Space Trust Committee, Historic Preservation Committee, and the Harding Township Board of Education, as well as local environmental/stewardship groups, including the Harding Land Trust and the Harding Township/Green Village Bridle Path Association, seeking input on the Master Plan Reexamination Report and the Open Space and Recreation Plan. The Planning Board received written responses from the Township Committee, the Harding Township/Green Village Bridle Path Association, Environmental Commission, Harding Land Trust and HOST.

In preparation of this Plan, the consultants attended a meeting with HOST on March 11, 2020. The goal of this meeting was to collect information as well as establish HOST's goals and targets for the next 10 years.

## **OPEN SPACE PLAN GOALS**

The overall philosophy of this Plan is that there remain strategically located parcels of largely undeveloped land that are of special importance to the Township's traditional rural character and high quality natural resources. These parcels should be preserved where possible. Harding's specific open space goals are as follows:

1. Preserve open space areas that contribute to the preservation of water resources, scenic vistas, streetscapes or landscapes, and/or that contain historic features or qualities of importance to the traditional rural historic character of the Township.
2. Preserve open space important to the protection of Harding's high-quality natural resources, the Great Swamp National Wildlife Refuge and Morristown National Historical Park. Particular emphasis should be placed upon areas not otherwise protected by State regulations such as forests and meadows that provide valuable wildlife habitat.
3. Preserve open space to provide for active and passive recreational needs including linkage between open space areas and greenways, and maintaining the integrity of the system of bridle trails.
4. Promote the preservation of farms and farming in the Township.
5. Provide for the stewardship of publicly owned land and promote the maintenance of privately preserved areas.

## **SIGNIFICANT EVENTS IN OPEN SPACE PRESERVATION**

Open space planning and preservation efforts in Harding have been ongoing for over 70 years, commencing with the establishment of the Morristown National Historical Park in the 1930s. In recent years there has been increasing local, regional and statewide concern about damage to environmental resources and the consequences of "sprawl" development, which has led voters to support dedicating local, county and state tax revenues for open space preservation. Planning efforts have increased at all levels of government to mitigate the negative consequences of development and depletion of natural resources. Following are the significant events relating to open space preservation in Harding.

**1933:** Morristown National Historical Park is established, preserving over 1,300 acres of open space in the northwestern part of the Township. This highlighted the significance of this area related to important events and sites in the American Revolutionary War.

**1960:** The Great Swamp National Wildlife Refuge is created; close to half of its current 7,700 acres are located within Harding Township.

**1961:** Green Acres Program created by New Jersey to address the State’s growing recreation and conservation needs. The program’s purpose is to preserve and enhance the natural environment, recreation areas, historic and scenic resources.

**1965:** Federal Land and Water Conservation Fund Act is enacted which requires states to prepare and revise a Statewide Comprehensive Outdoor Recreation Plan in order to be eligible to receive funding. This act funds New Jersey’s Green Acres Program.

**1968:** The Harding Township Environmental Commission is created with an original focus to undertake research and studies documenting the Township’s natural resources.

**1976:** The first Natural Resources Inventory is prepared by the Environmental Commission to serve as a resource for the Township’s Planning Board, Board of Adjustment and Township Committee.

**1980:** Statewide and regional planning efforts commence with the preparation of the “State Development Guide Plan” by the NJ Department of Community Affairs, which designates most of Harding as a *Conservation Area*. By 1985 the “State Planning Act” establishes a new State Planning Commission to develop a statewide plan to establish planning policies; Harding is designated within Planning Area 5, the *Environmentally Sensitive* planning area. By 2004 the "Highlands Water Protection and Planning Act" designates Harding within the Highlands *Planning Area*. These statewide and regional planning efforts indicate the sensitivity of large portions of Harding and the need to protect them from the negative impacts of development.

**1984:** The Planning Board adopts an updated Master Plan (updating the first Master Plan adopted in 1972) incorporating a “Parks, Recreation, Conservation and Open Space Plan Element.” The element focuses on an inventory of open space and recreation areas and assumes that privately owned areas in the central portion of the Township will remain open as a result of historic land use patterns.

**1990:** The Harding Land Trust is formed by local citizens as a nonprofit organization to acquire, by gift, bequest or purchase, real property or easements for conservation purposes. Over the ensuing 30 years, the Trust acquires an interest in hundreds of acres of land in strategic locations around the Township, often partnering with Harding’s Open Space Trust Committee, thereby contributing significantly to Harding’s rural character and environmental protection through a program of proactive open space preservation.

**1992:** The Township participates for the first time in the state Green Acres Program with the acquisition of the “Margetts” property, a 46-acre tract of land with scenic vistas and extensive road frontage on Blue Mill Road. Also in 1992, the Planning Board adopts a report entitled “Greenway and Open Space Plan for Harding Township” originally prepared for and adopted by the Township’s Environmental Commission in 1991. The plan focuses on the importance of open space preservation and stream quality, and proposes “greenways” as an effective means to protect water resources and establish linkage between Morristown National Historical Park and

the Great Swamp. The plan is incorporated into the Master Plan with the adoption of the recodification in 1994.

**1993:** Morris County commences collection of a dedicated tax for open space preservation. The Morris County Open Space and Farmland Preservation Trust Fund was established by the Freeholders in late 1992 with a strong commitment to preserve open space and farmland throughout the county.

**1996:** Harding voters pass a non-binding referendum recommending that the Township Committee establish an Open Space Trust Fund through dedicated tax revenues to finance the acquisition of land and easements for the acquisition of land for conservation and recreation. In establishing the fund, the Township Committee firmly commits the Township to a permanent open space preservation program. Subsequent referenda approved by the voters in 2000, 2002 and 2003 increased the authorized tax and authorized the use of funds for farmland preservation, historic preservation, and the maintenance of lands acquired for open space/recreation purposes.

**1997:** The Township Committee establishes an “Open Space Trust Committee” comprised of the Mayor, Township officials and residents. The committee performs an advisory function with duties that include establishing criteria to be used in analyzing properties for potential acquisition or the purchase of an easement or development rights.

**1998:** In a statewide referendum, New Jersey voters approved a stable source of funding for open space preservation throughout the state. The program dedicates \$98 million annually for the ensuing ten years from sales tax revenue to the Garden State Preservation Fund. The goal of the program is to permanently preserve approximately 1,000,000 acres from development. A subsequent statewide ballot question passes in 2007 authorizing an additional \$200 million in funding for one more year.

**1998:** The Township’s Land Use and Development Ordinance (section 105-124) was amended to require that subdivision approvals be conditioned upon the establishment of conservation easements encompassing freshwater wetlands and their transition areas, lands within fifty feet of the top of the channel bank of any state open water, stream encroachment areas, and other unique environmentally-sensitive areas as a means of environmental protection.

**1998:** Two (2) referenda were passed at the County level to increase the maximum collection for the Morris County Open Space & Farmland Preservation Trust Fund to 3.0 cents per \$100 assessed value and provided 0.25 cents for the MCPC Improvement Fund.

**2000:** The Township Committee adopts the “Harding Township Open Space Plan” for submission to NJDEP in connection with funding under the state’s Green Acres Program. The plan draws upon the Master Plan’s open space inventories, goals and policies, and assesses open space needs and resources.

**2001:** State Development and Redevelopment Plan is adopted and includes policy objective “Protect and preserve large, contiguous tracts and corridors of recreation, forest or other open



space land that protects natural systems and sensitive natural resources, including endangered species, ground and surface water resources, wetland systems, natural landscapes of exceptional value, critical slope areas, scenic vistas and other significant environmentally sensitive features.”

**2001:** Morris County Preservation Trust Fund increased the maximum collection to 5.25 cents per \$100 assessed value via approved Trust Fund referenda.

**2002:** A referenda was passed for the Morris County Preservation Trust Fund to establish the Historic Preservation Fund utilizing 1/8 to 1/4 cent of the existing tax.

**2003:** An updated Environmental Resources Inventory is adopted by the Planning Board as a component of the Master Plan. It documents the importance and sensitivity of the Township’s water and other resources.

**2005:** The New Jersey Legislature approved an act amending Section 2 of P.L. 1997, c.24 (C.40:12-15.2) to permit the governing body of a county to submit a proposition to voters authorizing imposition of an annual levy for the acquisition, development, and/or maintenance of lands for recreation and conservation; acquisition of farmland for preservation; historic preservation; or the payment of debt issued from the acquisition of lands for the previously stated purposes. The act requires funds raised by the levy to be deposited in a “County Open Space, Recreation, and Farmland and Historic Preservation Trust Fund.”

**2007:** \$200 million Green Acres, Farmland, Blue Acres, and Historic Preservation Bond Act of 2007 is passed by voters.

**2008:** Planning Board adopts an Open Space Plan Element of the Master Plan

**2008:** HOST completes Gatehouse Property Management Plan Block 23, Lot 1. The property is 13.73 acres and includes meadows, wetlands, a brook, and vernal pools. The plan also addresses the maintenance of the Gatehouse. The plan was updated in 2011.

**2008:** HOST completes Waterman Meadow Management Plan which outlined activities required to restore, maintain, and enhance the conservation of Block 2, Lot 18. The property is a 19.46-acre meadow containing wetlands that is adjacent and drains into Loantaka Brook Reservation. The plan was updated in 2011.

**2008:** HOST completes Von Zuben Management Plan for Block 7, Lot 4.05, a 3-acre property that drains towards a tributary of Great Brook. The plan was updated in 2011.

**2009:** \$400 million Green Acres, Water Supply and Floodplain Protection, and Farmland and Historic Preservation Bond Act of 2009 is passed by voters.

**2010:** HOST completes the Kemble Tract Property Management Plan for the 6.394-acre open space portion of Block 34, Lot 1 that is restricted by Green Acres. The remaining 3.181 acres of the parcel is subject to a Morris County Deed easement and contains the historic Glen Alpin home. The plan was updated in 2011.

**2010:** Harding forms Citizen's Park Advisory Committee (CPAC) to advise the Township Committee on the operations and care of the Township's four parks: Bayne Park, Memorial Park, Barret Field and Showgrounds.

**2014:** Preserve New Jersey Act was approved by voters to permanently dedicate a portion of the Corporate Business Tax for preservation efforts which entails 71% of the 4% of the collected tax to be used for preservation until the 2019 fiscal year where it then increases to 78% of the 6% tax in the 2020 fiscal year.

**2014:** Morris County passes a referendum to establish Trail Development as an eligible activity of the Morris County Preservation Trust.

**2016:** HOST completes the Field Management Plan for the Dear Property which consists of Block 9, Lots 2.01 and 2.02 whose combined acreage is 10.60. The plan addresses maintenance of existing environmentally sensitive area as well as strategies to combat invasive species.

**2018:** HOST updates Gatehouse Property Management Plan.

**2019:** Township Committee adopts Ordinance 12-2019, revising §7-37.1 Open Space Trust Committee of the Code of the Township of Harding. Amendments included changes to the membership of the Committee and the appointments process as well as requiring the Open Space Trust Committee to prepare a management plan for each property owned by the Township and identified on the Recreation and Open Space Inventory.

**2019:** Environmental Commission begins a Flora Study of the Township.

#### **SUPPORT FOR OPEN SPACE PRESERVATION**

Preservation of additional open space remains a priority for Harding residents. Township residents have historically and overwhelmingly voted to use local tax dollars for additional open space acquisitions in the following four Township referenda.<sup>2</sup>

**1996:** To establish a Township "Open Space Trust Fund" through a dedicated property tax not to exceed 2 cents per \$100 of assessed valuation: 1,301 in favor, 491 against.

**2000:** To add to the Open Space Trust Fund by authorizing the Township Committee to enact ordinances levying additional property taxes up to and including 3 cents beyond the 2 cents (5 cents total) approved in 1996: 1,217 in favor, 720 against.

**2002:** To authorize the use of Township tax money for acquisition and maintenance of land for conservation, recreation, and farmland preservation purposes: 1,137 in favor, 312 against.

**2003:** To authorize the use of tax money for the preservation and acquisition of historic properties and to allocate a sum of up to 10% of future open space tax levies for such purposes: 593 in favor, 272 against.

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<sup>2</sup> Source: Harding Township.

## **OPEN SPACE INVENTORY**

Preserved open space in Harding can be broken down into two broad categories. The map attached at the end of this Plan, entitled “Open Space-Overview” illustrates the distinct patterns of the parks and open space located within the Township. The first category, border preserves, is made up of a relatively few but very large preserves along the periphery of the Township. The second and substantially smaller category, known as interstitial open space, is made up of scattered parcels located throughout the developed area of the Township.

The first category, *the border preserves*, is made up by three very large preserves of open space. The largest is the Great Swamp Wildlife Refuge, which encompasses the entire southern third of the Township. The second largest preserved area is in the northwest quadrant of the Township comprised of the two contiguous areas of Morristown National Historical Park (Jockey Hollow) and Lewis Morris Park. In the northeast, Loantaka Brook Reservation provides a linear band of preserved land centered on Loantaka Brook. In all three cases these open space areas in Harding are part of much larger preserves that include lands in the adjacent municipalities. If land adjacent to Harding is included, preserved open space exists essentially along the entire southern, western, and eastern periphery of the Township. Combined they substantially buffer the Township from the encroachment of surrounding suburban development and provide the foundation for the Township’s traditional rural development pattern. Altogether they create a community with a strong sense of a distinct place surrounded by countryside.

The second category, *the interstitial open space*, is located within and throughout the area where Harding’s residents live and what most people view as the Harding community. While the total amount of land within this category is over 700 acres, representing approximately 11% of the Township’s total open space inventory, its impact in promoting Master Plan goals belies its cumulative acreage. Many of these parcels have a direct impact on the character of adjacent residential areas. A number are also located along the Township’s most traveled roadways, thereby having a prominent visual impact promoting the preservation of the Township’s traditional rural development pattern.

The amount of undeveloped countryside and the continuation of Harding’s traditional rural character are the features that most distinguish the Township from most other communities in the region. The preservation of these characteristics is at the heart of this Master Plan. The significance of open space to Harding and its planning goals is reflected in its zoning; the majority of publicly owned open space areas are zoned “PL: Public Land.” There are several open space properties within the Township that have not been re-zoned to PL: Public Land since acquired by either the municipality, non-profit agency, or other government agency. It is recommended that all parks and open spaces identified in this plan be rezoned as PL: Public Land.

<b>Open Space &amp; Recreation Areas in Harding Township</b>	
<b>Park Name/Owner</b>	<b>Acreage in Harding</b>
Great Swamp National Wildlife Refuge	3,850.2
Morristown National Historical Park	1,346.6
Morris County:	
Lewis Morris Park	187.8
Loantaka Brook Reservation	82.0
Township of Harding:	
Recreation and Open Space Inventory (ROSI)	220.4
Other Municipal Open Space not on ROSI	8.4
Board of Education	40.6
Community Organizations/Nonprofits	473.6
<b>TOTAL</b>	<b>6,209.6</b>

Sources: Harding Township Geographic Information System 2020 and Harding Township ROSI 2013.  
Acreage is calculated in GIS and rounded to the nearest 1/10th acre.

## **FEDERAL PARKS**

### ***Great Swamp National Wildlife Refuge***

The largest and ecologically most important natural feature in Harding is the Great Swamp National Wildlife Refuge covering approximately the lower third of the Township as well as parts of neighboring municipalities. The most important goal of the Refuge is to provide habitat for migratory birds; its secondary goal is to provide high-quality environmental education and wildlife-dependent recreation opportunities that are compatible with the Refuge's purpose.<sup>3</sup>

Parts of the Great Swamp have been in public ownership since 1956 when 450 acres were set aside for a sanctuary. In 1959 when the Port Authority of New York and New Jersey designated it as a possible site for a major regional jetport, local citizens raised funds to purchase more than 3,000 acres, which were then donated to the federal government. The Refuge was established on November 3, 1960 and formally dedicated on May 29, 1964. On September 28, 1968, Congress designated 3,660 acres of the Refuge as a Wilderness Area (of which approximately 1,600 acres lie within Harding) and it was included in the National Wilderness Preservation System, to be forever left in a natural state. Over the years, acreage has been added to the Refuge from willing sellers pursuant to the federal acquisition program. Today the Refuge is the largest single holding of contiguous parcels of vacant land in the region, comprised of almost 7,800 acres in the Townships of Harding, Long Hill and Chatham. In Harding, the Refuge covers over 3,850 acres of land.

<sup>3</sup> Source: [www.friendsofgreatswamp.org](http://www.friendsofgreatswamp.org).

The Great Swamp is one of a series of swamps remaining as a result of the draining of glacial Lake Passaic, which covered a wide area, about 30 miles long and 10 miles wide.<sup>4</sup> The lake drained through Little Falls Gap, along the present course of the Passaic River and left extensive marshes in its place. Today the Great Swamp is about seven miles long and three miles wide. It is essentially a depression surrounded by low hills composed of basalt from ancient lava flows. Shales and sandstones underlie the Swamp as a result of geological formations of the Triassic Era. It serves as a large natural flood plain saving vast areas downstream from potentially damaging floodwaters.

The Great Swamp contains a series of wooded ridges interspersed with wide areas of wooded swamp and open marsh. Woodlands compose about 20 percent of the Great Swamp, while the balance is primarily composed of wooded swamp and marshland. Generally, the Swamp bed consists of several feet of peat and organic muck overlaying a thin layer of sand and ultimately a thick deposit of impermeable clays and silts. Between the clay/silt layer and the deeper bedrock is a bed of sand and gravel aquifers. Groundwater in the Swamp moves in the sand and gravel aquifer beneath the clay/silt layer. Surface water cannot, however, pass through the clay beds to add to the groundwater. Thus, groundwater in the swamp is actually below the normal levels of groundwater in areas outside the Swamp since the clay and silt layer is some 60 feet thick.<sup>5</sup>

Wetlands within the Great Swamp are associated with four brooks and their tributaries, which carry water into the Great Swamp. These brooks (Black, Great, Loantaka, and Primrose) form the Great Swamp Watershed, which includes virtually all of Harding and parts of Morristown, Madison, Chatham, Morris, Long Hill, Bernards and Mendham Townships and Bernardsville, Madison and Mendham Boroughs. The brooks flow across the Swamp to the Passaic River. The stream waters bring in silt, which in time can destroy the Great Swamp. As streams flow through marsh areas, water spills over the banks where the emergent vegetation absorbs it and, by transpiration, sends it into the atmosphere. As a result, stream-flows leaving the Great Swamp during the growing season contain less water than when they entered it, an important factor in flood prevention.

The Great Swamp is a valuable habitat for wildlife. It is the home of 244 species of birds according to their seasonal occurrence, 39 species of mammals, and 42 species of reptiles and amphibians. Some notable inhabitants of the area include the federally threatened bog turtle, the state threatened wood turtle, and the state endangered blue spotted salamander.<sup>6</sup>

Utilizing the New Jersey Department of Environmental Protection (NJDEP)'s Landscape Project data, many threatened and endangered species have been sighted within the Great Swamp. These species consist of a variety of amphibians, birds, mammals, and reptiles that have been identified as being a species of special concern, State Threatened, State Endangered, Federally Listed as

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<sup>4</sup> Others include Black Meadows, Great and Little Piece Meadows, Troy Meadows, and Hatfield Swamp.

<sup>5</sup> U.S. Department of the Interior, Fish and Wildlife Service, Bureau of Sport Fisheries and Wildlife; 1980.

<sup>6</sup> U.S. Fish and Wildlife Service, Great Swamp, Wildlife and Habitat.

Threatened, or Federally listed as Endangered. For information regarding the species within the Great Swamp, refer to the Landscape Project section of this Plan.

In the early 2000s, remediation actions were necessary at several former dumps, including one within the Great Swamp. The site had been previously used as a municipal landfill. In 2004, the Great Swamp National Wildlife Refuge hosted an event highlighting contaminant remediation, creative liability settlement, ecological restoration projects, and successful partnerships. As part of the settlement, the site had been restored to provide valuable upland and wetland habitat.<sup>7</sup> In 2010, the site was removed from the National Priorities List

Activities in the Refuge include pedestrian trails, the Morris County Outdoor Education Center, and the Wildlife Observation Center (see “Recreation Facilities” below). A Visitor Center, named in memory of late conservationist Helen C. Fenske, is located on Pleasant Plains Road.

### ***Morristown National Historical Park (Jockey Hollow)***

Created by Congress in 1933, Morristown National Historical Park was the first park of its kind in the United States. Located northwest of Route 202 and comprised of a total of about 1,700 acres of land (1,346.6 acres in Harding) this is the site of "Jockey Hollow," the main encampment for the Continental Army during the winter of 1779-1780. Jockey Hollow is the second largest contiguous open space area in the Township.

Jockey Hollow provides open space recreational opportunities, as well as habitat for wildlife and virtually undisturbed vegetation. This area contains the headwaters of Primrose Brook, which flows to the Great Swamp and is the ecological link between Jockey Hollow and the Wildlife Refuge. It is designated a "category I trout production" stream from its origin in the Park to Lees Hill Road and “non-trout” below Lees Hill Road. According to DEP standards, the stream must be protected from measurable changes (including calculable or predicted changes) to the existing water quality. The National Park is buffered by Lewis Morris Park (a county park) and two large adjacent parcels, one owned by the Morris Area Council of Girl Scouts and the other by the New Jersey Audubon Society.

### **STATE-OWNED LAND**

Much of the state-owned property in Harding is situated along the US Route 202/I-287 corridor and is owned by the Department of Transportation (DOT). The largest parcel is the 41-acre rest area on the easterly side of the interstate highway. Another large parcel is a nine-acre wetlands mitigation site located along Route 202. In total, the DOT currently owns approximately 75.6 acres in Harding Township.

### **COUNTY PARKS**

Morris County holds approximately 270 acres in parkland in Harding Township. A portion of Lewis Morris Park in the northwestern corner of the Township comprises about 188 acres (the

<sup>7</sup> Source: [https://www.fws.gov/fieldnotes/print/print\\_report.cfm?arskey=12671](https://www.fws.gov/fieldnotes/print/print_report.cfm?arskey=12671)

total park area is 2,196 acres) and has approximately 22.1 miles of trails. The Lewis Morris Park is the second largest county park in Morris County. The park features hiking trails, off-road biking, equestrian trails, picnic areas, athletic fields, a dog park, and group camping areas. The park also offers summer activities at the Sunrise Lake Beach Club, which provides a water obstacle course, paddle boats, and fishing. The park also serves as the Morris County Park Commission's headquarters as it contains the Cultural Center.

The Lewis Morris Park is named after the first Governor of New Jersey and was opened by the Morris County Park Commission in 1958. The 8-acre Sunrise Lake and beach area was acquired March 1, 1957. The Old Army Area was dedicated on September 20, 1958 and the Cultural Center, which serves as the Morris County Park Commission headquarters, was dedicated on January 29, 1969. The Off-Leash Dog Park, located in the Old Army Area, was opened November 2003.

In the northeastern corner of the Township lies an 82-acre portion of the Loantaka Brook Reservation. This site, situated to the west of Woodland Avenue, includes Loantaka Brook. It is part of the 883-acre linear park that helps provide protection to Loantaka Brook and the Great Swamp. The park contains 9.9 miles of trails that can be used for bicycling, jogging, hiking, horseback riding, and cross-country skiing. The park also features playground areas, and athletic fields.

The Loantaka Brook Reservation was acquired by the County Park Commission in 1957 via land donations from J. Spencer Woods, M. Hartley Dodge, and George E. Potters. Since that time, additional properties have been acquired by or donated to the County with the intent to create a linear greenway to protect the Loantaka Brook.

### **TOWNSHIP OPEN SPACE AND RECREATION SITES**

Parcels of land owned solely by the Township that are dedicated to open space or contain recreation facilities comprise about 169.9 acres and are listed in the table below.<sup>8</sup>

Many of these properties are listed on the Recreation and Open Space Inventory (also known as the ROSI). The ROSI is a database maintained by the NJDEP Green Acres Program. A requirement of accepting Green Acres grants and loans is that the municipal entity must update the ROSI to include land that is either owned by the municipality as open space and recreation areas, land leased by the municipality for recreational purposes, land owned by a private entity of which the municipality holds a conservation easement, or land in which the municipality holds a specific recreation and/or conservation interest.

The majority of open space owned by the Township of Harding is on the ROSI. The table below details the parcels owned by the Township that are considered to be open space and recreation area. The ROSI column indicates whether or not the property is currently encumbered by Green

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<sup>8</sup> The Township owns additional parcels of land in various locations including sites with community buildings or facilities, affordable housing, and other undeveloped land.

Acres rules and restrictions. It is important to note that not all of the properties listed below have been purchased utilizing the Green Acres Program and funding.

<b>Municipally Owned Open Space</b>						
<b>Park Name</b>	<b>Block</b>	<b>Lot</b>	<b>Acres</b>	<b>Address</b>	<b>Types of Recreation</b>	<b>ROSI</b>
Wexford Lane/James Street	5	13	3.2	2 OXFORD LN	Passive	Yes
Margetts Field	8	22	53.8	6 COLGATE TER	Passive	Yes
		23		2 COLGATE TER	Passive	Yes
		9.01		1 FEATHERBED LN	Passive	Yes
Dear Property	9	2.01	5.7	174 BLUE MILL RD	Passive	Yes
	9	2.02	5.0	174 BLUE MILL RD		
Memorial Park	16	1	0.9	21 VILLAGE RD	Passive	Yes
Municipal Campus	19	12.07	14.2	21 BLUE MILL RD	Active	Yes
Showgrounds	20	6	8.1	1 SAND SPRING LN	Active & Passive	Yes
Bayne Park	21	9	14.4	1 BLUE MILL RD	Passive	Yes
Frelinghuysen	22	4.04	3.8	49 SAND SPRING LN	Passive	Yes
Eggert Property	27	3.01	7.4	663 MT KEMBLE AVE	Passive	Yes
Kemble Tract	35.01	18	9.4	880 MT KEMBLE AVE	Passive	Yes
Rossell	35	14	4.1	140 BAILEYS MILL RD	Passive	Yes
Barret Field	46	2.01	9.7	131 BAILEYS MILL RD	Active & Passive	Yes
Primrose Farm	46	23	15.9	1 WHITE OAK LN	Passive	Yes
Bailey's Mill Road	46	4.01	5.9	105 BAILEYS MILL RD	Passive	Yes
Youngs Road Property	48	2	3.2	96 YOUNGS RD	Passive	Yes
Lees Hill Road	51	11	5.2	163 LEES HILL RD	Passive	No
<b>Total</b>			<b>169.9</b>			

Source: Harding Township 2013 ROSI. 2018 MODIV Tax Records. Acreage is calculated utilizing GIS, rounded to the nearest 1/10<sup>th</sup> acre.

For purposes of this Plan, passive recreation is defined as recreational activities that do not require prepared facilities such as sports fields or pavilions. Active recreation is defined as a structured individual or team activity that requires the use of special facilities, courses, fields, or equipment. As noted in the above chart, the majority of the parks owned by Harding Township are developed with passive recreational amenities to promote activities such as walking and hiking trails, cross-country skiing, horseback riding, and birding. Several of the above parks do



permit hunting, including the Eggert Property, Rossell, Kemble Tract, Bailey's Mill Road, Youngs Road Property, and Margetts Field.

***Bayne Park: Community Focal Point***

Bayne Park is a 13+ acre site situated between Glen Alpin, Blue Mill, and Sand Spring Roads in the village of New Vernon. Harding resident Howard Bayne donated the land to the Township in 1937 to be used in perpetuity as a park. With its large pond and highly visible location across from the municipal building and within walking distance of the historic village, it is a focal point and historically important for all Harding residents. The stone footbridges were constructed in the late 1930s under the Works Progress Administration (WPA) program and have become defining elements of the park. A dedication boulder has been placed in the park in appreciation of Mr. Bayne's gift to the community.

While there is a considerable amount of open space within Harding, Bayne Park is centrally located and easily accessed, and is one of the largest parcels of land owned by the Township. The pond provides opportunities for fishing; the mature plantings and expansive open lawn create a setting that offers tranquility not only for those who visit, but also for those who drive along the roads that surround the park on three sides. Recreation opportunities include a bridle trail and, during winter months, ice skating and ice hockey. Over the years, many trees and shrubs have been added and picnic tables and park benches provide opportunities for visitors to enjoy the setting.

In the mid-1990s, concerns arose about maintenance of the pond and park features. In 1997 the *New Vernon Garden Club* presented recommendations to the Planning Board in a professional Landscape Master Plan. Since then, work has been undertaken to maintain existing improvements and introduce new plantings. Members of the New Vernon Garden Club continue to maintain gardens in public places within New Vernon village, including the areas adjacent to the Tunis-Ellicks House.

The Township Committee since established the *Bayne Park Committee, which has been renamed the Citizens' Park Advisory Committee*, to provide oversight of the varied community interests in the park. The preservation of the park's natural setting and informal character is of great importance to the Township and is consistent with Harding's historic rural heritage.

The Citizens' Park Advisory Committee (CPAC) advises the Township Committee on the operations and care of Barrett Field, Memorial Park and Show Grounds, and Bayne Park. CPAC is composed of a variety of stakeholders, including interested citizens and liaison members from Harding Committees, including the Environmental Commission, Historic Preservation Commission, Garden Club, Harding Township Recreation Association, HTGV Bridle Path Association. Wildlife Management Committee and the Superintendent of the Township's Department of Public Works.

### **MUNICIPAL & NON-PROFIT OWNED LANDS**

In addition to the above Township-owned properties, there are several properties that are owned by both Harding Township and non-profit entities. The non-profit agencies and the Township have successfully partnered to preserve nearly 70 acres of land that provide passive recreation. The following chart details the block, lot, location, ownership, acreage, types of recreation, and details whether the property is listed on the ROSI.

<b>Municipal/Non-Profit Owned Open Space</b>							
<b>Block</b>	<b>Lot</b>	<b>Park Name</b>	<b>Owner</b>	<b>Acres</b>	<b>Location</b>	<b>Recreation Type</b>	<b>ROSI</b>
23	1	Gatehouse	TOWNSHIP OF HARDING/HARDING LAND TR	12.2	110 HARTER RD	Passive	Yes
33	13.01	Scudder/Audubon Property	NJ AUDUBON SOCIETY/TWP OF HARDING	11.0	POST HOUSE RD	Passive	Yes
33	8	Anderson Woods	TWP OF HARDING, HLT, NJAS	14.6	525 TEMPE WICK RD	Passive	Yes
34	1	Glen Alpin	TOWNSHIP OF HARDING/HARDING LAND TR	9.5	685 MT KEMBLE AVE	Passive	Yes
7	4.05	von Zuben	TOWNSHIP OF HARDING/HARDING LAND TR	2.9	77 BLUE MILL RD	Passive	Yes
2	18	Waterman Meadow	TOWNSHIP OF HARDING/HARDING LAND TR	19.7	634 SPRING VALLEY RD	Passive	Yes
<b>Total</b>				<b>69.8</b>			

Source: Harding Township 2013 ROSI. 2018 MODIV Tax Records. Acreage is calculated utilizing GIS, rounded to the nearest 1/10<sup>th</sup> acre.

As indicated above, all of the municipal/nonprofit open spaces have passive recreation amenities. There are no sports fields at any of these sites. Only two of these properties permits hunting, which are the Gatehouse property and Watermen Meadow.

Waterman Meadow, located at Block 2 Lot 18, is another property Harding Township and the Harding Land Trust partnered to preserve. The Township has a 21.875% interest and Harding Land Trust has 78.125%.

The Township is currently working with NJDEP Green Acres to remove a portion of the Glen Alpin property from the ROSI. The portion of the property to be removed includes the existing driveway and an area surrounding the existing structure, which has since fallen into a state of disrepair. A portion of the property is proposed to remain on the ROSI and will include a

walking path leading to the historic graveyard located just off of Mount Kemble Road. In order to satisfy Green Acres requirements, the Township must add additional land to the ROSI at a ratio of 1:4, meaning for every one acre removed, an additional four acres must be added in its place.

The Township recently passed Ordinance #05-2020 on July 16, 2020, which authorized Harding Township to exchange its interest in the Gate House property (Block 23 Lot 1), currently co-owned by the Township and Harding Land Trust, for Harding Land Trust's interest in Glen Alpin (Block 34 Lot 1).

### **BOARD OF EDUCATION- HARDING ELEMENTARY SCHOOL**

The Harding Township Board of Education owns the Elementary School property (approximately 40.6 acres), located in New Vernon village, which contains recreation fields and playground equipment. The school currently has a blacktop area, basketball courts, and baseball/multi-purpose fields. Because of this, the school site is considered part of the Township's recreation sites inventory.

The Environmental Commission, Shade Tree Commission, and the Board of Education recently partnered in an effort to mitigate the effects of climate change. Groves of trees are being grown at the school and will eventually be relocated and replanted within the Township to not only sequester carbon, but to also assist with beautifying and maintaining the Township's rural features.

### **NONPROFIT-OWNED LANDS**

Community and nonprofit organizations contribute significantly to open space preservation in Harding, particularly because most parcels are interstitially located within the developed community area of the Township. Collectively they preserve over 460 acres of open space as detailed below.

<b>Community &amp; Non-Profit Owned Open Space</b>						
<b>Block</b>	<b>Lot</b>	<b>Park Name</b>	<b>Acres</b>	<b>Address</b>	<b>ROSI</b>	<b>Owner</b>
12	24	New Jersey Conservation Foundation Property	20.5	176 VILLAGE RD	No	NJ CONSERVATION FND, BAMBOO BROOK
23	3	Great Swamp (Association)	19.0	13 TIGER LILY LN	No	GREAT SWAMP WATERSHED ASSOCIATION
23	4.02		4.9	25 TIGER LILY LN		
23	4.03		5.1	27 TIGER LILY LN		
23	4.04		5.6	29 TIGER LILY LN		
23	4.05		5.8	31 TIGER LILY LN		
23	5.01		8.9	37 TIGER LILY LN		
23	6		23.4	49 MT KEMBLE AVE		

Community & Non-Profit Owned Open Space (cont.)						
Block	Lot	Park Name	Acres	Address	ROSI	Owner
31	2	Girl Scouts Camp	44.4	585 TEMPE WICK RD	No	GIRL SCOUTS:LENNI-LENAP COUNCIL,INC
32	5	Audubon Society Property	0.4	PASSAIC RIVER	No	NEW JERSEY AUDUBON SOCIETY
32	7		71.2	PASSAIC RIVER		
5	17	Frelinghuysen Fields 3	18.7	562 JAMES ST	No	Harding Land Trust
5	18	Frelinghuysen Fields 1	24.0	574 JAMES ST		
5	19	Frelinghuysen Fields 2	39.9	582 JAMES ST		
8	4	Bridle Paths 3	2.1	26 DICKSONS MILL RD		
8	7	Bridle Paths 3	0.3	VILLAGE RD		
9	32	Koven Field	28.2	15 DICKSONS MILL RD		
9	4	Bridle Paths 2	8.7	210 BLUE MILL RD		
9	5	Bridle Paths 2	2.9	212 BLUE MILL RD		
9	7	Bridle Paths 1	1.6	BLUE MILL RD		
12	24.01	Bridle Paths 5	0.8	192 VILLAGE RD		
14	9	Bridle Paths 4	1.5	138 VILLAGE RD		
19	15	Bridle Paths 6	0.9	SAND SPRING RD		
20	7	Bridle Paths 6	1.1	3 SAND SPRING LN		
22	4.03	Frelinghuysen	3.8	43 SAND SPRING LN		
22	6	Frelinghuysen Marsh	13.6	585 JAMES ST		
35	16.02	Primrose Preserve	3.8	13 BROOK DR N		
46	26	Primrose Farm	101.8	10 WHITE OAK LN		
Total			462.9			

Source: 2018 MODIV Tax Records. Acreage is calculated utilizing GIS, rounded to the nearest 1/10<sup>th</sup> acre.

In addition to the properties displayed above, the Harding Land Trust partnered with the Township of Harding to preserve two additional properties (Glen Alpin, and the “Gatehouse”), all of which are zoned Public Land, and are included in the above inventories.

### ***The Harding Land Trust***

In 1990, a group of Harding citizens founded the Harding Land Trust (HLT) to work with local residents to conserve land in Harding. HLT is a 501(c)(3) nonprofit organization with a mission to acquire, by gift, bequest or purchase, real property or easements in the Township for conservation. Major goals of HLT are to support land use planning that promotes conservation of unique scenic, natural and historic areas, to protect the rural character of the Township and to ensure the integrity of water resources.

In 1992, Jane Koven made the first donation to HLT. The property is situated along Pine Brook on Dickson's Mill Road and it represents the first major portion of the Silver Brook/Pine Brook

greenway, consistent with this Master Plan. The property is also a key element in Harding's bridle trail network and provides habitat, food and shelter for migratory birds and other wildlife.

HLT owns 284.0 acres of land in various locations around the Township and has partnered with the Township on many open space preservation projects. HLT also holds a number of conservation easements that permanently protect the important natural features of land that remains in private ownership. Acquiring property and easements in this fashion enables the preservation of unique vistas, open space, stream corridors and wooded areas that serve to enhance and protect the Township's rural character and environmental resources. Properties owned by HLT are indicated on the Ownership Map under the collective umbrella as “Non-Profit”.

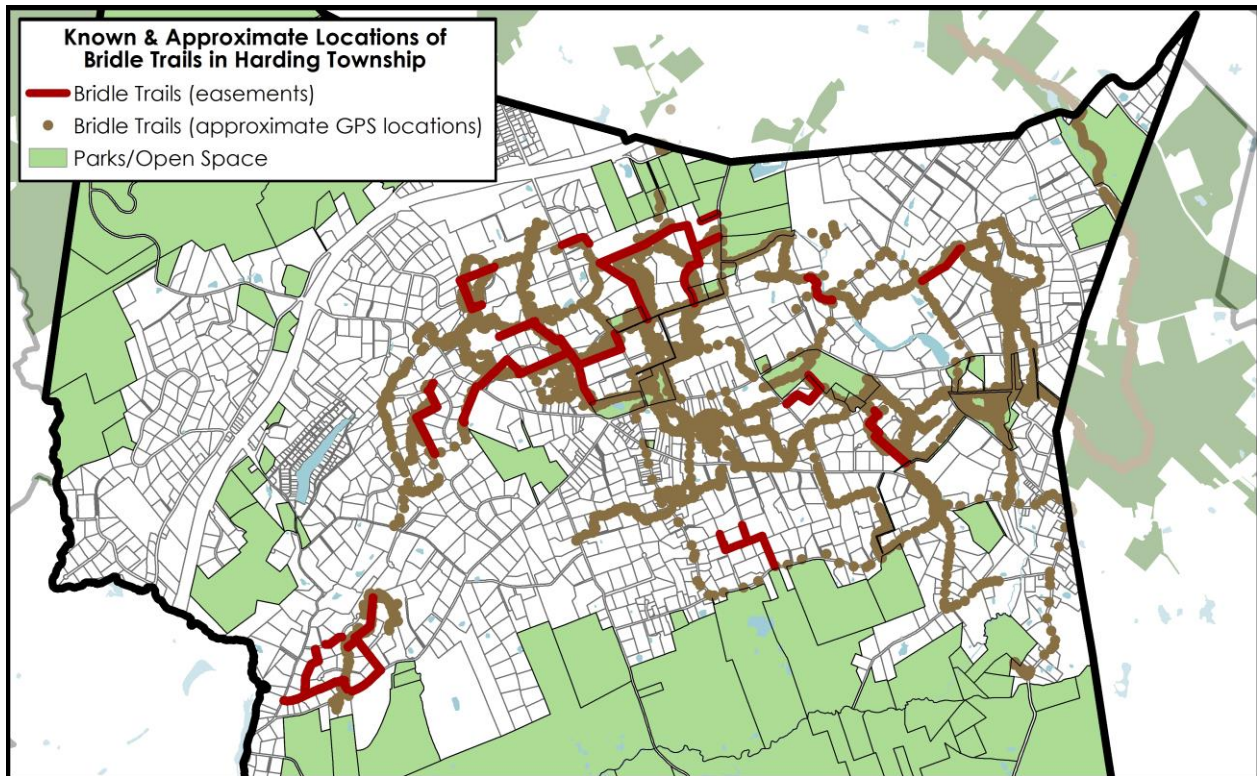
### ***Bridle Trails***

There is a long history of equestrian or bridle trails in Harding and many are still actively used. Over the years, Bridle Paths, Inc. established, owned and managed a series of equestrian trails, predominantly located in the eastern central portion of the Township. The trails form a greenway system leading from Pleasantville Road across from the Refuge, northeast across Village Road and up to Blue Mill Road. Another trail links the Glen Alpin property to the Showgrounds Equestrian Park on Sand Spring Lane.

Bridle Paths, Inc. transferred ownership of its holdings to the Harding Land Trust in 2003. The approximate locations of bridle trail easements are shown on the following map, entitled “Known & Approximately Locations of Bridle Trails in Harding Township” but the map does not show trails that are subject to voluntary license agreements arranged as part of the subdivision process since a license may be revoked by the landowner at any time in the future. Other existing trails scattered throughout the Township are not shown on the map because they have not yet been formally preserved.

As previously stated, the bridle trail easements shown on the following map are *approximate locations* based on the best available data.

The Township’s subdivision regulations require the mapping of any trails that exist on property proposed for development. The Land Use and Development Ordinance and Planning Board strongly support trail preservation, preferably via formal easements.



### ***New Jersey Audubon and Morris Area Girl Scouts***

The New Jersey Audubon Society and the Morris Area Council of Girl Scouts own parcels that form an important part of the large area of open space preserved in the northwestern part of the Township. A 71.6-acre parcel owned by the Audubon Society is part of the 260-acre Scherman-Hoffman Sanctuary that extends into Bernardsville. It contains a facility for environmental education/wildlife habitat. The Morris Area Council of Girl Scouts owns a 44.4-acre parcel situated between the Tempe Wick Road and the Township boundary. The property adjoins the Council's land in Mendham Township, which is the site of their camp facilities.

### ***Great Swamp Watershed Association and New Jersey Conservation Foundation***

The Great Swamp Watershed Association (GSWA) owns seven parcels of land totaling 72 acres in the Tiger Lily Lane area along Silver Brook. These parcels contain significant wetland areas. GSWA has self-designated the property as a Conservation Management Area, consisting of several miles of boardwalk and mulched trails that are open to the public for walking, hiking, and nature study.

The NJ Conservation Foundation owns a 20.5-acre parcel adjoining a tributary stream of Great Brook, which serves as an area for wildlife habitat and wetlands protection. It adjoins a portion of the bridle trails to the east and a large vacant parcel to the south, also located on both sides of the stream. In addition, the Foundation holds conservation easements in several areas of the Township.

## **PRIVATELY OWNED OPEN SPACE**

There are several areas of the Township that are privately-owned open space. Many of the private open space areas are a result of cluster development, while others are recreational amenities provided to the residents within a development. In total, there are approximately 111 acres of privately-owned open space in the Township.

In addition to Privately-Owned Open Space, there are 390 acres of privately-owned land preserved via conservation easements across 151 properties which are not open to the public.

### ***Lakeshore Company (Mt. Kemble Lake)***

Lakeshore Company is an outgrowth of the development of the Mt. Kemble Lake residential community. Lakeshore owns many parcels around Mt. Kemble Lake, some of which are the subject of conservation easements and are included in the “Private Preserved” category in the Ownership map. The company also owns Mt. Kemble Lake, which comprises 14+/- acres in surface water area and serves as a recreational resource for Lake residents. Lakeshore also owns numerous other parcels throughout the lake community. Several parcels provide access to the lake while others are vacant or serve as recreational sites for such uses as tennis, a community garden and clubhouse. Lakeshore Company also owns the roadways within the development. In total, Lakeshore Company owns approximately 47.5 acres of land across 43 parcels.

### ***Harding Green, Shadowbrook and Hartley Farms***

Harding Green and Shadowbrook are planned developments constructed in the 1980s pursuant to Harding’s planned development/cluster zoning, which required a minimum amount of open space. Harding Green owns approximately 15.4 acres of land which consists of roads, community amenities, and open space. Shadowbrook owns approximately 6.1 acres of land consisting of roads, common areas, and open space.

Hartley Farms represents an “open space subdivision” with a voluntary set-aside of about 42 acres of preserved open space in historically significant portions of the former estate of Marcellus Hartley Dodge. Marcellus Hartley Dodge was the owner and President of the Remington Arms Company who, along with his wife Geraldine Rockefeller Dodge, held the world’s largest dog show on the Polo Fields from 1927-1957. The site is listed on the National and State Register of Historic Places and is also part of the municipalities Historic District. The property was subdivided in the 1990s. (see Figure 16 Historic Districts). Hartley Farms holds the conservation easements for the preserved open space, known as Remington Forest, as well as the polo fields.

### ***Conservation Easements***

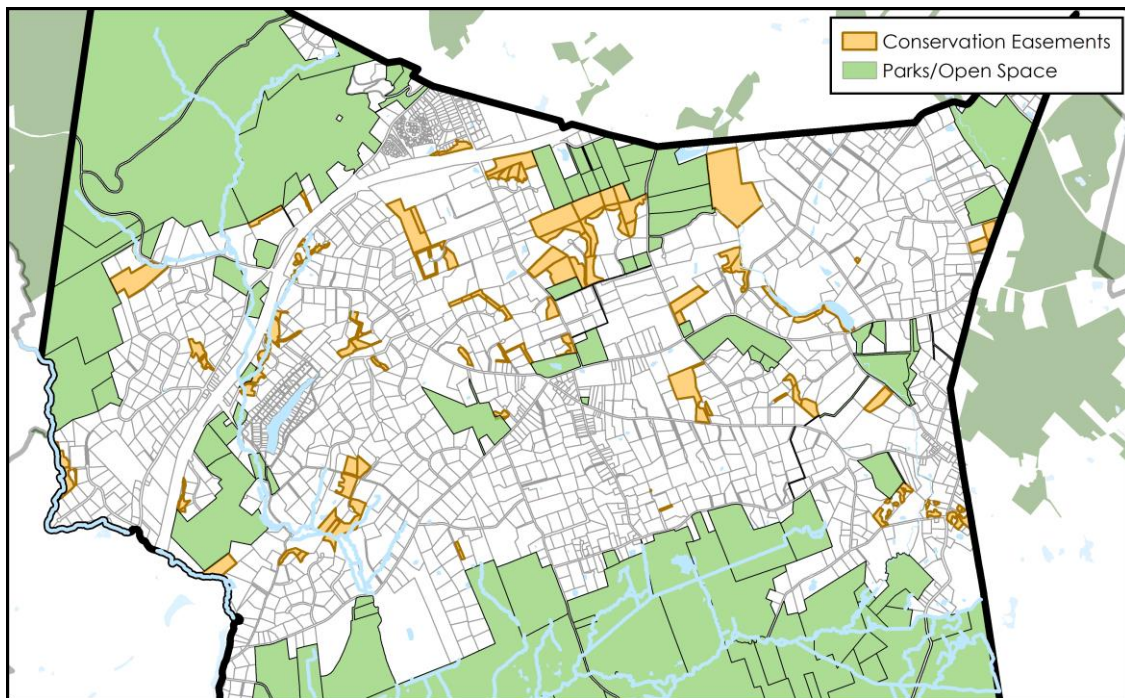
Over 390 acres across 151 privately-owned properties have been preserved via conservation easements within the Township. The largest is a 50-acre easement that is owned by New Jersey Conservation Foundation.



According to the Township's easement database, of the properties with conservation easements, approximately 167 acres are preserved via conservation easements held by the Township, 118 acres are held by the Harding Land Trust, 71 acres are held by the New Jersey Conservation Foundation, and 12.4 acres are held by Harding Land Trust/Harding Township. The remaining 21.6 acres do not have an entity assigned to the database.

Many of these conservation easements are a result of the Township's site plan and subdivision process, which was amended in 1998 to require subdivision approvals be conditioned upon the establishment of conservation easements over environmentally sensitive areas.

The following map shows the location of all conservation easements in the Township.



## **RECREATION FACILITIES**

Morris County's two major park facilities in Harding Township, Lewis Morris Park and Loantaka Brook Reservation, provide extensive active and passive recreation facilities. The Reservation is divided into three major areas: the Seaton-Hackney Stables, the Brook Recreational Area, and the Helen Hartley Jenkins Woods area, which is largely undeveloped with the exception of a bike path and hiking trails.

Morristown National Historical Park provides for hiking, nature trails, a visitor's center and tours of the historic Tempe Wick House. The Great Swamp National Wildlife Refuge provides opportunities to view a variety of plant and animal life in a natural habitat. A series of marked trails are found in the Wilderness Area, which is bordered on the eastern edge by the Morris County Outdoor Education Center. Public access to the remainder of the Refuge is on a



restricted basis on designated, elevated trails and Pleasant Plains Road. The Wildlife Observation Center is situated in the central-eastern portion, near the Wilderness Area boundary.

In addition to the recreation provided at county and federal parks, recreation facilities are provided locally at Bayne Park in the center of New Vernon, at the Municipal Campus, at the Show Grounds Equestrian Park on Sand Spring Lane and at Barrett Field near Bailey's Mill Road. Recreation at Bayne Park includes a bridle trail, fishing, ice-skating, picnicking and passive recreation. The Harding Township Recreation Association helps provide funding for the park and recreation facilities and the Harding Department of Public Works provides maintenance of the park facilities. Recreation facilities are also available at the Board of Education property and Fire Department property in New Vernon.

### **ACTIVITIES AVAILABLE TO THE PUBLIC AT MAJOR PARKS AND OPEN SPACE AREAS**

Great Swamp National Wildlife Refuge	Morristown National Historical Park	Lewis Morris Park	Loantaka Brook Reservation
Extensive educational programs available at the Outdoor Education Ctr. (Morris Co.) and the Environ. Educ. Ctr. (Somerset Co.)	Museum; historic bldgs; educ. films	Athletic fields; play areas; fitness stations	Athletic fields; play areas; fitness stations
	Guided tours; historic events/reenactments	Boating; fishing; swimming	Stables
Trails: pedestrian	Trails: pedestrian, equestrian	Trails: pedestrian, equestrian	Trails: pedestrian, equestrian
Wildlife Observation	Cross-country skiing; sledding; snowshoeing	Ice skating; sledding; snowshoeing	Ice skating; cross-country skiing; snowshoeing
Pre-arranged tours	Picnicking	Camping; picnicking	Picnicking
Visitor Center exhibits	Biking	Biking	Biking
Source: <a href="http://www.fws.gov">www.fws.gov</a> (4/2020)	Source: <a href="http://www.nps.gov">www.nps.gov</a> (4/2020)	Source: <a href="http://www.morrisparks.net">www.morrisparks.net</a> (4/2020)	Source: <a href="http://www.morrisparks.net">www.morrisparks.net</a> (4/2020)

The Map attached to this Plan, entitled “Open Space Ownership”, gives a visual representation of the ownership categories, as discussed above, in relation to the context of the Township.

## **ENVIRONMENTAL PROTECTIONS**

### **STREAM CORRIDOR PROTECTION**

In 1994, the Master Plan was amended to incorporate the “Greenway Plan” for Primrose and Silver Brooks originally prepared for the Environmental Commission in 1991. Its primary purpose was to propose the reservation of a corridor of land encompassing these high quality streams to protect them from the encroachment of development. Since that time, New Jersey Department of Environmental Protection regulations have become increasingly more stringent regarding encroachment on all high quality streams. This presents the opportunity, particularly

when a property is the subject of the site plan or subdivision review process, to preserve these areas and those areas adjacent to Category 1 streams by means of conservation easements.

Riparian Zones are regulated by the NJDEP via the Flood Hazard Area Control Act. Most waterways in New Jersey can be classified as either Category One (C1) or Category Two (C2). C1 and C2 waterways are types of antidegradation designations that provides additional protection to specific waterbodies. C1 waterways are protected from any measurable change in existing water quality because of their exceptional ecological significance, exceptional recreational significance, exceptional water supply significance, or exceptional fisheries resources.

Riparian Zones are assigned to all waterways based upon their water quality designation as well as physical attributes. Specifically, C1 waterways are assigned a riparian zone of 300 feet. Trout production, trout maintenance, and waters flowing through documented habitat for threatened and endangered species are assigned a 150-foot riparian zone. All other waterways are assigned a 50-foot riparian zone.

In 1998 the Township's Land Use and Development Ordinance (section 105-124) was amended to require that subdivision approvals be conditioned upon the establishment of conservation easements encompassing freshwater wetlands and their transition areas, lands within fifty feet of the top of the channel bank of any state open water, stream encroachment areas, and other unique environmentally-sensitive areas. For the most part, conservation easements in Harding are not intended as a means of promoting open space preservation per se. However, they are an important part of Harding's overall environmental protection and rural preservation strategy and indirectly promote open space preservation because the area of the easement is usually protected from any development. There are 151 conservation easements recorded, totaling almost 400 acres of land.<sup>9</sup>

The Riparian Zones Map, located at the end of this section, shows the streams and the approximate associated riparian zone, conservation easements, and preserved land areas within Harding Township.

### **TREE PROTECTION**

The Land Use Ordinance promotes the preservation of trees and wooded buffers between properties with the establishment of a "tree conservation area" along all residential property lines. Permits are required to cut down trees greater than eight inches (measured at breast height) within the conservation area. Also, in conjunction with the review and approval of major subdivisions, tree conservation easements have been established to protect extraordinary specimen trees and tree conservation areas have occasionally been expanded in order to provide enhanced buffering for neighboring properties.

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<sup>9</sup> Harding Township Geographic Information System, March 2020.

## **GREEN ACRES**

The *Green Acres* Program was established by the State in 1961 and has evolved and grown into what is now the most important source of funds for open space in the New Jersey. From 1961 to 1995, New Jersey’s voters overwhelmingly approved nine bond issues earmarking more than \$1.4 billion for land acquisition and park development. In response to a 1998 statewide ballot question, the Legislature enacted the Garden State Preservation Trust Act, providing a source of funding for the ensuing ten years for open space preservation. Continued funding is dependent upon periodic statewide election ballot questions. In 2007 voters passed \$200 million for “Green Acres, Farmland, Blue Acres, and Historic Preservation Bond Act of 2007.” Then in 2009 voters approved the \$400 million for the “Green Acres, Water Supply and Floodplain Protection, and Farmland and Historic Preservation Bond Act of 2009.” In 2014 the Preserve New Jersey Act was passed. Voters approved to dedicate 71% of the 4% Corporate Business Tax for preservation until Fiscal Year 2019. For the Fiscal Year 2020 and thereafter the allocation will be increased to 78% of the 6% Corporate Business Tax. Over 1.2 million acres of New Jersey’s natural resources have been preserved through the programs that fund municipal and nonprofit organizations.

In recent years, the Green Acres Program has become one of the Township’s most important sources of funding for open space preservation. The Green Acres Program provides low interest loans and matching grants to municipalities and nonprofit organizations to acquire land for open space and recreation purposes. Two of Harding’s “partners” in open space preservation, the private nonprofit Harding Land Trust and the Great Swamp Watershed Association, are eligible for Green Acres funding and have utilized the program to acquire land for preservation in Harding. The Green Acres Planning Incentive Program provides grants and loans to municipalities that have enacted an open space tax and have adopted an open space and recreation plan consistent with Green Acres Standards. The grants and loans require a municipality match of 50%. The Tax Exemption Program provides exemption from local property taxes to eligible nonprofit organizations that own recreation or conservation land and permit public use of their private lands.

Green Acres funding was important in the Township’s acquisition of numerous open space parcels over the last 28 years. Since 1992, the Township has preserved several open space properties via fee simple purchase in addition to conservation easements on private property. The following chart details the properties that have utilized the Green Acres Program.

<b>Properties Preserved with Green Acres Funding</b>					
<b>Park Name</b>	<b>Block</b>	<b>Lot</b>	<b>Acres</b>	<b>Ownership</b>	<b>Year Acquired</b>
Margetts Field	8	9.01, 22 & 23	53.8	Municipal	1992
Rossell	35	14	4.1	Municipal	2000
Waterman Meadow	2	18	19.7	Municipal/ Nonprofit	2001
Gatehouse	23	1	12.2	Municipal/ Nonprofit	2003
Glen Alpin	34	1	9.5	Municipal/ Nonprofit	2004
Wilkerson	21	5.02	3.1	Private (easement)	2005
Anderson Woods	33	8	14.4	Municipal/ Nonprofit	2007
Eggert Property	27	3.01	7.4	Municipal	2008
von Zuben	7	4.05	2.9	Municipal/ Nonprofit	2009
Primrose Farm	46	23	15.9	Municipal	2012

Source: Harding Township 2013 ROSI. 2018 MODIV Tax Records. Acreage is calculated utilizing GIS, rounded to the nearest 1/10<sup>th</sup> acre.

## **MORRIS COUNTY PRESERVATION TRUST AND FARMLAND PRESERVATION**

In 1992, Morris County established the Morris County Open Space and Farmland Preservation Trust Fund (County Trust Fund). The Freeholders review the tax rate annually and may set the tax anywhere from \$0.00 to \$0.0525 per \$100 of property valuation. Harding has received \$15 million in grants under the program. The Fund is divided into the following categories:

- County Park Improvement Program
- Historic Preservation Program
- Morris County Agriculture Development Board
- Open Space Preservation program allocated as:
  - Municipal and/or qualified charitable conservancy projects
  - Flood Mitigation Program
  - Morris County Park Commission
  - Morris County M.U.A.
- Trail Construction Grant Program

The County Trust is the source of funding for the Morris County Farmland Preservation Program, which began in 1987. The Morris County Farmland Preservation Program is allocated 25% of the County Trust Fund exclusively for farmland preservation purposes. This program has been particularly important to Harding for farmland preservation. Although the Township has long since ceased to be a predominantly farming community, the continuation of the remaining

farms and farming-related activities is a preservation objective of this plan. Since 1995, fourteen parcels preserved in the Township have utilized funding from this source. There are four ways to preserve farmland under the county-administered program:

1. County Easement Purchase Program – A landowner voluntarily agrees to sell to the County Agricultural Development Board the development rights to their farm, and a permanent deed restriction is then placed on the land.
2. Fee Simple Purchase Program – Interested landowners sell their land in fee simple, relinquishing all rights to the land.
3. Direct Easement Program – Landowners sell the development rights of their farmland directly to the State Agricultural Development Committee.
4. Eight-Year Program – Landowners voluntarily restrict development on their land for a period of eight years. They receive no direct compensation but are eligible to receive grants for up to 50% of the cost of conservation projects.<sup>10</sup>

<b>Preserved Farmland in Harding Township</b>						
<b>Name</b>	<b>Location</b>	<b>Block</b>	<b>Lot</b>	<b>Acres</b>	<b>Preservation Type</b>	<b>Year Preserved</b>
Wightman	Mt. Kemble Ave	32	9	41.5	Ag easement	2002
		33.03	7, 9, 10			
Nagro/Lobel	Sand Spring Rd	25.02	10.01	19.7	Ag easement	2004
Lancor/McShane	Cherry Lane	8	2, 2.01	9.8	Dev rights/Ag easement	2009
Koven	Dickson's Mill Rd	8	3.01	15.5	Ag easement	2005
Thebault	Sand Spring Rd	25.02	10.02	32.5	Ag easement	2007
Scaff	Lee's Hill Rd	51	10	96.3	Ag easement	2007
Haeberle/Deer Meadow	Lee's Hill Rd	51	7	28.7	Ag easement	2007
Devine	Lee's Hill Rd	51	12	32.4	Ag easement	2007
<b>TOTAL:</b>				276.40		

Source: Morris County Farmland Preservation- Permanently Preserved Farms in Morris County as of July 2018

Other state and local policies also promote the preservation of farmlands. As part of the Township's participation in the Morris County Farmland Preservation Program, it enacted a "Right to Farm" ordinance in 2000 intended to protect farmers pursuing normal farming activities. In addition, state legislation provides for "farmland assessment" - reduced local real estate taxes on property that meets the minimum size criteria of five acres for a vacant lot and six acres for parcels containing a dwelling. There are also annual farm-related production

<sup>10</sup> Comprehensive Farmland Preservation Plan Element, Morris County Master Plan, Morris County Planning Board, March 20, 2003.

requirements. This program makes farming more economical and reduces financial pressures to subdivide. According to Morris County tax assessment data as of April 2020, over 1,780 acres of land are farmland assessed (i.e. listed as “Q Farm”) in Harding.<sup>11</sup> The Existing and Preserved Farms maps shows the location of the qualified farmland and preserved farmland in the Township.

## **OPEN SPACE PRESERVATION NEEDS AND RESOURCE ASSESSMENT**

Open Space preservation and the protection of resources are critical to maintaining the rural characteristics of the Township, as well as improving the quality of life for residents.

The Balance Land Use Standard, Geographic Service Area Standard for Recreational Facilities, and Facilities for Specific Populations will help the Township plan for the locations of future open space as well as the types of facilities that should be incorporated into future parks.

### **BALANCED LAND USE STANDARD**

In order to achieve consistency with state and regional open space planning, this needs analysis utilizes the Balanced Land Use Standard (BLUS) that was established by the New Jersey Green Acres 2018-2022 Statewide Comprehensive Outdoor Recreation Plan for open space and recreation areas. Per this standard, municipalities should strive to permanently preserve 3% of their total developable and developed land area as recreation and open space areas. Open Space refers to lands that could be developed for recreation purposes. The BLUS analysis for Harding Township was performed using GIS software.

Harding Township has approximately 4,700 acres of developed and developable land area. In order to satisfy the 3% goal established by the New Jersey Green Acres 2018-2022 Statewide Comprehensive Plan, the Township needs to preserve approximately 40 acres of land. To date, the Township has permanently preserved 6,200 acres, which results in approximately 133% of its total developed and developable land area for open space and recreation purposes, exceeding the goal by 130%. It should be noted that the preserved acreage includes Federal and County lands in addition to nonprofit and municipal lands.

### **GEOGRAPHIC SERVICE AREA STANDARD FOR RECREATIONAL FACILITIES**

The geographic service area standard is another framework to examine the adequacy of parkland provisions specifically for recreational facilities. This standard examines active and passive recreational opportunities. Preserved open space that does not contain improvements is excluded from the analysis.

Each recreational facility is assigned to a park category with a corresponding service area based upon the aggregate size of the park. These categories include Mini/Pocket Park, Neighborhood Park, Community Park, and Regional Park.

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<sup>11</sup> Qualified farmland were mapped utilizing GIS and their acreages were calculated accordingly. This data may include developed portions of the property that are assessed as 3A: Regular Farmland or residential.

- The Mini Park/Pocket Park addresses limited or isolated recreation needs. Benefits include the ability to provide small recreation facilities in neighborhoods with little vacant land. An associated challenge is that they can be spread out and therefore hard to maintain.
- Neighborhood Park (small) serves a residential neighborhood, providing active and passive recreation activities. The scope of possible activities is restricted by limited size.
- Neighborhood Park (traditional) serve a residential neighborhood, providing active and passive recreation activities.
- Community Parks serve the needs of an entire community with courts, fields, and other recreational facilities.
- Regional Parks serve the needs of a community and the region beyond the community.

The table below shows the park type, service area, and corresponding parks in Harding Township.

<b>National Recreation and Parks Associated Parkland Categories</b>			
<b>Park Type</b>	<b>Service Area</b>	<b>Typical Size</b>	<b>Harding Township Parks</b>
Mini Park / Pocket Park	¼ mile	< 1 acre	Memorial Park
Neighborhood Park (small)	½ mile unobstructed by barriers	1-5 acres	Von Zuben Youngs Road Property Wexford Lane/James Street Primrose Preserve Rossell
Neighborhood Park (traditional)	½ mile unobstructed by barriers	5-10 acres	Bailey's Mill Road Eggert Property Frelinghuysen Showgrounds Kemble Tract Glen Alpin Barret Field Municipal Campus Harding Township Elementary School

<b>National Recreation and Parks Associated Parkland Categories (cont.)</b>			
<b>Park Type</b>	<b>Service Area</b>	<b>Typical Size</b>	<b>Harding Township Parks</b>
Community Park	1 to 2 miles (1.5 acres is used in the GIS analysis shown on the map)	Typically 10-50 acres	Dear Property Scudder/Audubon Gatehouse Frelinghuysen Marsh Bayne Park Anderson Woods Frelinghuysen Fields Watermen Meadow NJ Conservation Foundation Koven field Girl Scout Camp
Regional Park	3 miles	Greater than 50 acres	Morristown National Park (Jockey Hollow) Great Swamp National Refuge Margetts Field Audubon Society Property Great Swamp Association Loantaka Brook Reservation Primrose Farm Lewis Morris Park

As shown on the Geographic Service Area Standard map, nearly the entirety of the Township has access to parks and open spaces when applying the NRPA standards to the existing parks and open spaces in Harding Township. The regional parks alone serve the entire Township and community. However, with the addition of the interstitial open spaces and community parks, Harding Township provides exemplary access of open space and recreation opportunities.

#### **FACILITIES FOR SPECIFIC POPULATIONS**

To conduct a comprehensive analysis of Harding's recreation needs, the existing and changing demographics in Harding Township are analyzed to predict future uses and users of open space. Park acquisition, development, and maintenance require stable funding mechanisms.



<b>Population by Age 2012 and 2017, Harding Township</b>						
	<b>2008 – 2012 (5 Year Estimates)</b>		<b>2013 – 2017 (5 Year Estimates)</b>		<b>Change</b>	
	<b>Number</b>	<b>Percentage</b>	<b>Number</b>	<b>Percentage</b>	<b>Number</b>	<b>Percentage</b>
Total Population	3,833	100%	3,887	100%	54	1.4%
Under 5 years	161	4.2%	162	4.2%	1	0.6%
5 to 14	636	16.6%	485	12.4%	-151	-23.7%
15 to 24	406	10.6%	367	9.4%	-39	-9.6%
25 to 34	129	3.4%	182	4.7%	53	41.1%
35 to 44	500	13%	460	11.8%	-40	-8.0%
45 to 54	588	15.3%	589	15.2%	1	0.2%
55 to 64	569	14.8%	662	17%	93	16.3%
65 and over	844	22.1%	980	25.3%	136	16.1%
Median Age	46.1		50.7		-	

While the population of Harding has remained steady, the demographics have shifted since 2012. The median age of residents has increased from 46.1 to 50.7 years between 2012 and 2017. The 25- to 34-year-old cohort is the fastest growing age group in the Township, but they remain one of the smallest. The next fastest growing cohorts are 55 to 64 and 65 and over. These two groups are also the largest cohorts in the Township, representing 17% and 25.3% of the population respectively. The population of children and young adults has declined; the 5 to 14 cohort has decreased by 23.7% and the 15 to 24 cohort has decreased by 9.6%.

The data indicates that fewer people are starting families in Harding. The aging population of the Township, combined with the decreasing child population, will play a role in determining the type of open space facilities that are most desirable.

When planning for a community's recreational spaces it is important to consider accessibility for all users. 25.3% of Harding is age 65 or older, and the next largest group is age 55 to 64 which represents 17% of the population. The data demonstrates the need for recreation and open space facilities to be accessible to this population.

Creating spaces that are accessible to the 55 and older population does not limit these open space areas. By addressing accessibility for these cohorts, the spaces also become more accessible for small children, people with strollers, and people with disabilities. Parks and open spaces should create comfortable and accessible environments, where people feel a sense of attachment to the community and can engage in social and recreational activities.

Parks and open spaces have been shown to provide health benefits, including providing places for exercise and reducing stress levels, which in turn improves cognitive function and performance. Facilities and amenities that are accessible to all age categories while maintaining the rural character of Harding include:

- Parks that incorporate natural elements into the design
- Comfortable benches with backrests and arm rests that are shaped to support the back and waist
- Sufficient space around benches for those with walkers, wheelchairs, or strollers
- Picnic tables designed for the comfort of seniors
- Location of rest areas under trees, canopies or gazebos to provide shade
- Walking paths marked with distance travelled

### **PLANNING FRAMEWORK**

Open space preservation continues to be central to achieving the overall goals of the Master Plan, preserving the Township's traditional rural/historic character and protecting its high quality of natural resources particularly its water resources. Land use and environmental regulations should be complemented by an active open space acquisition plan.

The Township is designated by the State Planning Commission as Planning Area 5 *Environmentally Sensitive* and has been included in the *Highlands Planning Area*. It is also entirely within the watershed of the Great Swamp National Wildlife Refuge. State planning policies emphasize that open space preservation should be an important part of land use policies at all levels of government affecting these areas. In 2004, the Conservation Plan and Land Use Plan elements were amended to recommend that Township land use policies be changed if Harding's long-standing overall planning goals were to be achieved. As a result, the Township established a lower density residential zoning district, the Rural Residential Zone, encompassing a majority of the privately owned land in the Township. The 2004 Land Use Plan also emphasizes that the new lower density zoning needs to be complemented with active open space preservation as key to achieving the Master Plan's goals.

Harding's land use regulations by themselves cannot achieve the Master Plan's goals. A complementary program of active open space preservation is also needed in order to preserve parcels that are strategically important to the Township's character and high quality natural resources. The goals of this Plan are consistent with the goals and objectives of the 2004 Conservation Plan and Land Use Plan, the overall Master Plan goals, and the 2020 Master Plan Reexamination Report. There are two general categories of land, still abundant in Harding, that need to be preserved to achieve the Township's planning objectives consistent with its designation within PA-5 and the Highland Regional Master Plan. They are highly visible areas important to the Township's historic/rural character and environmentally sensitive areas, as more specifically described below.

### **ASSESSMENT OF LANDS IMPORTANT TO THE PRESERVATION OF THE TOWNSHIP'S CHARACTER**

The land areas especially important to preserving Harding's traditional rural character are the very low-density areas that give the impression of the rural countryside and of traditional

farmsteads visible from the public roads. Areas outside of the villages but otherwise interstitially located throughout the developed community area of the Township are particularly important to this goal.

### **ASSESSMENT OF LANDS IMPORTANT TO ENVIRONMENTAL PROTECTION**

The Township contains abundant areas of special environmental importance. They include Category 1 streams and important open waters such as Primrose Brook, Silver Brook, Great Brook, Mt. Kemble Lake and Silver Lake. They also include the Great Swamp and adjacent lands important to its role as a wildlife refuge. Strict state regulations, particularly regarding stormwater management and the 300-foot buffer to Category 1 streams, are having a dramatic effect towards protecting these environmental resources. State and Federal regulations governing wetlands, vernal ponds, and endangered species habitat can also help to preserve land that would otherwise be developed. However, open space acquisition should be complementary to regulatory efforts to protect the most vulnerable areas.

### **OPEN SPACE PRESERVATION PRIORITIES**

The overall goals and objectives of this Master Plan should be considered in evaluating land contemplated for preservation. The Township and HOST have developed open space criteria used to evaluate potential sites for acquisition, preservation, and conservation. The criteria include the following:

- Viewscape, visibility to public and gateway
- Linkages to other preserved properties
- Water resource protection value
- Other environmental resource protection
- Likelihood of development
- Public access, equestrian trails, hiking
- Funding options and availability of funds

To achieve the plan's goals, the following areas should be given priority, although they are not in any rank order because each is important to achieving Harding's Master Plan goals.

### **PROTECTION OF WATER RESOURCES**

There are 44 miles of streams and numerous ponds and lakes throughout the Township, almost all of which drain to the Great Swamp National Wildlife Refuge. In addition, almost all Harding residents rely upon individual private wells for potable water supplies; thus the protection of groundwater resources is an imperative for the Township. The Planning Board should continue its practice of requiring conservation easements that support the protection of wetlands, stream corridors and open waters. The Township should also consider purchasing properties and

easements with the goal of providing public access to inland waterways and protection of water resources.

### ***Prime Groundwater Recharge Areas***

The Township has approximately 3,170 acres of prime groundwater recharge areas, which represents approximately 24% of the entire Township. The Prime Groundwater Recharge Areas map shows these locations within the Township. These areas provide 40% or more of the total recharge for each HUC 14 sub watershed. The method used to determine these areas is known as the GSR-32, which was developed by the New Jersey Geological Survey. The GSR-32 method uses precipitation, surface runoff, evapotranspiration, and soil moisture deficit information to estimate recharge rates.

The recharge areas are located within the northern half of the Township, predominantly within the Morristown National Historic Park (Jockey Hollow) and are interspersed along privately-owned tracts. These areas are important to maintain, considering nearly all of Harding's residents rely upon private wells for water.

### **GREENWAYS AND WILDLIFE HABITAT**

This Open Space Plan continues the legacy of the Greenways Plan adopted by the Environmental Commission and Planning Board in the early 1990s. Priority should be given to linking open space areas, thereby enhancing the usability of those areas for passive and active recreational purposes. In addition, linked areas are more beneficial to natural ecological systems, wildlife habitat, and more effective in retaining the Township's rural character.

### ***Landscape Project***

Due to Harding Township's rural characteristics and proactive open space preservation efforts, the Township maintains critical habitat areas. NJDEP began mapping critical habitat areas in the early 2000's as a tool for municipalities, counties, and environmental groups to identify, locate and preserve critical habitat areas. The dataset is based upon NJDEP's Land Use Land Cover, and integrates identified species of concern, threatened species, and endangered species at both the state and federal levels. The habitats where these species are found are ranked accordingly.

According to the Landscape Project, Harding Township has 10,961.5 acres within its municipal borders that are identified as critical habitat areas. As shown on the Landscape Project map, over 80% of the Township falls within one of these habitat classifications. The following chart breaks down the acreage of each of these habitat areas within the Township.

<b>Habitat Rank in Harding Township</b>		
<b>Habitat Rank</b>	<b>Acres</b>	<b>% of Township</b>
Rank 1- Habitat of Specific Requirements	380.2	2.9%
Rank 2- Special Concern	1,021.9	7.8%
Rank 3- State Threatened	48.3	0.4%
Rank 4- State Endangered	42.3	0.3%
Rank 5- Federal Listed	9,468.8	71.9%
<b>Total</b>	<b>10,961.5</b>	<b>83.3%</b>
<b>Total Township Area</b>	<b>13,162.0</b>	<b>100.0%</b>

Sources: NJDEP Landscape Project v3.3, acreages calculated in GIS

**Rank 1** is assigned to species-specific habitat patches that meet habitat-specific suitability requirements such as minimum size or core area criteria for endangered, threatened or special concern wildlife species, but that do not intersect with any confirmed occurrences of such species. The Rank 1 designation is used for planning purposes, such as targeting areas for future wildlife surveys. Harding Township has approximately 380 acres of Rank 1 habitat within its borders and is located throughout the center of the Township.

**Rank 2** is assigned to species-specific habitat patches containing one or more occurrences of species considered to be species of special concern. Species of special concern are nongame wildlife species that warrants special attention by the DEP because of inherent vulnerability to environmental deterioration or habitat modification that would result in it becoming threatened if conditions surrounding the species begin or continue to deteriorate.

The Township has over 1,000 acres of Rank 2 Special Concern Habitat. Large clusters of this habitat lie north and south of Route 130 and Route 280 and are also located adjacent to the Loantaka Brook Reservation. Rank 2 habitat is also found scattered through the Morristown National Historical Park (Jockey Hollow).

Species that have been seen within the Rank 2 habitat in Harding include the Brown Thrasher (*Toxostoma rufum*), the Great Blue Heron (*Ardea herodias*), the Wood Thrush (*Hylocichla mustelina*), all of which belong to the Aves class, in addition to and the Tiger Spiketail (*Cordulegaster erronea*), which belongs to the Insecta class.

**Rank 3** is assigned to species-specific patches containing one or more occurrences of State threatened species. Threatened species are generally defined as species that may become endangered if conditions surrounding them begin or continue to deteriorate. Harding Township has minimal Rank 3 habitat, located mostly within the Great Swamp Wildlife Refuge.

Species that have been seen within the Rank 3 habitat in Harding include the Red-headed Woodpecker (*Melanerpes erythrocephalus*), the Bobolink (*Dolichonyx oryzivorus*), the American Kestrel (*Falco sparverius*), which belong to the Aves class and the Wood Turtle (*Glyptemys insculpta*).

**Rank 4** is assigned to species-specific habitat patches with one or more occurrences of State endangered species.

Similar to the Rank 3 habitat, Harding Township has minimal state endangered species habitat. Species which have been observed within the Rank 4 habitat in the Township include the American Bittern (*Botaurus lentiginosus*), the Bald Eagle (*Haliaeetus leucocephalus*), the Bobolink (*Dolichonyx oryzivorus*), and the Blue-spotted salamander (*Ambystoma laterale*).

**Rank 5** is assigned to species-specific habitat patches containing one or more occurrences of wildlife listed as endangered and threatened pursuant to the Federal Endangered Species Act of 1973.

As mentioned above, the Township has over 9,400 acres of Rank 5 Federally Endangered and Threatened species habitat. This habitat category makes up the most habitat in Harding Township, likely due to the proactive policies and regulations that the Township has been enacting over the past several decades, in addition to preserved contiguous lands areas.

Species that have been observed within the Rank 5 habitat in Harding include the American Bittern (*Botaurus lentiginosus*), the Barred Owl (*Strix varia*), the Great Blue Heron (*Ardea Herodias*), the Canada Warbler (*Wilsonia canadensis*), and Veery (*Catharus fuscescens*), all of which belong to the Aves class. The Northern Myotis (*Myotis septentrionalis*) and Indiana Bat (*Myotis sodalis*), both of which are a Federally Endangered mammals, have also been located within Rank 5 habitat. Additionally, the Blue-spotted salamander (*Ambystoma laterale*) a State Endangered amphibian, is also present within this habitat.

### **RURAL STREETSCAPES**

The overriding goal of the Master Plan, overwhelmingly supported by Harding’s residents, is to preserve Harding’s traditional rural development pattern. Its promotion should be a primary consideration in open space acquisition. In practical terms this means undeveloped properties, including undeveloped portions of large developed properties, farmsteads and farmland that are adjacent to major Township roads should be given a high priority for open space preservation. The Margetts property, with extensive frontage along Blue Mill Road, is an example of a visually prominent open space parcel that contributes importantly to preserving the Township’s traditional character.

### **VIEWSHEDS AND GATEWAYS**

Harding is endowed with many relatively open areas providing long distance views that prominently contribute to its traditional character. Ridgelines may also provide prominent scenic vistas. “Gateways” or areas through which people first travel when entering Harding are important first impressions that deserve special consideration. The preservation of these views should be given a high priority. Viewshed easements should be considered as a potentially more economical alternative to fee simple acquisition.

## **HISTORIC AREAS**

Harding also contains many historic resources with special significance as described in the Historic Preservation Plan element. Their preservation should be given priority, especially when they are part of important viewsheds. However, this priority must be balanced with potential costs associated with the adaptive reuse of historic structures and their continued maintenance.

## **BRIDLE TRAILS**

Where bridle trails exist and are identified as part of the development review process, they should be protected through easements. When it is not possible to obtain bridle trail easements, a licensing agreement should be obtained.

## **OPEN SPACE PLAN IMPLEMENTATION**

### **OPEN SPACE TRUST COMMITTEE (“HOST”)**

Harding entered a new era in open space preservation with the mandate of Township voters and the establishment of the Open Space Trust Fund. Early in 1997 the Township Committee established the Open Space Trust Committee composed of nine members including the Mayor, Township officials and residents. HOST is empowered to establish criteria for property acquisition and to make recommendations to the Township Committee as to which properties may be suitable for acquisition, easements or the purchase of development rights.

HOST works proactively to obtain additional funding to augment the use of Township Trust funds by partnering with other public, as well as local and national nonprofit conservation organizations. The leveraging of resources to accomplish common goals has a multiplying effect on the Township’s efforts to preserve open space. The Committee also undertakes baseline documentation and monitoring of open space properties to ensure that the Township in a good steward of its open space lands.

In 1999 HOST sought input from Township boards, organizations and officials in establishing criteria for land acquisition in Harding. Recommendations were received from many interested parties including the Planning Board, Environmental Commission and the Shade Tree Advisory Committee. As a result, HOST developed the following criteria, consistent with this Master Plan, to serve as a guide in setting priorities for open space acquisition.

- Land that protects enhances or restores ecosystems, aquifers, stream corridors, or other water resources.
- Land that preserves Harding’s rural heritage such as scenic vistas or landscapes and Bridle trails.
- Land that complements existing open space.
- Land that serves as valuable wildlife habitat including forests and meadows.
- Land that establishes or contributes to a system of greenways.

- Land that should be acquired because development would have a substantial deleterious impact on the character of the Township.
- Land that supports the goals of this Master Plan.

Funds set aside through the open space tax may be used for direct acquisition or to help finance bond issues for land acquisition.

In 2019, the Township Committee passed Ordinance #12-2019 that permits funds from the Open Space Trust Fund be used to prepare management plans for the properties acquired by the Township. Several management plans have been prepared for properties including the Gatehouse, Dear Property, Kemble Tract, von Zuben, and Waterman Meadow. It is recommended that management plans be developed for all municipally owned and majority controlled open spaces and that these Plans be updated as appropriate.

## **PARTNERSHIPS AND FUNDING FOR OPEN SPACE PRESERVATION**

Historically, the federal government was the largest source of funds for open space preservation in Harding Township; that source is now very constrained, or nonexistent. Fortunately, however, other sources for local open space funding have become increasingly available. In particular, the Green Acres Program, County Trust Fund, Harding Open Space Trust Fund, and Harding Land Trust have become increasingly important to the Township's efforts to preserve open space. HOST has been active in forging partnerships with these funding sources.

Since the costs of fee-simple purchases of land can be prohibitive and take time and effort to arrange, alternative means of open space preservation will continue to be important in achieving this Plan's objectives. Alternatives include obtaining conservation easements, purchasing of development rights, and facilitating open space acquisition undertaken by private/third-party nonprofit groups when the goals of this plan will be advanced.

Landowners are often willing to give bargain sales or donations of land, conservation easements, or life estates to nonprofits and governments, and in so doing can reap income, inheritance, and capital gains tax benefits. Such contributions can satisfy the Township's matching requirement when using county or state funding. Landowner contributions can also be used by nonprofits working in partnership with the Township, which need to match public dollars at a 1:1 ratio. The Township should continue to strengthen relationships with residents and partner with groups and organizations that share its open space preservation goals.

## **OPEN SPACE MAINTENANCE AND STEWARDSHIP**

The cost of open space preservation does not end with the acquisition of land. Land ownership carries with it maintenance and stewardship responsibilities. The burden of maintenance can vary greatly with each parcel and its intended use. Preserved natural woodlands may require little maintenance; developed properties are typically high maintenance. The extent and cost of continued maintenance should be carefully considered as an important part of future open space acquisition.



Most open space areas in Harding are natural preserved lands requiring relatively little maintenance. However, good stewardship requires that they be monitored and, as such, the Township has established a regular monitoring program for land acquired through dedicated tax funds. The monitoring of conservation easements is also important to good stewardship. In 2002 the Harding Township Environmental Commission prepared a *Survey, Inventory and Monitoring Plan for Conservation Easements in Harding Township*. The Commission recorded 86 easements held by Harding Township at that time for various purposes, including conservation (no disturbance of land or vegetation or steep slope protection), scenic views or preservation of bridle trails. HOST has initiated and will continue to fund stewardship of appropriate resources.

Township staff have historically maintained a comprehensive database of open space, including easements, as key to stewardship of all of these important resources. It is recommended the database of easements be updated to accurately reflect all easements that are held by the municipality or other agency. Many of these easements are reflected on the Township's Tax Maps. It is recommended that the Tax Maps and the easement database be reviewed to confirm all easements are accurately reflected within the Township's GIS database.

## **OPEN SPACE ACTION PLAN**

Township-supported open space acquisition should be guided by a strategic plan developed by HOST advising the Township Committee about potential acquisition based upon priorities that promote Harding's overall planning goals. The ability to obtain supporting funding from other sources, Green Acres, Morris County's Open Space Fund or the Harding Land Trust, should be an important part of the Township's consideration. The strategic plan should have a long-term outlook to avoid being reactive when land is proposed for development. Increasingly, state requirements restricting development on environmentally sensitive lands, particularly adjacent to wetlands and streams, should be considered when evaluating areas that are essentially already barred from development.

The following list includes the Goals of this Open Space and Recreation Plan, as listed previously in the Plan, along with objectives and recommendations pertaining to each goal:

**Goal #1: Preserve open space areas that contribute to the preservation of water resources, scenic vistas, streetscapes or landscapes, and/or that contain historic features or qualities of importance to the traditional rural historic character of the Township.**

*Proposed Objectives/Recommendations:*

1. Continue to acquire open space properties.
2. Recognizing that acquisitions may be opportunistic resulting from changing circumstances of the owner (death, taxes, or divisions of property).

3. Preserve environmentally constrained private land areas. Utilize conservation easements where appropriate.
4. Maintain the Township's rural roads and bridges to reduce the impact of traffic on the existing community.

**Goal #2: Preserve open space important to the protection of Harding's high-quality natural resources, the Great Swamp National Wildlife Refuge and Morristown National Historical Park. Particular emphasis should be placed upon areas not otherwise protected by State regulations such as forests and meadows that provide valuable wildlife habitat.**

*Proposed Objectives/Recommendations:*

1. Preserve environmentally constrained/unique habitats. Utilize conservation easements where appropriate.
2. Preserve wooded/forested areas with tree conservation easements where appropriate.
3. Utilize NJDEP Landscape Project data to preserve land areas that provide habitat to threatened and endangered species.
4. Develop a comprehensive Flora study of the Township to determine appropriate native plants and encourage native plants throughout the Township.

**Goal #3: Preserve open space to provide for active and passive recreational needs including linkage between open space areas and greenways and maintaining the integrity of the system of bridle trails.**

*Proposed Objectives/Recommendations:*

1. Acquire properties and easements that will serve as links between existing open spaces.
2. Explore pedestrian linkages between open space, parks, and municipal facilities.
3. Review each park's facilities to determine whether additional trails or amenities are appropriate.
4. Increase signage related to horse crossings/crosswalks to raise awareness to vehicle drivers.
5. Review active recreational facilities to determine whether additional sports fields are required within the Township for recreational programs.
6. Prioritize areas for preservation that serve as "connections" between existing parks.
7. Install signs for all parks, including trail entrances and distance markers on trails accessible to the public, and consider installing interpretive signs within parks, where appropriate.

**Goal #4: Promote the preservation of farms and farming in the Township.**

*Proposed Objectives/Recommendations:*

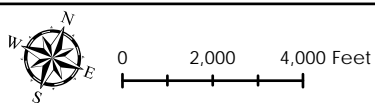
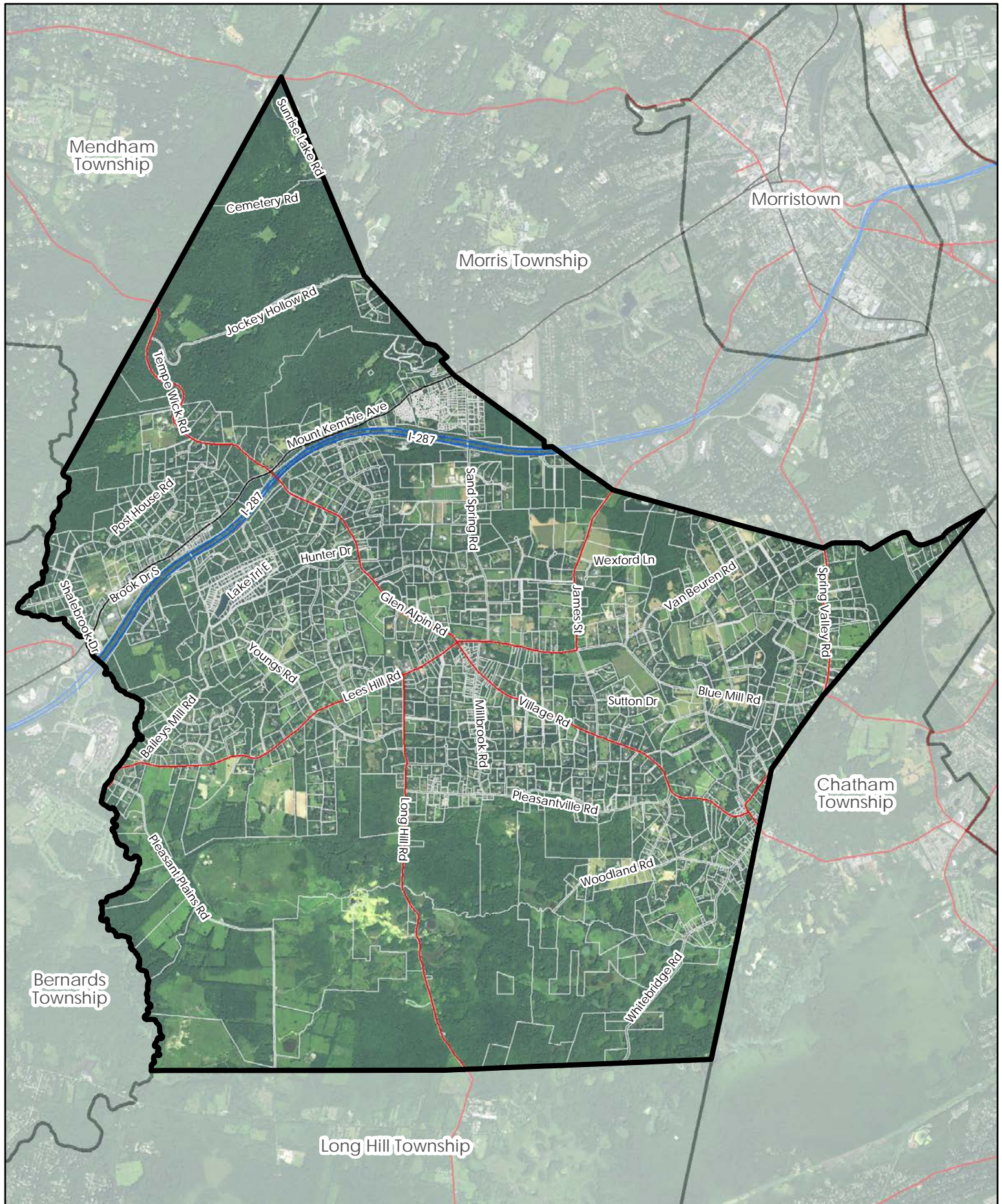
1. Continue participation in the County and SADC preservation program.
2. Encourage farming activities within Harding that do not negatively affect the rural characteristics of the Township.
3. Encourage smaller hobby farming operations within the Township, including bee keeping.
4. Explore the possibility for Farm-to-Table programs between farming operations and restaurants in the Township.
5. Create a community garden within the Township.

**Goal #5: Provide for the stewardship of publicly owned land and promote the maintenance of privately preserved areas.**

*Proposed Objectives/Recommendations:*

1. Develop management plans for Township majority-owned and controlled properties.
2. Continue to educate and encourage landowners to maintain privately preserved areas with workshops, speakers, and events. Outreach may include seminars and workshops featuring professionals and experts discussing best management practices for landscaping, removal of invasive species, and information regarding native species within Harding and the surrounding area.
3. Install trail markers indicating start of trails and distances along trails, parking signs, equestrian/bridle trail markers and wayfinding signs in the Township to indicate where parks are located.
4. Make parking available where appropriate.

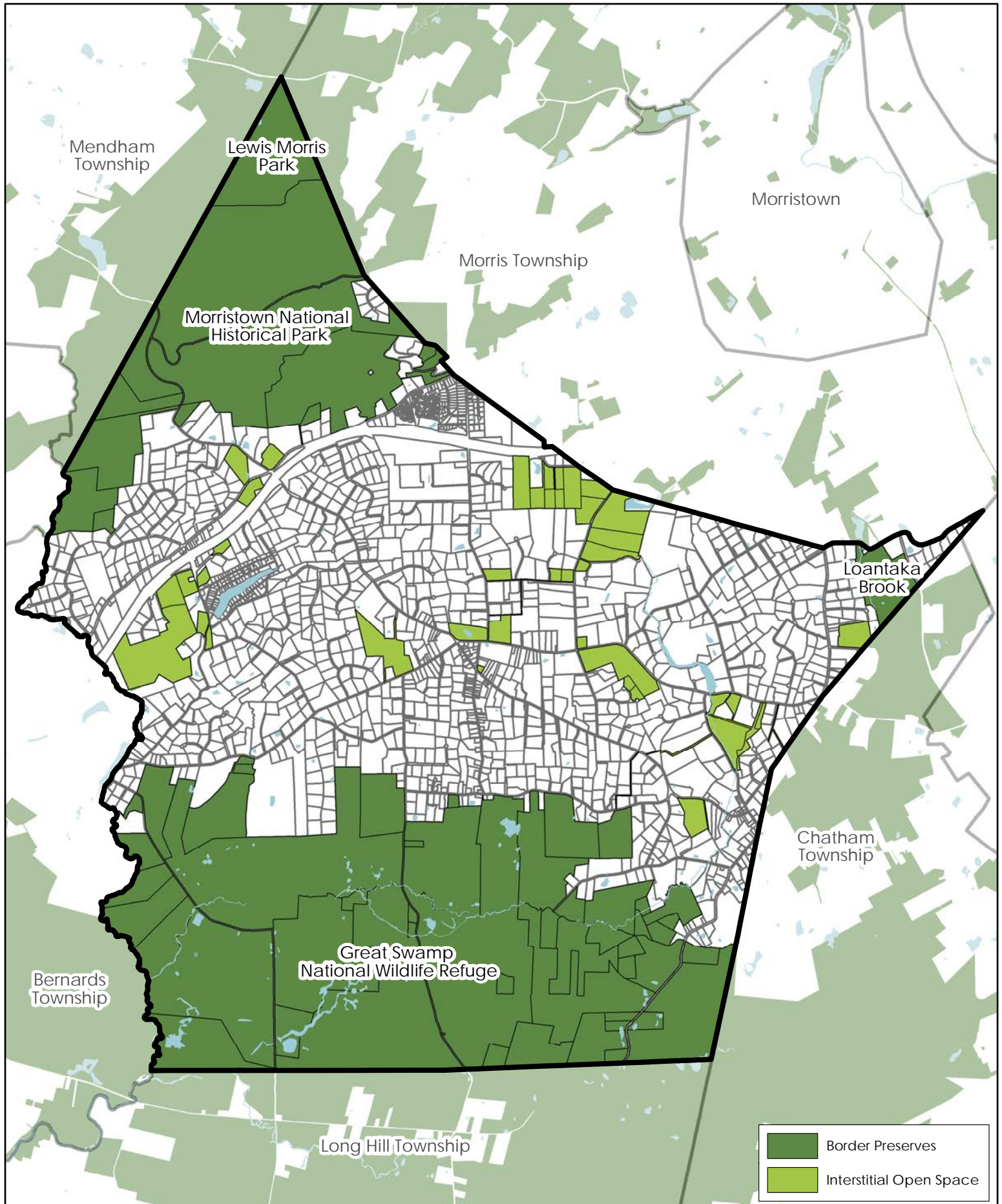




Source: NJGIS, NJGIN, NJDEP, NJDOT

Aerial  
Harding Township, Morris County, NJ





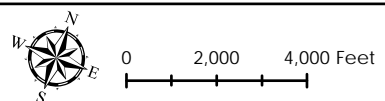
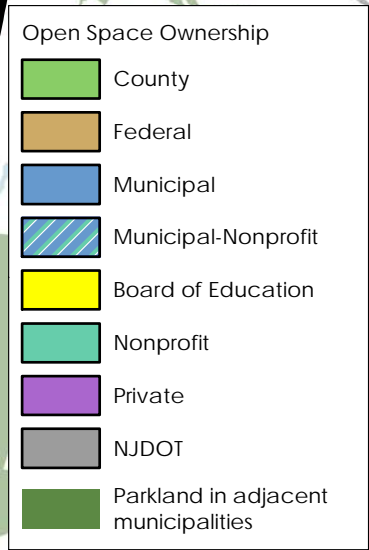
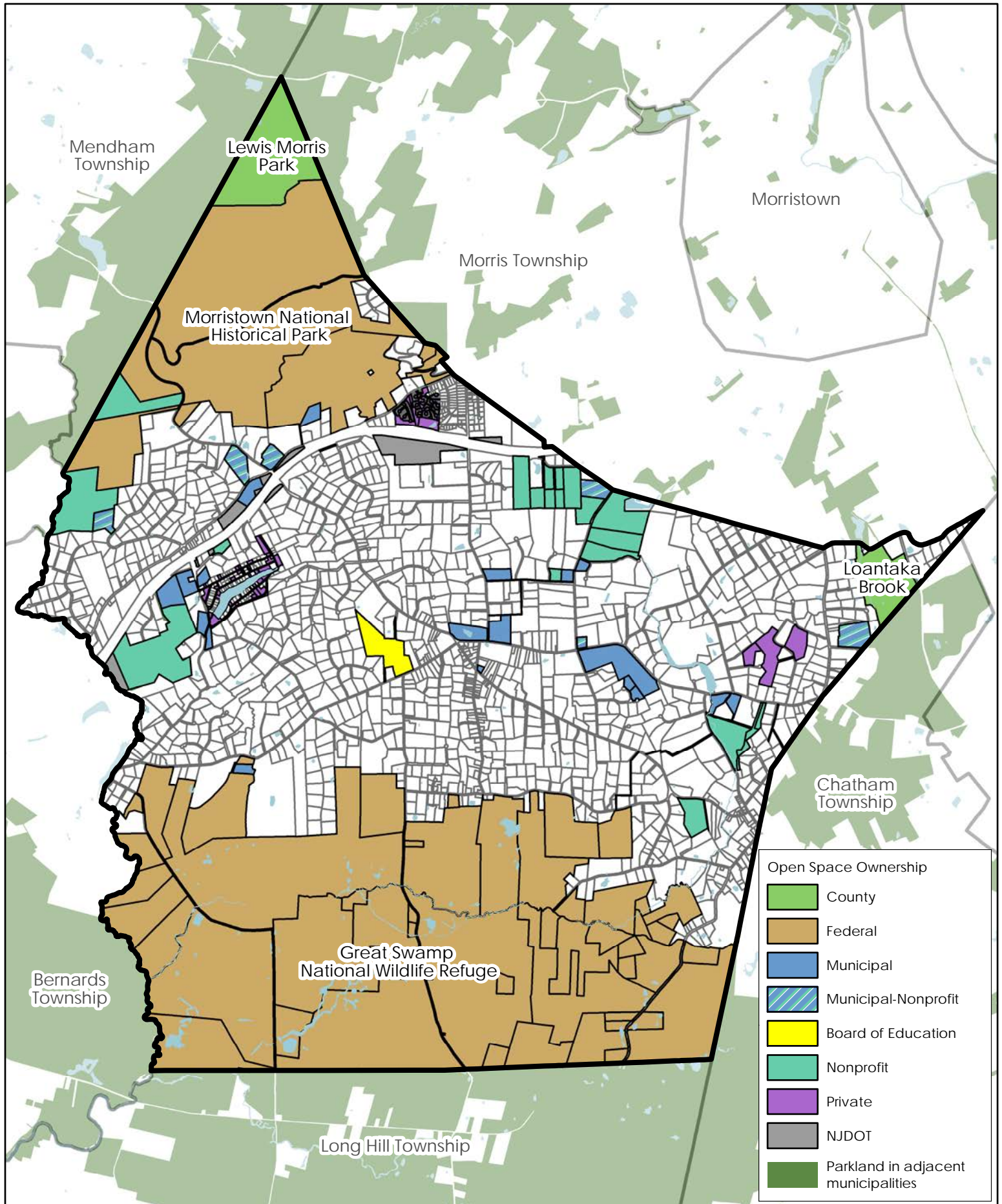
0 2,000 4,000 Feet

Source: NJGIS, NJGIN, NJDEP, NJDOT

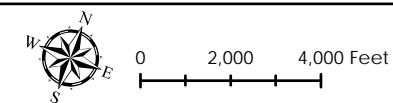
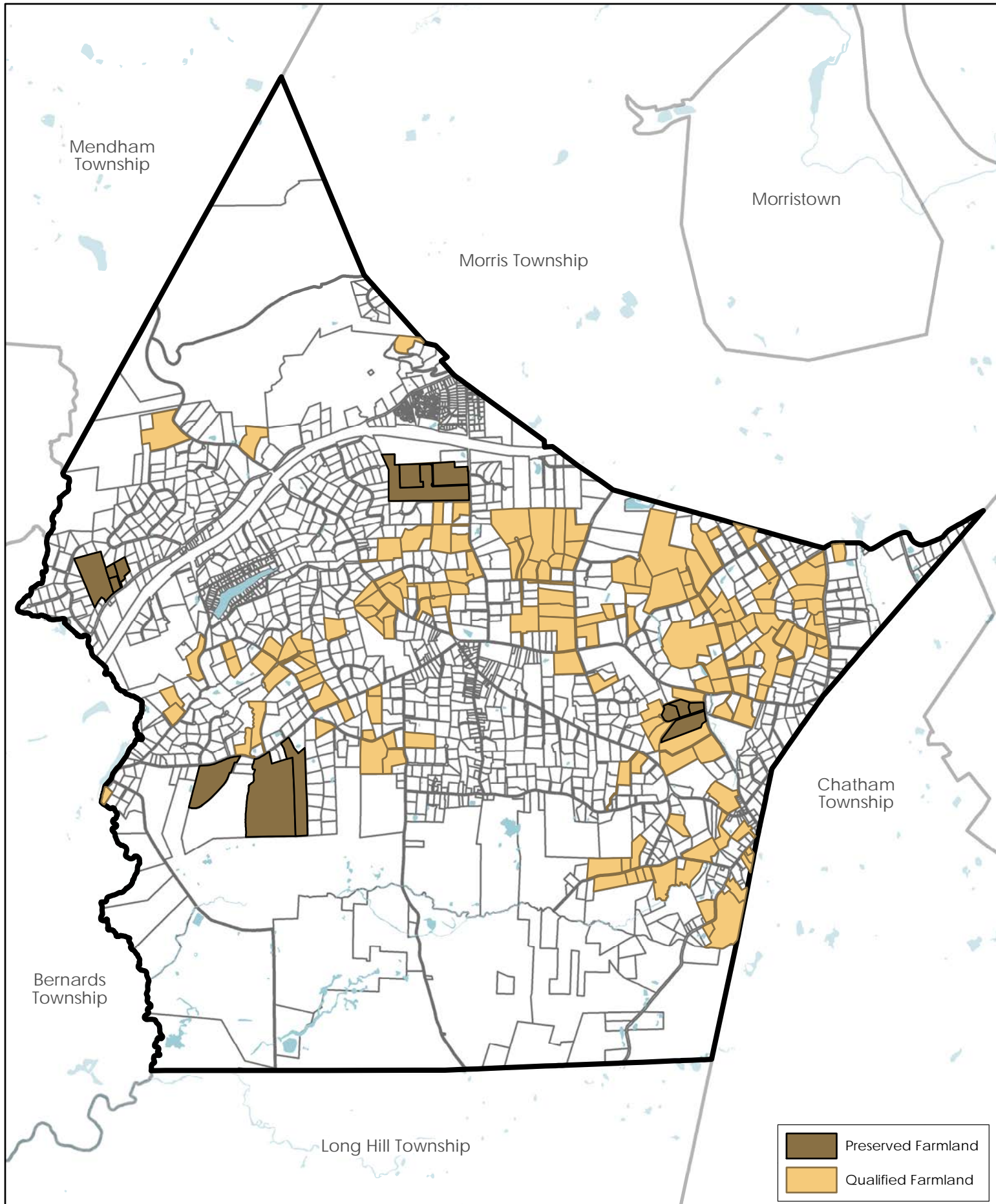
## Open Space - Overview

Harding Township, Morris County, NJ





# Open Space Ownership Harding Township, Morris County, NJ

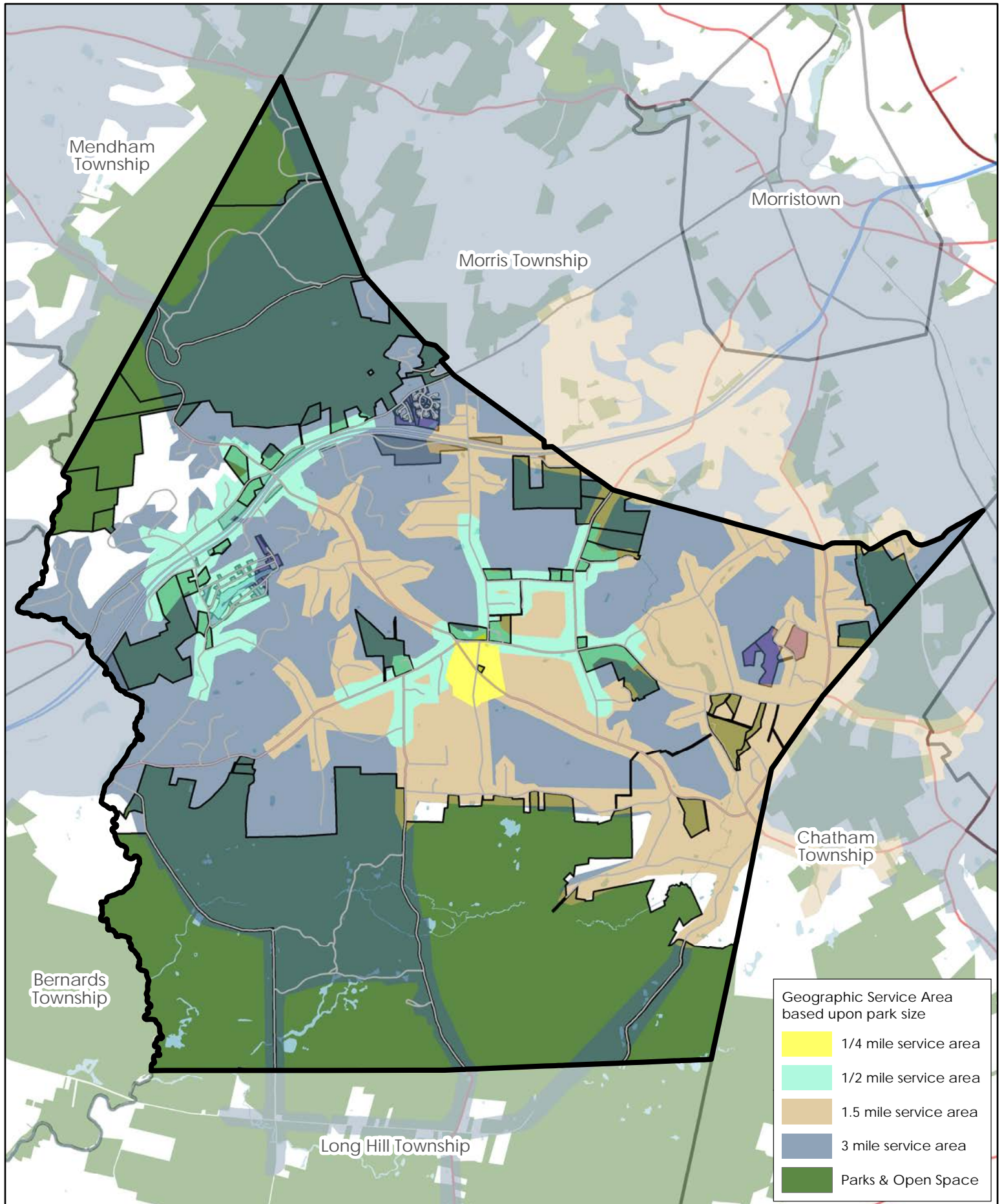


Source: NJGIS, NJGIN, NJDEP, NJDOT

# Existing and Preserved Farms

Harding Township, Morris County, NJ





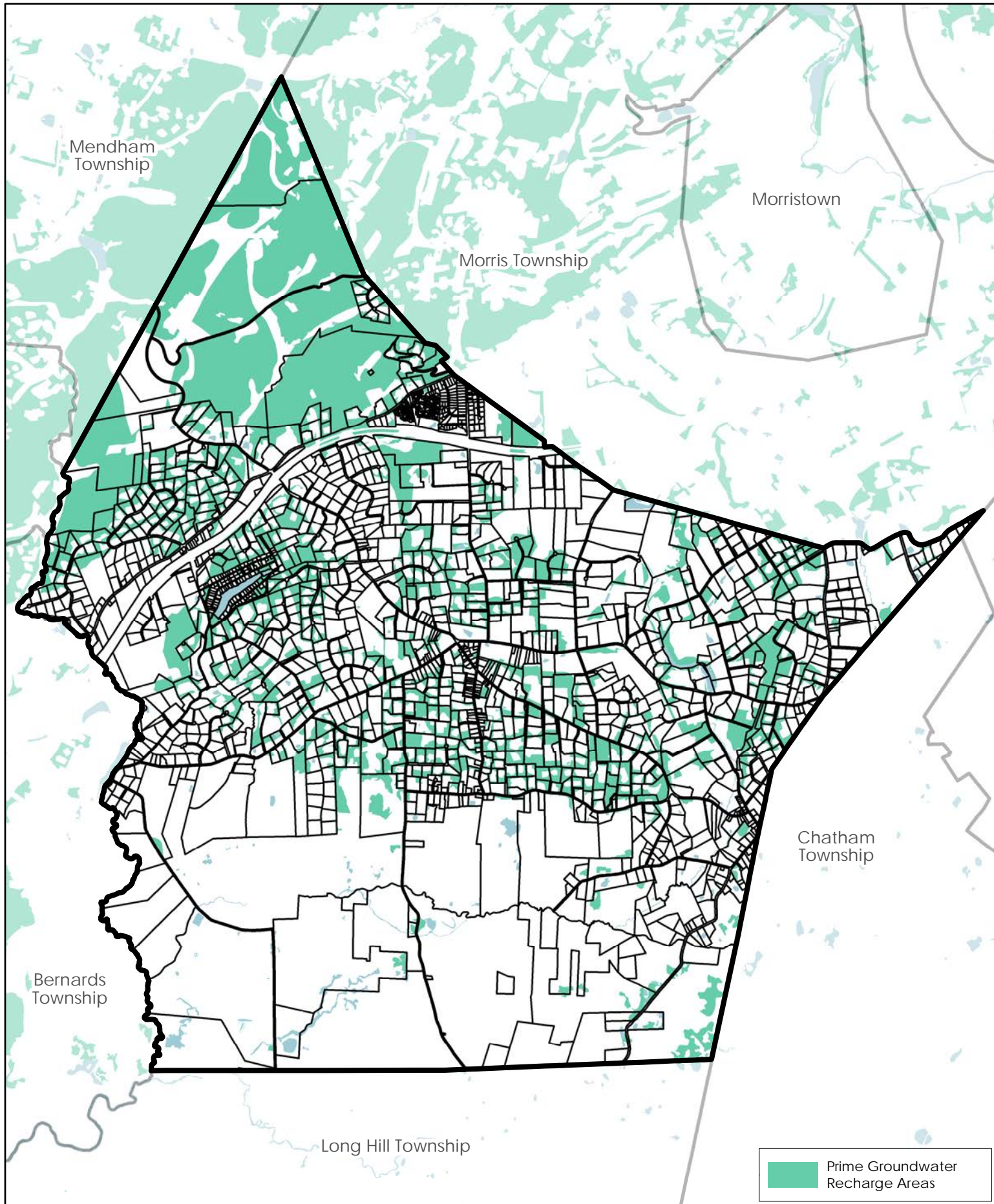
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## Geographic Service Area

Harding Township, Morris County, NJ

Source: NJGIS, NJGIN, NJDEP, NJDOT





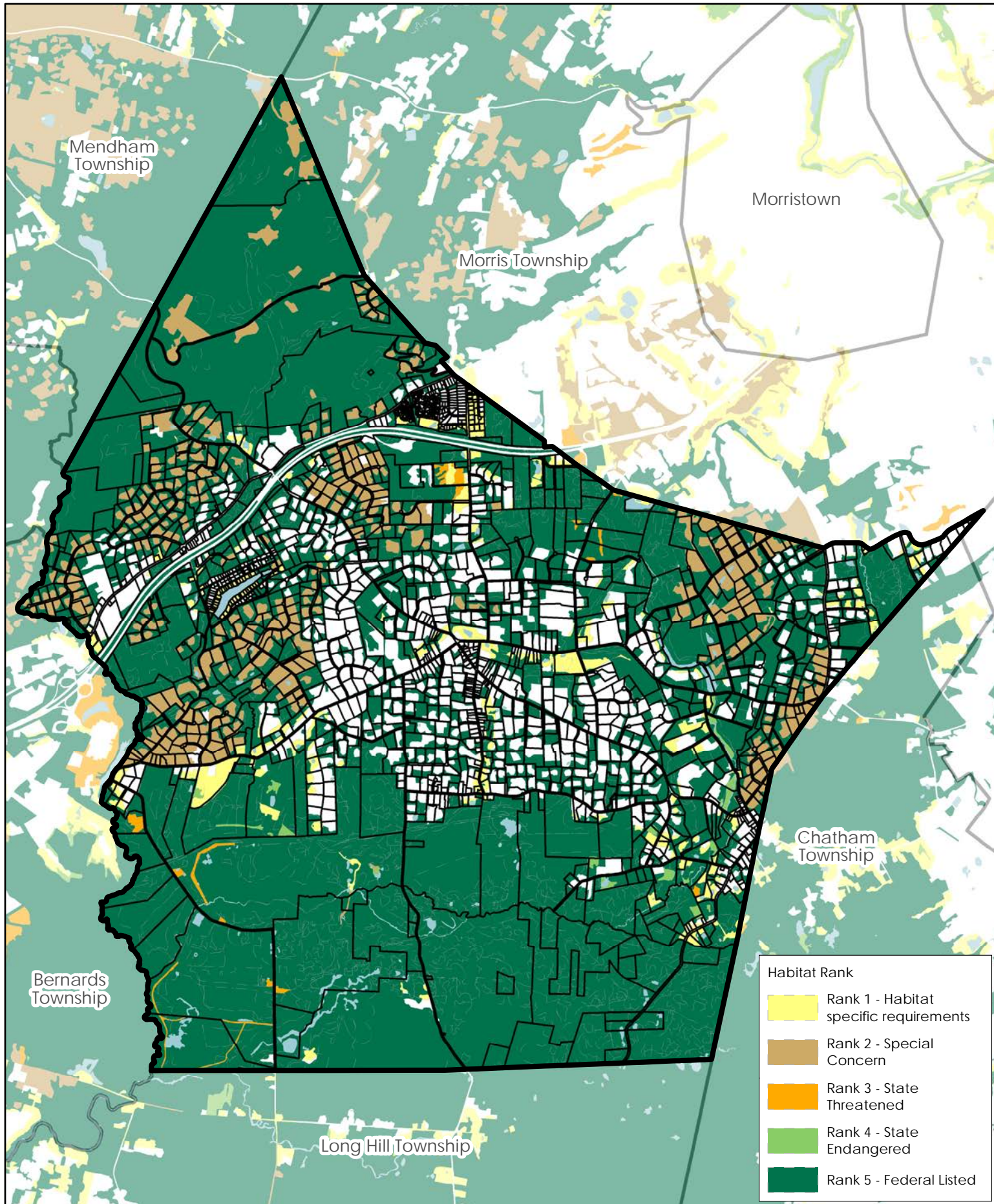
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# Prime Groundwater Recharge Areas

Harding Township, Morris County, NJ

Source: NJGIS, NJGIN, NJDEP, NJDOT





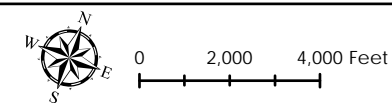
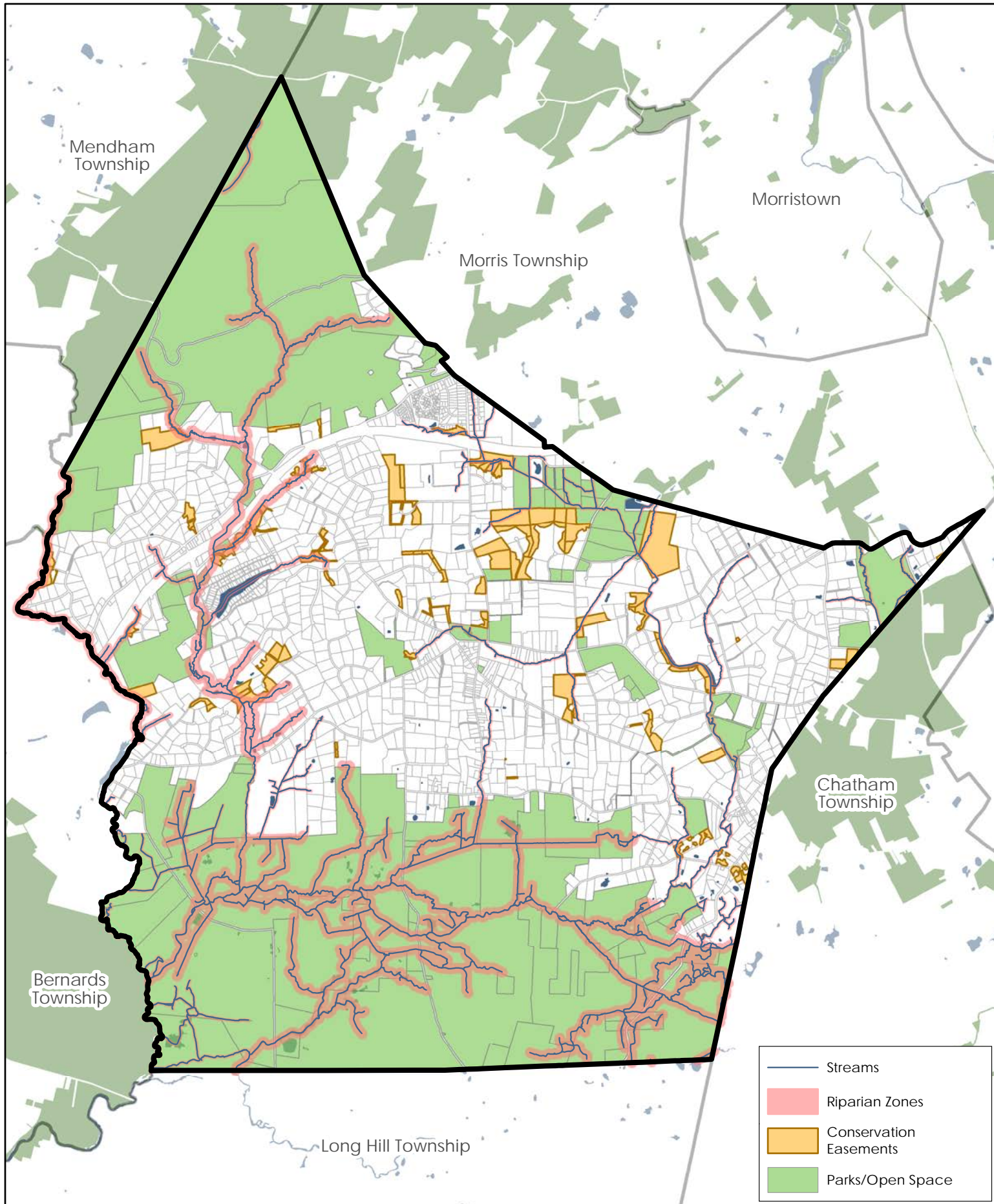
0 2,000 4,000 Feet

Source: NJOGIS, NJGIN, NJDEP, NJDOT

Landscape Project  
Harding Township, Morris County, NJ

**HGA**  
HEYER, GRUEL & ASSOCIATES  
January 2021



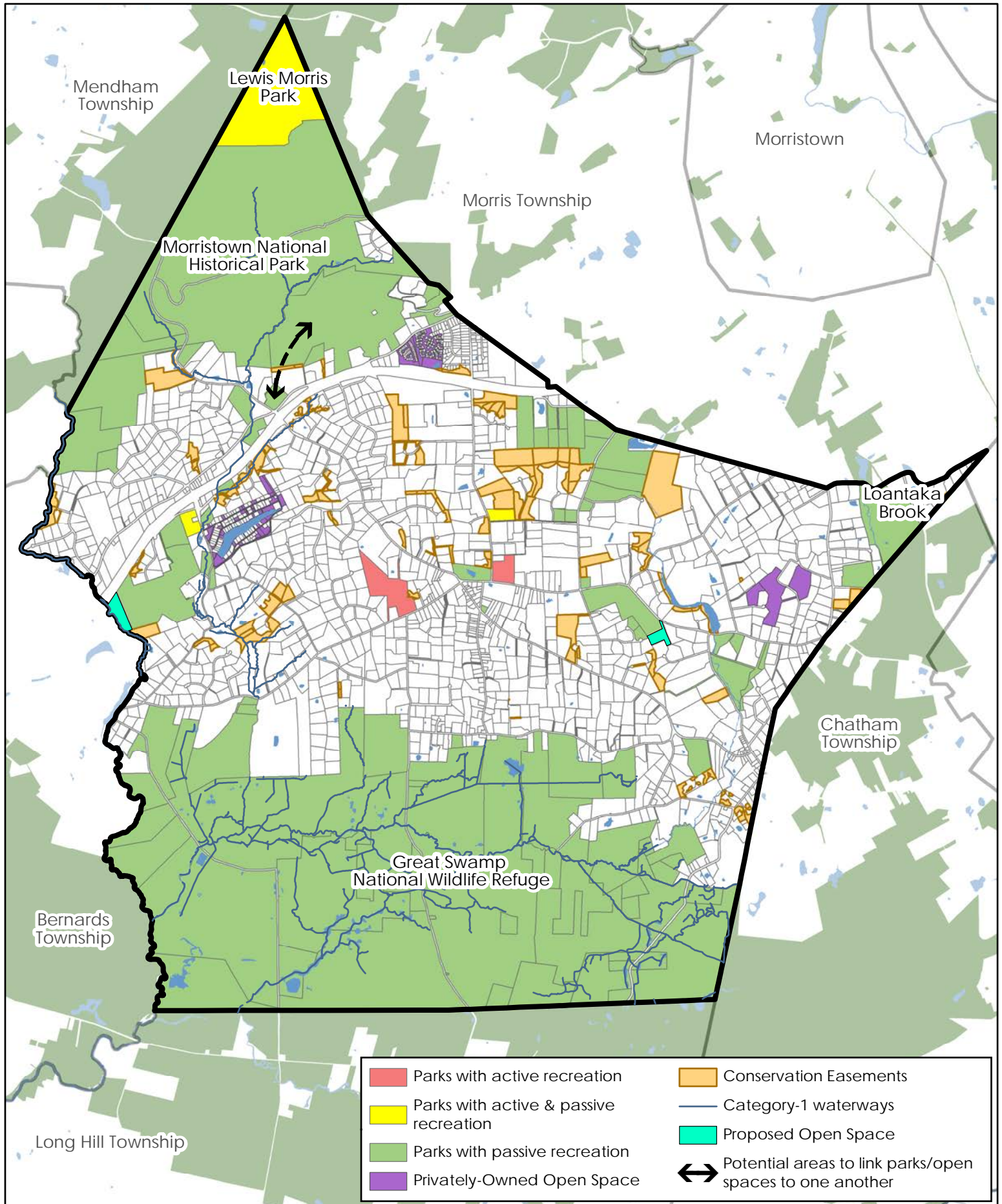


Source: NJOGIS, NJGIN, NJDEP, NJDOT

# Riparian Zones

Harding Township, Morris County, NJ





0 2,000 4,000 Feet

## General Open Space Systems Map

Harding Township, Morris County, NJ

Source: NJOGIS, NJGIN, NJDEP, NJDOT