

# **Southern Pinelands Natural Heritage Trail Scenic Byway Corridor Management Plan**

## **Task 7: Institutional Survey**

**Including preliminary materials for Task 3: Intrinsic Quality Inventory,  
Task 8: Byway Segment Rating, and Task 9: Development Trends Assessment**

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# 1. Introduction

The New Jersey Scenic Byways Program specifies three “surveys” that make up the inventory and assessment phase of management planning: *physical* and *visual* surveys of features and areas of interest along the byway, and an *institutional* survey of the governmental entities that have jurisdiction in the byway corridor. The Program handbook describes the institutional survey as follows:

The institutional survey evaluates the potential to which the scenic byway may be managed to preserve and enhance its attributes. ... Relative to the physical and visual surveys, the institutional survey is an objective inventory of measures that are currently in place or potentially available based on the responses of public officials at all levels of government with jurisdiction in the scenic corridor.<sup>1</sup>

As set forth in the Program handbook, the institutional survey consists of interviewing public officials about planning, regulations, historic sites and districts, and images of the byway.

In the case of the Southern Pinelands Natural Heritage Trail, the institutional and management context needs to be viewed in a broader context than simply that of governmental jurisdiction. An important characteristic of this byway is the large amount of land along the corridor that is in public ownership, including federal land (national wildlife refuges), state parks and forests, and county parks. Much of this land has been acquired and is managed specifically for protection of natural and historic resources, as well as for outdoor recreation and nature-based tourism. This extensive public ownership and management provide the capacity for preservation and enhancement of byway attributes beyond what would be provided simply by governmental control of the roadway and land use regulation.

In addition, the New Jersey Pine Barrens are recognized regionally, nationally and internationally for their ecological significance; and this recognition has created a widespread focus on resource management not only at the governmental level but also in the scientific and environmental communities. Moreover, several specific areas within the Pinelands area, or overlapping with it, have also received special recognition and designation, including two National Wild and Scenic Rivers, a National Estuarine Research Reserve, and a number of Important Bird Areas.

Based on these considerations, this institutional survey for the Southern Pinelands Natural Heritage Trail has been expanded beyond the public official interviews. The survey consists of four parts:

- An overview of the governmental and non-governmental designations that recognize the Pinelands region or other specific areas through which the byway passes (Section 2);
- A description of the major public lands along the byway corridor that are managed for resource protection and recreation (Section 3);

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<sup>1</sup> *The New Jersey Scenic Byways Program*, New Jersey Department of Transportation and others, February 1995, pp. 39-40.

- A description of the land use regulation context, including the relationship between the Pinelands Comprehensive Management Plan and local zoning controls, along with other State environmental protection regulations (Section 4); and
- A detailed review of public ownership and land use management along the byway, broken down into 21 “links” ranging from 1.6 to 15.3 miles in length (Section 5).

Thus, in addition to providing the results of the surveys of local officials under the institutional survey task, this report includes elements of other corridor management plan tasks. Much of the information on significant habitats and public lands (Sections 2 and 3) will also be included in the Intrinsic Quality Inventory (Task 3); and information compiled on the byway links (Section 5) will be used in both the Byway Segment Ratings (Task 8) and the Development Trends Assessment (Task 9).

## 2. State, National and International Designations

The Southern Pinelands Natural Heritage Trail (SPNHT) Scenic Byway is largely within the New Jersey Pinelands, or Pine Barrens, the largest body of open space on the Mid-Atlantic seaboard between Richmond and Boston. Among the important environmental features of the Pinelands are the following:

- The region is underlain by the Kirkwood-Cohansey aquifer, containing 17.7 trillion gallons of pristine water.
- The Pinelands is home to the most extensive surviving forest on the Eastern seaboard between Maine and Florida, yet it is found in the most urbanized state in the nation.
- The New Jersey Pine Barrens is a lush ecosystem that provides a haven for a growing number of rare species adapted to its unusual conditions.
- The Pinelands contain some of the largest cranberry and blueberry operations in the world, and is one reason for New Jersey's designation as "The Garden State."

The New Jersey Pinelands is significant not only for its rich natural resources, but also for its built environment. More than two dozen sites in the Pinelands are listed in the National Register of Historic Places, including restored historic villages and settlements, town historic districts, and historic structures and ruins.

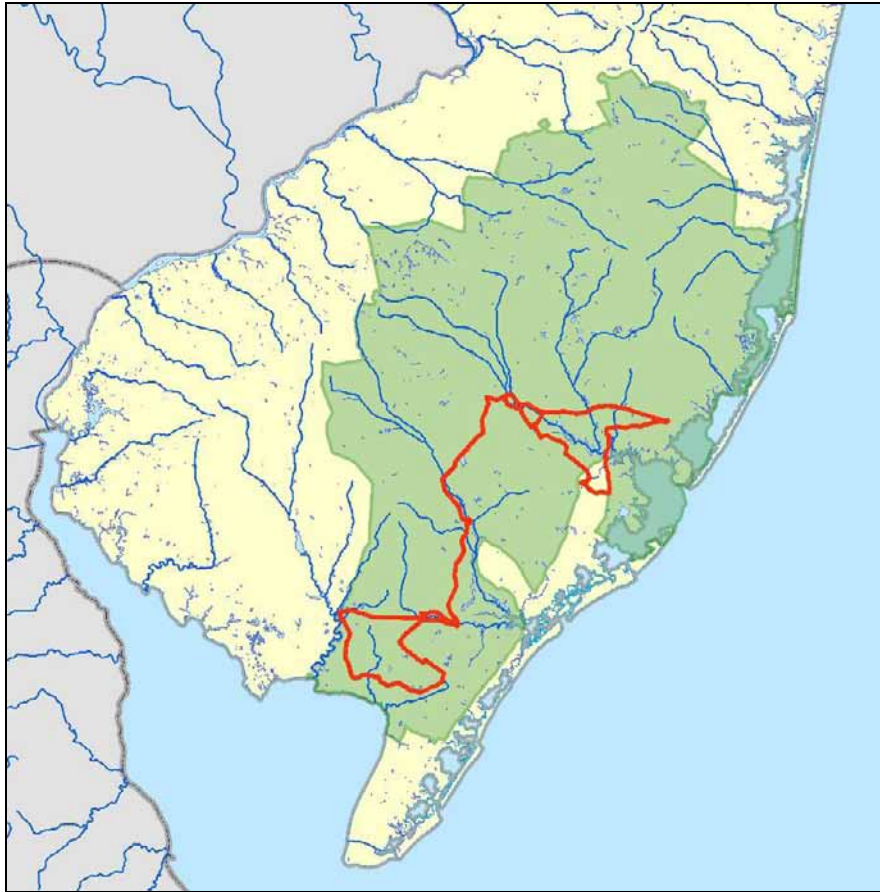
The Pinelands' unique environment and outstanding resources have been officially recognized through a number of regional, national and international designations. Most of these designations do not have a direct regulatory aspect, nor are they specifically directed at the SPNHT corridor; but they are important because they represent a broad commitment to resource management within the larger area through which the scenic byway passes.

### 2.1 The Pinelands National Reserve

In 1978, at the request of the State of New Jersey, the U.S. Congress designated the Pinelands as the country's first National Reserve. The New Jersey Pinelands National Reserve designated by this legislation (codified at 16 USC 471i) is 1.1 million acres in size and occupies approximately 22% of New Jersey's land area (Figure 1).

The legislation creating the Pinelands National Reserve called on the State to create a new regional planning entity with the responsibility for drafting a comprehensive management plan for the National Reserve. The federal legislation thus laid the groundwork for the state act that most directly affects land use and management in the Pinelands, and by extension the SPNHT corridor. The Pinelands Commission was created in 1979, and the Pinelands Comprehensive Management Plan was adopted in 1980 (Section 4 discusses regulatory aspects of the Plan).

**Figure 1: The Pinelands National Reserve  
(with the Southern Pinelands Natural Heritage Trail)**



## 2.2 UNESCO World Biosphere Reserve

In 1983 the Pinelands was designated a U.S. Biosphere Reserve by the U.S. Man and the Biosphere Program and the United Nations Educational, Scientific and Cultural Organization (UNESCO). This designation is not simply a recognition of the ecological significance of the Pinelands, but also represents a specific commitment to both environmental protection and economic development:

Biosphere reserves are sites recognized under UNESCO's Man and the Biosphere Programme which innovate and demonstrate approaches to conservation and sustainable development. UNESCO believes that utilization and conservation of land and water resources should go hand in hand, and that an interdisciplinary approach and long term vision are key. Biosphere reserves are much like laboratories where new and optimal practices to manage nature and human activities are tested and demonstrated. They outpace traditional confined conservation zones, combining core protected areas with zones where sustainable development is fostered by local dwellers and enterprises. Their governance systems are often highly innovative. In some cases, new legislation can be introduced. Biosphere reserves have three inter-connected functions:



- Conservation: landscapes, ecosystems, species and genetic variation
- Development: economic and human and culturally adapted
- Logistic support: research, monitoring, environmental education and training<sup>2</sup>

Thus, sustainable development based on resource management, which characterizes the National Scenic Byways Program, is also at the heart of the region's designation as a Biosphere Reserve.

## 2.3 Jacques Cousteau National Estuarine Research Reserve (JCNERR)

The Jacques Cousteau National Estuarine Research Reserve (JCNERR) is one of 26 such reserves created to promote the responsible use and management of the nation's estuaries through a program combining scientific research, education, and stewardship.

The JCNERR encompasses over 110,000 acres in southeastern New Jersey, including a great variety of terrestrial, wetland and aquatic habitats within the Mullica River-Great Bay ecosystem. The Reserve is a concentrated patchwork of federal and state lands managed in partnership through a variety of agencies. With little more than 1% of the Reserve subjected to human development, this area is regarded as one of the least disturbed estuaries in the densely populated urban corridor of the Northeastern United States. Occurring within the unique New Jersey Pinelands forest ecosystem, on the coastal plain and the barrier islands of the coastal margin, the Mullica River-Great Bay estuary is of special ecological value. The high environmental quality of the habitats within the Cousteau Reserve are consistent with the objective of the Reserve system to preserve areas which retain a healthy ecosystem and provide the opportunity to serve the needs of long-term research and monitoring programs.<sup>3</sup>

Through its Coastal Training Program, the JCNERR “offers a variety of training programs, resources and outreach materials for elected officials, members of local land use boards, and municipal or county government representatives who make frequent decisions about how coastal lands are used. The goal of the Coastal Training Program is to enhance informed decision-making on coastal issues by transferring technical information to audiences that have the ability to influence the management of coastal resources.”<sup>4</sup> The Jacques Cousteau Coastal Learning Center is located on the upper level of the Tuckerton Yacht Club in Tuckerton. The JCNERR also has an exhibit area (“Life on the Edge”) at the Tuckerton Seaport.

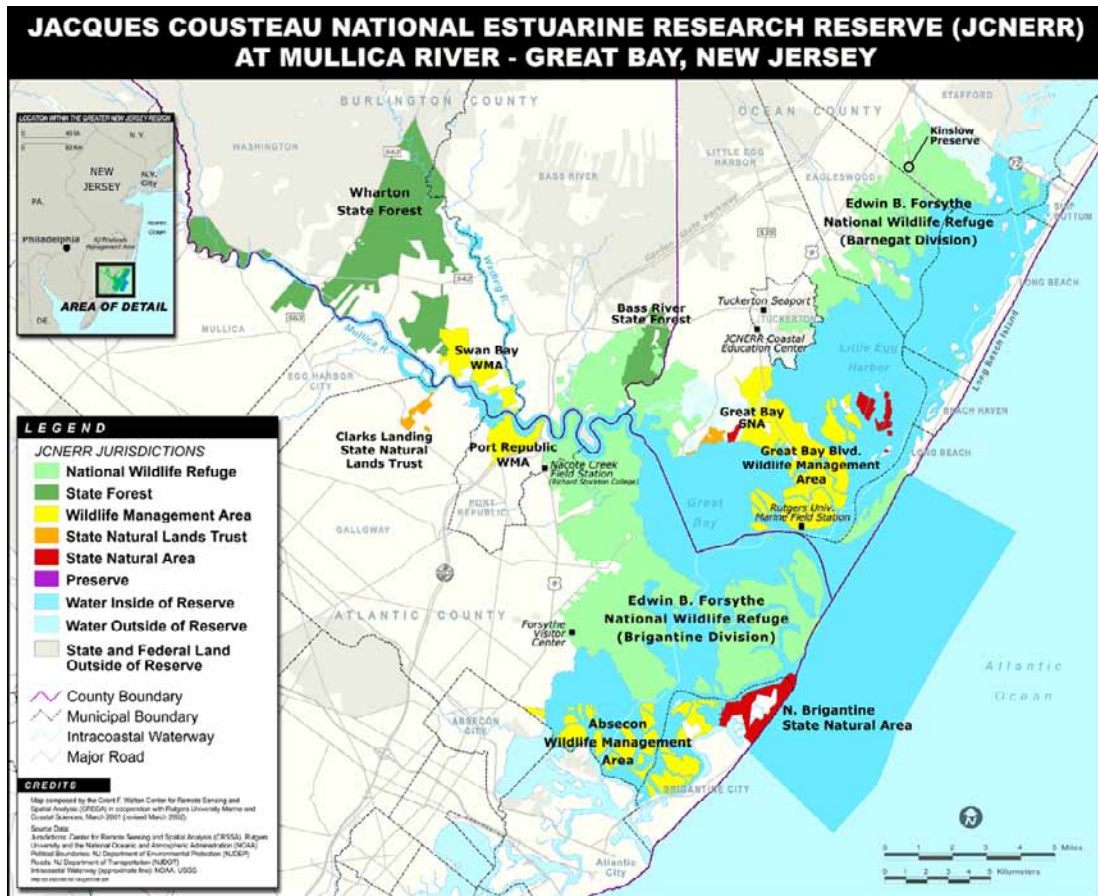
The JCNERR area extends from the Atlantic Ocean inland along the Mullica River watershed. The SPNHT scenic byway route intersects with the JCNERR at several locations, in Washington Township (along CR 542), Bass River Township (along US 9 near the eastern boundary of the township), Mullica Township (on CR 563 near the Green Bank bridge), and Galloway Township (on CR 624/Clarks Landing Road, and US 9 crossing Nacote Creek).

<sup>2</sup> “Biosphere reserves: reconciling the conservation of biodiversity with economic development,” <http://www.unesco.org/mab/BRs.shtml> (accessed 7/16/2008).

<sup>3</sup> <http://marine.rutgers.edu/cousteau/jcnerr/aboutjcnerr.htm> (accessed 7/16/2008).

<sup>4</sup> [http://marine.rutgers.edu/pt/coastal\\_training/index.htm](http://marine.rutgers.edu/pt/coastal_training/index.htm)

Figure 2: Jacques Cousteau National Estuarine Research Reserve



Source: Rutgers University, Center for Remote Sensing and Spatial Analysis (CRSSA), <http://www.crssa.rutgers.edu/projects/jcgis/maps/juris1500.gif>.

## 2.4 Wild and Scenic Rivers

### National Wild and Scenic Rivers

The Southern Pinelands Natural Heritage Trail Scenic Byway crosses two river systems that are part of the National Wild and Scenic River System: the Great Egg Harbor National Scenic and Recreational River and the Maurice National Scenic and Recreational River.

Designation as a National Wild and Scenic River (under the National Wild and Scenic Rivers Act of 1968) requires the creation of a comprehensive river management plan that addresses resource protection, development of lands and facilities, user capacities, and other management practices. Wild and Scenic River designation also prohibits federally assisted water resources projects that would adversely affect river values, but does not prohibit development nor give the federal government control over private property. National Wild and Scenic Rivers are administered by the National Park Service and may receive federal funding to undertake planning studies or assist with managing the lands and waters of the Wild and Scenic Rivers.

The **Great Egg Harbor National Scenic and Recreational River** (including the Great Egg Harbor River and 17 tributaries) begins in Berlin, NJ and flows through the byway communities of Hamilton Township, Egg Harbor Township, Weymouth Township, Estell Manor City, Corbin

City and Upper Township. The SPNHT (on CR 559) crosses the main spine of the River at Weymouth Forge in Hamilton Township and then follows the river on the west to Mays Landing where it crosses the river twice more (on CR 559 and US Route 40). South of Mays Landing the byway (on NJ 50) initially parallels the Great Egg Harbor River on the west through Belcoville in Weymouth Township, then turns away after crossing the South River, an important tributary.

The **Tuckahoe River** is a major tributary of the Great Egg Harbor River which is included within the boundaries of the Great Egg Harbor National Scenic and Recreational River. The scenic byway encircles the Tuckahoe River between the village of Tuckahoe and Head of River, crossing the river on NJ 50 in Tuckahoe and again on NJ 49 a short distance south of Head of River. The byway parallels the river on the north along Aetna Drive and Head of River Road (CR 649), and on the south along NJ 49 and through Marshallville.

The scenic byway (on NJ 47) runs parallel to the **Maurice National Scenic and Recreational River** between Port Elizabeth and Dorchester in Maurice River Township. The byway approaches the main stem of the river at one point in Bricksboro, and also abuts Manumuskin Creek, a tributary, in Port Elizabeth.

### **Pinelands Special Scenic Corridors**

The Pinelands Comprehensive Management Plan designates 19 rivers as “wild and scenic rivers and scenic corridors of special significance to the Pinelands.” The Comprehensive Management Plan requires that “all structures within 1,000 feet of the center line of the rivers shall be designed to avoid visual impacts as viewed from the river” (N.J.A.C. 7:50-6.105).

The scenic byway corridor includes portions of 11 of these designated corridors:

Mullica River	Bass River	Dennis Creek
Nescochague Creek	Great Egg Harbor River	Maurice River
Batsto River	Tuckahoe River	Manumuskin River
Wading River	West Creek	

The byway’s relationships to the Great Egg Harbor, Tuckahoe, Maurice and Manumuskin Rivers are described above under “National Wild and Scenic Rivers.” The seven remaining “special scenic corridor” rivers in the byway’s corridor are described below.

The SPNHT’s northern loop includes portions of five of the rivers designated as “special scenic corridors”: **Mullica River**, **Batsto River**, **Nescochague Creek**, **Wading River** and **Bass River**. The byway encircles the lower **Mullica River** between Pleasant Mills and Great Bay, crossing the river three times (on CR 542 in Pleasant Mills, on CR 563 in Green Bank, and on the Garden State Parkway between New Gretna and Chestnut Neck). At the westerly end of this loop, the byway on CR 542 crosses three of these rivers in a distance of less than a mile: **Nescochague Creek** west of CR 643 (and again on CR 643 about 0.3 miles south of this intersection); the **Mullica River** just east of CR 643, and the **Batsto River** about 0.3 mile east of the Mullica.

On the north side of the Mullica River, the byway follows CR 542 from the bridge at Pleasant Mills to the village of Wading River, where it crosses the **Wading River** and then turns away from the Mullica River toward Tuckerton. On the south side of the Mullica, the byway parallels the river on CR 643 (crossing **Nescochague Creek** as it flows out of Nescochague Lake), CR 563 and CR 624 (Clark’s Landing Road), from Pleasant Mills through Weekstown to Port

Republic. The byway then turns away from the Mullica, following several roads to Route 9 in Smithville. Route 9 from Smithtown to Tuckerton completes the northern loop, which includes expansive views of the Mullica River and Great Bay as it crosses the river on the Garden State Parkway. A separate section of the byway between Weekstown and Green Bank on CR 563 provides the middle crossing of the river.

The SPNHT crosses the **Wading River** in the village of the same name, at the junction of CR 542 and CR 653 (Leektown Road). While the byway follows CR 653 east toward Tuckerton, CR 542 (Hammonton Road) follows the east bank of the Wading River to New Gretna. Further east, the byway crosses the **Bass River** twice: on Stage Road, and on Route 9 in New Gretna, just east of the Garden State Parkway.

The section of the byway that runs along NJ 47 crosses the **West River** at the boundary of Maurice River and Dennis Townships. Finally, while the byway does not cross the main stem of **Dennis Creek**, it crosses several tributaries of the creek including the outflows from Ludlams Pond and Johnson Pond.

## 2.5 New Jersey Audubon Important Bird Areas

The Important Bird Area effort is an international effort to identify and protect bird habitat areas.

Important Bird Areas, or IBAs, are sites that provide essential habitat for one or more species of bird. IBAs include sites for breeding, wintering, and/or migrating birds. IBAs may be a few acres or thousands of acres, but usually they are discrete sites that stand out from the surrounding landscape. IBAs may include public or private lands, or both, and they may be protected or unprotected.<sup>5</sup>

In order to qualify as an IBA, a site must support at least one of the following types of bird species:

- Species of conservation concern (e.g. threatened and endangered species)
- Restricted-ranges species (species vulnerable because they are not widely distributed)
- Species that are vulnerable because their populations are concentrated in one general habitat type or biome
- Species, or groups of similar species (such as waterfowl or shorebirds), that are vulnerable because they occur at high densities due to their congregatory behavior.<sup>6</sup>

In the United States, the IBA effort is administered by the National Audubon Society, working with state IBA organizations. New Jersey's IBA program is coordinated by New Jersey Audubon Society.

By raising awareness of their ecological significance, IBA designation has led to increased protection for many of these areas. New Jersey Audubon stresses the broader ecological importance of areas identified as Important Bird Areas:

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<sup>5</sup> "What is an Important Bird Area?" [http://www.audubon.org/bird/iba/iba\\_intro.html](http://www.audubon.org/bird/iba/iba_intro.html) (accessed 7/21/2008).

<sup>6</sup> "What is an Important Bird Area?" [http://www.audubon.org/bird/iba/iba\\_intro.html](http://www.audubon.org/bird/iba/iba_intro.html) (accessed 7/21/2008).

Birds have been shown to be effective indicators of biodiversity in other animal groups and plants - especially when used to define a set of sites for conservation. So although the IBA network is defined by its bird fauna, the conservation of these sites would ensure the survival of a correspondingly large number of other animals and plants, and would help to preserve water and air quality.

As the emphasis moves from site identification to site monitoring and protection, the IBA Program is thus making a major contribution to global biodiversity conservation. IBA sites are not the only way of conserving birds and other biodiversity, they form part of a wider, integrated approach to conservation and sustainable development that also focuses on species, habitats and people.

The conservation of IBAs can make a major contribution to wider landscape or habitat protection. Natural habitats are islands of rich ecological complexity in a landscape which is increasingly simplified and vulnerable to man-made perturbations. Remaining semi-natural habitats at key sites such as lakes, rivers, forests, reefs, mires and grasslands can make an inordinate contribution to mediating the natural cycles of water, carbon, nitrogen, oxygen and other substances through the environment, filtering, buffering, purifying, storing and replenishing the substances that make life possible.<sup>7</sup>

New Jersey Audubon has identified 123 IBAs across the state, including nine sites along the SPNHT scenic byway corridor:

- Wharton State Forest
- Mullica River Corridor
- Bass River Marsh
- Edwin B. Forsythe National Wildlife Refuge
- Maurice River Corridor
- Peaslee Wildlife Management Area
- Belleplain State Forest
- Tuckahoe Wildlife Management Area
- Cape May National Wildlife Refuge (Great Cedar Swamp Division)

Each of these nine sites is discussed elsewhere in this report. Site descriptions from the NJAS IBA site inventory provide overviews of the site characteristics and features that are significant from the perspective of bird habitat (these descriptions are included in the Attachments at the end of this report).

New Jersey Audubon is expanding its IBA program into the Important Bird and Birding Area (IBBA) Program, to identify “both sites that are essential for sustaining native bird populations (Important Bird Areas), and areas that are exceptional for birdwatching (Important Birding Areas).”<sup>8</sup> At this time, only one Important Birding Area has been designated along the SPNHT byway – the Edwin B. Forsythe National Wildlife Refuge.

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<sup>7</sup> <http://www.njaudubon.org/Conservation/IBBA/Background.html> (accessed 7/21/2008).

<sup>8</sup> <http://www.njaudubon.org/Conservation/IBBA/Process.html> (accessed 7/21/2008).



## 2.6 Natural Heritage Tourism Routes

The Southern Pinelands Natural Heritage Trail Scenic Byway exists in a larger context of tourism based on natural and heritage resources and outdoor recreation in southern New Jersey. Two initiatives that overlap the SPNHT both geographically and thematically are the New Jersey Coastal Heritage Trail and the Bayshore Heritage Byway.

### **New Jersey Coastal Heritage Trail**

The New Jersey Coastal Heritage Trail (NJCHT) is a vehicular tourism route that stretches nearly 300 miles along the Atlantic seaboard and Delaware Bay. It is not a continuous trail; rather, it is a collection of sites linked by interpretive themes. The Trail is a partnership project of the National Park Service in cooperation with the State of New Jersey and other public and private organizations working to preserve the state's natural and cultural heritage. Welcome centers owned and operated by other organizations currently exist in two locations, with up to three additional centers anticipated.

The entire Southern Pinelands Natural Heritage Trail scenic byway route south of Mays Landing is within boundaries of the New Jersey Coastal Heritage Trail, along with the portions of the scenic byway that are east (seaward) of Wading River and Port Republic. The Trail is divided into five "regions," four of which intersect with the SPNHT:

- The **Barnegat Bay** Region includes the portion of the byway along US 9 north of the Mullica River, as well as along Stage Road and a portion of Leektown Road (CR 653);
- The **Absecon** Region includes the portion of the byway south of the Mullica River in Galloway Township and Port Republic City (US 9 to Smithville, Alt CR 561 and other roads to Port Republic, and CR 624 to west of the Garden State Parkway).
- The **Absecon** Region also includes the portion of the byway from Lake Lenape County Park through Mays Landing and along NJ 50 to the Tuckahoe River at Corbin City.
- The **Cape May** and **Delsea** Regions encompass the entire byway south of Corbin City (including the byway segments on both sides of the Tuckahoe River in Corbin City and Tuckahoe).

The New Jersey Coastal Heritage Trail has defined five interpretive themes: Maritime History, Historic Settlements, Wildlife Migration, Relaxation and Inspiration, and Coastal Habitats. Each theme is represented by sites along the corridor, and each site may represent one or more themes. Designated NJCHT sites that are along or near the Southern Pinelands Natural Heritage Trail include:

#### **Barnegat Bay Region**

Barnegat Bay Decoy & Baymen's Museum

#### **Absecon Region**

Edwin P. Forsythe National Wildlife Refuge – Brigantine Division

#### **Cape May Region**

Tuckahoe (MacNamara) Wildlife Management Area

#### **Delsea Region:**

Belleplaine State Forest

Dennis Creek Wildlife Management Area (Jake's Landing)

Dennis Township Wetland Restoration Site

## Delaware Bayshore Birding and Wildlife Trails<sup>9</sup>

In addition to designating Important Bird Areas (to recognize important bird and wildlife habitat sites) and Important Birding Areas (to identify exceptional areas for birdwatching), the New Jersey Audubon Society is developing “New Jersey Birding and Wildlife Trails” to link and highlight exceptional bird and wildlife viewing sites. The program website describes the difference in focus in the following way:

The Birding and Wildlife Trails initiative is designed to get people out to the sites that many people have already worked so hard to preserve and beautify. It is being created with the beginning wildlife-watcher in mind – a truly user-friendly guide to wildlife-watching in New Jersey. The Important Birds and Birding Areas (IBBA's) initiative is directed primarily at conservationists and land management professionals for large-scale bird conservation planning. It will also highlight areas that are exceptional for bird-watching, which is important for the more advanced bird-watcher.<sup>10</sup>

To date, two trail guides have been published, for the Delaware Bayshore region and the Meadowlands. The Delaware Bayshore Birding and Wildlife Trails Guide, published in 2005, was developed in partnership with the New Jersey Departments of Transportation and Environmental Protection and Office of Travel & Tourism. The Guide describes nine driving tours, three of which overlap portions of the Southern Pinelands Natural Heritage Trail:

- “The Cape May Bayshore” and “Off the Beaten Path” both follow NJ 47 between Eldora and Dennisville, and “Off the Beaten Path” also follows a portion of CR 550 in Belleplain. Two designated trail sites are on the SPNHT scenic byway: Belleplain State Forest and The Nature Conservancy's Eldora Nature Preserve. Other nearby sites on the trails but not on the scenic byway are Pickle Factory Pond, East Creek Pond, Beaver Swamp Wildlife Management Area, Jake's Landing, and the Dennis Township Wetland Restoration Site.
- “Treasures of the Marshland” includes a portion of NJ 47 between Mauricetown and Leesburg. However, none of the designated sites on this trail are on the SPNHT scenic byway

## Bayshore Heritage Byway<sup>11</sup>

The Bayshore Heritage Byway (BHB) is a new scenic byway route through unique natural and historically significant landscapes along southern New Jersey's “western shore”. The BHB will be nominated for designation under the New Jersey Scenic Byways Program. The proposed byway complements the New Jersey Audubon Birding and Wildlife Trail and shares some destinations of the NJ Coastal Heritage Trail, a National Park Service initiative. The BHB themes will complement the themes of the New Jersey Coastal Heritage Trail.

The Bayshore Heritage Byway coincides with the SPNHT along two sections of NJ 47: for approximately 8 miles between Glade Road (CR 616), just northwest of Delmont, and Dennisville; and for a short distance between Mauricetown Road (CR 670) and Main Street.

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<sup>9</sup> <http://www.njwildlifetrails.org>

<sup>10</sup> <http://www.njwildlifetrails.org/FAQ.htm> (accessed 7/29/2008).

<sup>11</sup> <http://www.bayshoreheritagebyway.org>

### 3. Public Land Ownership

Public Land ownership represents a critical component of the land management strategy for the byway. Lands held in public ownership are generally well protected from development and benefit from comprehensive management. Resources for strategic planning, environmental monitoring, infrastructure improvements, site and facilities maintenance, and programming are also common, though they vary by agency and may fluctuate over time.

Approximately 73 percent of the corridor of the Southern Pinelands Natural Heritage Trail is protected by public land ownership. Table 1 summarizes the amount of scenic byway frontage abutting this public open space, based on total frontage of approximately 257 miles (i.e., counting both sides of the 128.7-mile byway corridor).

**Table 1: Public Open Space Along SPNHT Scenic Byway Frontage**

Public Ownership Type	Miles of Byway Frontage	Percent of Total Byway Frontage
Federal (National Wildlife Refuges)	13	5%
State (State Forests, Wildlife Management Areas)	154	60%
New Jersey Natural Lands Trust	4	2%
County (County Parks)	18	7%
Total	189	73%*

*\*Percentages do not sum to total due to rounding.*

The following sections describe the individual public land units along the byway, which include two national wildlife refuges (Section 3.1), three state forests (Section 3.2), eight state wildlife management areas (Section 3.3), three New Jersey Natural Land Trust preserves (Section 3.4), and four county parks (Section 3.5).

#### 3.1 National Wildlife Refuges

The National Wildlife Refuge System is a national network of lands and waters under the jurisdiction of the U.S. Fish and Wildlife Service which is managed "for the conservation, management and where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans" (NWRS mission statement). Management in support of this mission ranges from preservation to active manipulation of habitats and populations. When compatible with a particular refuge's management strategy, wildlife-dependent uses such as hunting, fishing, wildlife observation, photography, interpretation and education are supported.

The SPNHT byway corridor interfaces with two National Wildlife Refuges. The **Edwin B. Forsythe National Wildlife Refuge** encompasses more than 43,000 acres of land and water in Atlantic, Burlington, and Ocean Counties. It was formerly two distinct divisions – Brigantine and Barnegat – which were combined in 1984. The SPNHT scenic byway abuts the Forsythe NWR in two locations: the south side of Route 9 in Bass River Township, and the east side of Route 9 in Galloway Township.

The **Cape May National Wildlife Refuge's** key location in the Atlantic Flyway makes it an important link in the vast nationwide network of National Wildlife Refuges administered by the U.S. Fish & Wildlife Service. In 1992 the Cape May NWR was designated a Wetland of



International Importance under The Convention on Wetlands of International Importance (also known as the Ramsar Convention).

The Cape May NWR contains three separate Divisions of which the Great Cedar Swamp Division is one. The **Great Cedar Swamp Division** is located in Upper and Dennis Townships near the towns of Woodbine and Dennisville. The SPNHT abuts two small areas of the Great Cedar Swamp along CR 610 between Dennisville and Woodbine.

## 3.2 State Forests

The New Jersey Division of Parks and Forestry is the agency responsible for management of state parks and forests. The SPNHT abuts or crosses through three state forests: Wharton State Forest in Burlington and Atlantic Counties; Bass River in Burlington County; and Belleplain in Cape May County.

**Wharton State Forest** is the largest single tract of land in the New Jersey state park system, comprising approximately 110,000 acres of contiguous land in Burlington, Camden and Atlantic Counties. The forest is named for Joseph Wharton who wanted to tap the ground water to provide drinking water for Philadelphia; however, a law was passed banning export of water from the state. The state bought the land from Wharton's heirs in the 1950s. Wharton State Forest is also the location of the historic Batsto Village, a former bog iron and glass manufacturing site from 1766 to 1867.

The SPNHT abuts or crosses through Wharton State Forest in Washington Township along CR 542 (Batsto-Bridgeport Road).

**Bass River State Forest** is comprised of approximately 23,000 acres of non-contiguous land in Bass River Township, Burlington County, with the main entrance and visitor center on Stage Road. Bass River State Forest was the first of New Jersey's state forests, acquired by the State in 1905 for public recreation, water conservation, and wildlife and timber management. Lake Absegami is 67 acres in size and was created in the 1930s to provide swimming, boating and canoeing and is a state recreation area of 128 acres in size within the Bass River State Forest.

The SPNHT scenic byway abuts Bass River State Forest in two places, first along Stage Road from Mill Road at the Burlington/Ocean County line west to Leektown Road CR653, and again along US 9 from Old NJ Route 4 west to west of David Point Road at the edge of Forsythe NWR.

**Belleplain State Forest** is comprised of approximately 15,600 acres of non-contiguous land in Dennis Township, Cape May County. Belleplain State Forest was established in 1928 by the State of New Jersey for recreation, wildlife management, timber production, and water conservation. In 1933, three camps were set up by the Civilian Conservation Corps (CCC) Reforestation Relief Act, supplying labor to the forest for over an eight-year period. The CCC converted the Meisle Cranberry Bog into Lake Nummy, a popular swimming, boating, and fishing area. They also constructed the original forest headquarters, maintenance building, a road system, bridges, and dams.

The SPNHT scenic byway crosses through Belleplain State Forest on CR 550 northwest of Woodbine from west of Garden Ave at the Woodbine / Dennis town line west to Cedar Bridge Road, and on NJ 47 southwest of Woodbine from Jakes Landing Road and Dudican Road west to just beyond Washington Ave.

### 3.3 State Wildlife Management Areas

Wildlife Management Areas (WMAs) in New Jersey are administered by the Division of Fish and Wildlife. WMAs are managed by the Division's Bureau of Land Management for fish and wildlife habitat, and a variety of wildlife-associated recreation is available within most areas. While hunting and fishing are probably the two activities most associated with the Division, WMAs are also prime locations for birding, wildlife viewing and photography, cross country skiing, hiking and mountain biking. Purchased with funds from the sale of hunting and fishing licenses and through the Green Acres Program, the Wildlife Management Area System encompassed more than 321,000 acres statewide in April 2008.

The Southern Pinelands Natural Heritage Trail abuts portions of eight Wildlife Management Areas, listed in Table 2.

**Table 2: State Wildlife Management Areas Along the Southern Pinelands Natural Heritage Trail**

WMA Name	Area (Acres)	County	Municipality
Dennis Creek North	6,100	Cape May	Dennis
Great Egg Harbor	5,100	Atlantic	Hamilton & Weymouth
Hammonton Creek	4,000	Atlantic	Mullica
Heislerville	7,100	Cumberland	Maurice River
Makepeace Lake	11,100	Atlantic	Hamilton & Mullica
Peaslee	33,600	Atlantic	Estell Manor
		Cape May	Upper & Dennis
		Cumberland	Maurice River
Port Republic	1,400	Atlantic	Port Republic City
Tuckahoe (MacNamara)	14,700	Atlantic	Estell Manor City & Corbin City
		Cape May	Upper

**Dennis Creek North WMA** is comprised of numerous non-contiguous parcels which total approximately 6,100 acres in Cape May County. Two parcels are located along the SPNHT byway along NJ 47 in Dennis Township.

**Great Egg Harbor WMA** includes six separate sites which total around 5,100 acres. Two of the six parcels are located along the byway as it traverses Hamilton Township near Emmellsville on CR 559 and Weymouth Township on NJ 50.

**Hammonton Creek WMA** made up of several parcels totaling approximately 4,000 acres in Mullica Township, Atlantic County interfaces the byway corridor on CR 658 in Mullica.

**Heislerville WMA**, consists of numerous non-contiguous parcels located in Maurice River Township, along the byway on NJ 47 and totals approximately 7,100 acres.

**Makepeace Lake WMA** has multiple sites totaling about 11,100 acres within Hamilton and Mullica Townships, in Atlantic County. It is located on both sides of the byway along CR 559 for almost four miles.

**Peaslee WMA**, includes many parcels which total approximately 33,600 acres in Atlantic, Cumberland, and Cape May Counties. There are about 5.6 miles of frontage on the byway located in Estell Manor City near Oakville on NJ 50, near Warners Mill on CR 649, and along NJ 49 near the Dennis Township border.

**Port Republic WMA**, encompasses 1,400 acres within several parcels in Atlantic County and interfaces the byway along the Garden State Parkway in Port Republic City.

**Tuckahoe WMA (MacNamara)** contains very large parcels in Atlantic and Cape May Counties that total around 14,700 acres. The byway passes along the WMA as it travels along NJ 50 between Oakville in Estell Manor City and Tuckahoe in Upper Township.

### 3.4 New Jersey Natural Lands Trust

The New Jersey Natural Lands Trust (NJNLT) is an independent agency within the NJ Department of Environmental Protection which acquires open space for preservation in the land's natural state. The Trust acquires land primarily through private donations of land outright or through donation of conservation easements. The Trust manages properties for conservation and invites passive use of the land by the public where such use does not adversely impact natural resources. The SPNHT scenic byway abuts four areas under the protection of the NJNLT: **Clark's Landing Preserve** and another unnamed property along CR 624 in Galloway Township, **John's Woods Preserve** in Hamilton Township (which abuts Weymouth Furnace County Park), and **Three Rivers Preserve** (which is located within the Atlantic County Park at Lake Lenape).

### 3.5 County Parks

The scenic byway passes along three county parks in Atlantic County and one in Ocean County.

Atlantic County Parks are managed by the Department of Public Works, Division of Parks and Recreation. Atlantic County operates three county parks along the byway route, which are listed and briefly described as follows:

**Weymouth Furnace County Park** is located along the byway on Weymouth Road (Route 559) in Hamilton Township just north its intersection with Black Horse Pike (Route 322). The Park is approximately 11 acres in size, but is bounded by two other public open spaces and a private open space area open to the public. People visit the park site primarily to see the ruins of the mill buildings and their foundations, which are the remains of an early industrial center, and/or as a popular starting point for canoeing on the Great Egg Harbor River.

The county park location was the site of an iron furnace and paper mill in the 1800s, located on the Great Egg Harbor National and Scenic River. At peak production, in the 1850s, there was a furnace, forge, gristmill, Methodist Church, sawmill, large owner's mansion, store, 20 workers' houses, a blacksmith shop, and a wheelwright all located at the property. The site is listed as a "Historic Site in Atlantic County" by the Atlantic County Government Division of Parks and Recreation. This once important regional industrial center adds to the significance of protecting these beautiful woods along the banks of the Great Egg Harbor National Wild and Scenic River.

**Atlantic County Park at Lake Lenape** is located on the byway in Mays Landing along the shores of the Great Egg Harbor River and Lake Lenape. The western edge of the park abuts Route 559 (Harding Highway), and its southern edge is along Route 609. To the west of the site is Great Egg Harbor Wildlife Management Area.

Atlantic County Park at Lake Lenape is the largest site in the County Park system, encompassing 1,921 acres of land. The entire surface of Lake Lenape is controlled by the county. In addition to a wide array of recreational activities, the park protects a major portion of the "Wild and Scenic" Great Egg Harbor River. Contained within a part of the park is the privately-owned Three Rivers Reserve.

**Estell Manor County Park** is located in Estell Manor City, 3.5 miles south of Mays Landing, along the western edge of the South River, along the eastern edge of the byway (Route 50), and along the north and eastern edge of Stevens Creek. There is a small portion in the south eastern section of Estell Manor County Park with frontage on the Great Egg Harbor National and Scenic River.

Estell Manor County Park is a large site comprised of 1,714 acres. There are many trails, athletic fields, picnic areas in addition to the location of the Warren Fox Nature Center. This is Atlantic County Park System's most popular park and the Division of Parks and Recreation headquarters. The Atlantic County Veteran's Cemetery is located within the park. The Park is bounded by various other open spaces. Great Egg Harbor Wildlife Management Area is located east of the park between the South River and the Great Egg Harbor National and Scenic River. Southeast of the Park is the Catawba Preserve, owned by the New Jersey Natural Lands Trust. South of the site is River Bend County Park, and to the northwest of the site is Pleasant Valley Campground.

The county park location was the site of the Estellville Glassworks in the 1800s, and then became the site of a munitions plant during World War I. Since that time, the forest has reclaimed the land and is home to a diversity of plants and animals. On the former glassworks site there are approximately a dozen building ruins including a melting furnace, a pot house, a flattening house, a cutting house, a lime kiln, and some workers' housing. Sidewalks and interpretive signs were placed at the site in the mid-1990s to improve the park visitors' experience. The site is listed as a "Historic Site in Atlantic County" by the Atlantic County Government Division of Parks and Recreation.

Ocean County Parks are managed by the Ocean County Department of Parks and Recreation. **Stanley "Tip" Seaman County Park**, the sole Ocean County Park on the byway, lies on the southern shore of Lake Pohatcong in Tuckerton Borough. This 22-acre recreational park is widely known as the site of the Ocean County Decoy and Gunning Show, now in its 26<sup>th</sup> year. This nationally-acclaimed event highlights the working decoy and the South Jersey waterfowling heritage. The park is located on Route 9.

## 4. Land Use Regulation

Land use regulations represent the other major strategy for resource protection and land management along the byway (ownership being the other). Land use regulations, inclusive of federal, state, and municipal policies and laws, determine where and what type of land use or development is allowed, the form and character of the development, and what is required to minimize or mitigate any development impact on existing resources. While regulations and the degree of protection for the corridor's resources may vary by municipality, federal and state regulations provide a consistency that is vital to the integrity of the SPNHT byway.

The New Jersey Pinelands Protection Act provides vital tools for land management within the byway corridor as 94% of the byway travels through land within its jurisdiction.

### 4.1 The Pinelands Comprehensive Management Plan

#### **Pinelands Protection Act**

In 1979, following the Pinelands National Reserve designation, the state of New Jersey partnered with the federal government to implement the requirements of the PNR legislation through state legislative action. The resulting New Jersey Pinelands Protection Act established the Pinelands Commission, and directed the Commission to adopt a Comprehensive Management Plan (CMP) to preserve natural resources and manage and control development in the Pinelands.

#### **Pinelands Area**

The state designated Pinelands Area, under control of the Pinelands Commission and managed through the CMP, is slightly smaller in size than the Pinelands National Reserve area. The Reserve totals 1.1 million acres and includes land east of the Garden State Parkway and to the south bordering Delaware Bay, which is omitted from the 927,000 acre state Pinelands Area.

#### **Pinelands Commission**

The Pinelands Commission created by the Pinelands Protection Act is charged with preparing and implementing a comprehensive management plan for the Pinelands Reserve. Today the Pinelands Commission staff of approximately 60 professionals is directed by 15 Commissioners, appointed as follows: seven by the Governor with approval of the state Senate, seven by the counties in the Pinelands, and one by the Secretary of the Interior. Members of the Commission serve staggered three-year terms and are uncompensated for their service. The Commission is the lead agency planning growth and preservation in the Pinelands, and is staffed by experts with a real commitment to preserving the Pinelands environment. The Pinelands Commission has pioneered many smart-growth planning concepts, such as watershed management, transfer of development rights, timed growth and conservation planning, long before they received widespread acceptance.

Among the many planning functions of the Pinelands Commission, a key responsibility includes reviewing and certifying all municipal zoning and land-use ordinances and master plans for consistency with the CMP. Local municipalities that have land within the Pinelands Area must conform their master plan and land use ordinances to the minimum standards set forth in the CMP. This means that both original 1980s era land use goals and any new master plans and

ordinances must be certified by the Pinelands Commission as meeting the minimum standards of the CMP. Probably the most significant authority granted to the Commission under the Pinelands Protection Act is the power to review proposed development and to disapprove projects which fail to meet its standards.

## **Pinelands Comprehensive Management Plan**

The Pinelands Comprehensive Management Plan (CMP) protects the region in a manner that maintains its unique ecology while permitting compatible development:

With minor exceptions, all activities that alter land and water in the Pinelands or that change uses of structures or land are subject to regulations under the CMP. Exemptions are allowed only for agricultural or horticultural construction or for the improvement, expansion, or rebuilding of an existing single-family dwelling. Construction of structures accessory to single family residences and utility installations that serve existing or approved development also are exempted. No permit is required either for the clearing of less than 1,500 square feet of land not located in a wetland or within 300 feet of a scenic corridor, or for the construction, repair or removal of any sign.<sup>12</sup>

The CMP provides regulations and standards that are designed to promote orderly development of the Pinelands so as to preserve and protect the significant and unique natural, ecological, agricultural, archaeological, historical, scenic, cultural and recreational resources of the Pinelands. It is widely considered the nation's most innovative regional land use plan. A cornerstone of the Plan is the creation of nine different land use management areas that are based on an assessment of environmental resources and existing land use patterns.

## **Pinelands Management Areas**

The Pinelands Comprehensive Management Plan divides the Pinelands National Reserve into nine land-use management areas with goals, objectives, development intensities and permitted uses for each. These are implemented through local zoning that must conform to the Pinelands land-use standards. The nine land-use management areas are briefly profiled in the following list.

1. **Preservation Area:** This is the heart of the Pinelands environment and is the most critical ecological region. It is a large, contiguous wilderness-like area of forest that supports diverse plant and animal communities and is home to many threatened and endangered species. With preservation the primary goal, the principal permitted uses include the culture of berries and native plants, forestry, fish and wildlife management, low intensity recreational uses, some limited housing defined as cultural housing<sup>13</sup> and agricultural employee housing accessory to an active agricultural operation.

The Preservation Area encompasses the majority of the Southern Pinelands Natural Heritage Trail corridor within the Mullica River corridor.

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<sup>12</sup> *Protecting the New Jersey Pinelands*, ed. Beryl Robichaud Collins and Emily W.B. Russell, 1988, p. 131.

<sup>13</sup> Cultural housing is meant to allow the development of residential dwellings to long term residents of the Pinelands on family owned land that has been in continuous ownership since 1979.



2. **Forest Area:** Similar to the Preservation Area in terms of ecological value; this is a largely undeveloped area that is an essential element of the Pinelands environment. The most restricted lands within the Pinelands are designated as Forest Areas. Agriculture, forestry, low-intensity recreation, continuing resource extraction, and limited local, commercial service activities are the permitted uses. Limitations on commercial service activities, for example, include a restriction that prohibits new roadside retail sales or service establishment to have any portion of any structure extend more than 300 feet from a similar establishment in existence on February 7, 1979. New residential development is limited to a maximum of one unit for each 15.8 acres of the total privately owned, undeveloped upland acreage in the area, with a minimum lot size of 3.2 acres.

Forest Areas dominate the landscape throughout the corridor south of the Mullica River.

3. **Agricultural Production Area:** These are areas of active agricultural use, generally upland field agriculture and row crops, including adjacent areas with soil suitable for expansion of agricultural operations. In addition to farming, permitted uses include commercial agricultural activities (including processing facilities), forestry, fish and wildlife management, and restricted low intensity recreational uses as well as cultural housing and farm related housing that is restricted to farm-owners or employees on a minimum 10 acre parcel that is in active agricultural operation.

There are two Agricultural Production Areas along the byway: one in Nesco in Mullica Township and the other on Head of River Road in Estell Manor.

4. **Special Agricultural Production Area:** These are areas primarily used for berry agriculture and horticulture of native Pinelands plants. This designation further limits uses permitted in the Agricultural Production Area to berry culture or to native horticultural activities, forestry, and fish and wildlife management. In this area farm related housing is at the option of the municipality.

One Special Agricultural Production Area is located along CR 542 between Green Bank and Wading River in Washington Township.

5. **Rural Development Area:** This is a transitional area that balances environmental and development values between conservation and growth areas (namely, between Forest Areas and Regional Growth Areas) and act as buffers and potential reserves for future development. Permitted uses here are less restrictive than those in Agricultural Production Areas and include in addition Institution uses, community commercial uses and housing. Residential housing in each Rural Development Area is permitted up to a maximum of one residential unit for each 3.2 acres of the total privately owned, undeveloped uplands, with a minimum lot size of 3.2 acres.

The byway passes through Rural Development Areas in six general areas:

- On both Stage Road and US 9 in the westerly portion of Little Egg Harbor Township (including a small adjoining portion of Bass River Township);
- A short section of CR 624 in Galloway Township, adjacent to Port Republic;
- West of Tuckahoe, with about 0.8 miles of frontage on the south side of NJ 49;
- Along three sections of NJ 47:

- Between the Pinelands Villages of Port Elizabeth-Bricksboro on the north and Dorchester-Leesburg on the south (approximately 1.75 miles on both side of the road, and another 1 mile on the west side only);
- Opposite the Pinelands Village of Delmont, and including the State prison north of Delmont (about 1.3 miles on both sides of the road, and another 2.6 miles on the south and west side only); and
- Opposite the Pinelands Village of Dennisville (about 0.7 mile).

6. **Regional Growth Areas:** These are areas of existing growth and adjacent lands capable of accommodating regional growth influences while protecting the essential character and environment of the Pinelands. All uses not otherwise prohibited may be permitted in regional growth areas. Each Regional Growth area must also provide a minimum number of new residential units based on densities per acre of developable land.

The byway passes through two Regional Growth Areas: Mays Landing (on CR 559, US 40 and NJ 50), and the easterly portion of Little Egg Harbor Township (on Stage Road and US 9).

7. **Pinelands Towns:** These include large, spatially discrete settlements typically with public sewer and or water facilities. Permitted uses include residential, commercial, and industrial infill development that is compatible with the existing character of the settlement.

There are two Pinelands Towns along the byway: Tuckerton and Woodbine.

8 **Military and Federal Installation Area:** These encompass federal enclaves within the Pinelands.

There are no areas along the byway in this management area.

9 **Pinelands Villages:** These represent small, existing and spatially discrete settlements that are appropriate for infill development. CMP regulations permit residential, commercial and industrial development of a character and magnitude that is compatible with existing structures and uses.

There are 15 Pinelands Villages along the SPNHT route:

Green Bank	Nesco-Westcoatville	Eldora
New Gretna	Belcoville	Delmont
Port Republic	Tuckahoe	North Dennis
Weekstown	Port Elizabeth-Bricksboro	Dennisville
Sweetwater	Dorchester-Leesburg	Belleplain

As the above outline suggests, land use management under the Pinelands Comprehensive Plan involves a complex and sophisticated hierarchy of management areas along the Southern Pinelands Natural Heritage Trail. However, as Figure 3 shows, the scenic byway corridor is dominated by just two of the management areas: the Preservation area on both sides of the Mullica River, and the Forest area along most of the remainder of the byway corridor. Thus, the overall pattern along the byway is much simpler than might be inferred from the detailed listing of management areas above.



**Figure 3: Pinelands Preservation Area and Forest Area  
(with the Southern Pinelands Natural Heritage Trail)**



### **Consistency Requirement**

The 1979 Pinelands Protection Act envisioned that local governments will be primarily responsible for implementing the CMP. The Act sets forth a procedure under which county and municipal master plans and land use ordinances are made consistent with the CMP. While some of the CMP's provisions are mandatory, many other aspects are intended to give municipalities resource management goals to work toward as they revise their land use regulations. A municipality is able to exercise more flexibility in applying the CMP to local conditions by participating in the conformance process.

The specific means chosen to meet municipal goals are open to negotiation between the Commission and the local government. If a municipality does not revise its master plan and ordinances as required by the Pinelands Protection Act, the Commission is required by law to enforce the Plan's minimum standards verbatim.

### **Scenic Setbacks from Certain Roads and Rivers**

The scenic character of the Pinelands contributes substantially to the attractiveness of the area and therefore is an important element to the area's economy. To protect that scenic character the CMP requires a municipality's master plan or land use ordinance to have a program for protection of the scenic values of the Pinelands. The intent is to ensure that development will take advantage of and enhance the visual character of the Pinelands. There are specific requirements addressing scenic corridors as roads and rivers, with respect to development permit type, building setback, landscape screening, and signage.

There is a general requirement that buildings be set back 200 feet from major public roads within the Preservation Area District, the Forest Areas, and the Rural Development Areas. Of 19 rivers designated State wild and scenic rivers and scenic corridors of special significance to the Pinelands, five are within the Byway corridor: the Mullica River, the Wading River, the Great Egg Harbor River, the Maurice River, and the Tuckahoe River. Two of those rivers also enjoy designation of national importance as National Wild and Scenic Rivers; namely, the Great Egg Harbor River, and the Maurice River. All structures within 1,000 feet of the centerline of these rivers shall be designed to avoid visual impacts as viewed from the river and must be screened.

### **Sign Regulations**

In order to protect the Pinelands' scenic qualities, stringent limitations have been placed on the size and type of signs allowed through regulation and specified in the CMP. These regulations include mandatory sign provisions that apply in all nine Pinelands Management Areas, as well as specific provisions for signs in the Preservation Area District and Special Agricultural Production Areas. In addition, there are suggested guidelines for additional sign provisions for other areas of the Pinelands.

Examples of some of the sign provisions in the CMP are that new warning and safety signs, as well as on-site commercial signs advertising agricultural roadside stands are permitted, whereas the erection of new off-site billboards is prohibited in all areas of the Pinelands.

### **Historic Districts**

Under the Comprehensive Management Plan any site or area listed on the National or State Register of Historic Places is automatically designated as an "historic resource of significance to the Pinelands." As a result, portions of Mays Landing, Tuckahoe, Marshallville and Dennisville are subject to the strict historic preservation standards of the CMP. This protection also applies to individual sites listed on either Register.

The Commission may also designate additional historic resources or districts of Pinelands significance based on criteria set forth in the Comprehensive Management Plan, but no such districts have been designated along the byway at this time.

## **4.2 New Jersey Department of Environmental Protection (NJDEP)**

The New Jersey Department of Environmental Protection (NJDEP) has a key role in protecting the Pinelands environment. The NJDEP implements the CMP in the coastal zone (see CAFRA below). Additionally, the NJDEP regulates the distribution of fresh water from the aquifers that lie beneath the Pinelands, and also control the filling or dredging of wetlands throughout the state.

### **Coastal Area Facility Review Act (CAFRA)**

CAFRA applies to projects near coastal waters in the southern part of the State. The inland limit of the CAFRA area follows an irregular line drawn along public roads, railroad tracks, and other features. The CAFRA area varies in width from a few thousand feet to 24 miles, measured straight inland from the shoreline. The law divides the CAFRA area into zones, and regulates different types of development in each zone, including almost all activities involved in residential, commercial, or industrial development, such as construction, relocation and enlargement of buildings or structures, and all related work (such as excavation, grading, shore

protection structures, and site preparation). While CAFRA regulations do not directly address visual qualities through design regulations, they may affect or limit development through strict environmental performance standards.

### 4.3 Local Zoning

Local zoning adopted in municipal land use ordinances must be consistent with the Pinelands Comprehensive Management Plan (CMP) for portions of the municipality within the Pinelands area and Pinelands National Reserve (see NJ State Plan cross-acceptance). While some of the CMP's provisions are mandatory, other aspects are guidelines for municipalities to use while updating and revising their land use regulations.

Local regulations and zoning districts generally mimic CMP regulations and management areas. Some municipal regulations also supplement CMP use, development standards and dimensional controls with additional regulations including, strengthened design and/or performance standards, as well as ordinances that address issues such as tree protection and/or planting, buffers, property maintenance and district specific site plan review requirements. Local regulations are responsible for determining what CMP optional uses will be allowed within Preservation Areas, Forest Areas, Agricultural and Special Agricultural Production Areas, and Rural Development Areas. This gives municipalities flexibility in regulating development to accommodate their needs and respond to the community's desired vision. Development approvals, however, remain subject to the Pinelands Commission review to ensure that they are consistent with the intent of the CMP.

### 4.4 New Jersey State Plan

The cross-acceptance provisions of the New Jersey State Development and Redevelopment Plan mean that the Pinelands CMP can provide input to planning for those areas that are outside the State Pinelands Area but within the Pinelands National Reserve. New Jersey State Plan cross-acceptance is a formal, periodic comparison of local and county land use and infrastructure plans with a statewide policy plan called the "State Development and Redevelopment Plan." The cross-acceptance procedure provides an opportunity for counties to collect comments from municipalities and the public regarding proposed changes to the New Jersey State Development and Redevelopment Plan. The process of cross-acceptance is intended to encourage consistency between regional, local and statewide planning policy to ensure that all New Jersey residents and levels of government have the opportunity to participate in a bottom-up approach to planning and to shape the goals, strategies and policies of the State Plan.

Cross Acceptance is the State Plan consensus building process. To initiate the process of a State Plan revision and update, the State Planning Commission issues a Preliminary Plan and a Preliminary State Plan Policy Map as well as a Cross-Acceptance Manual. All municipalities in the state are asked to file a Cross-Acceptance report with their county. In that report, the municipality reviews its own land use plans and compares them to the goals and objectives of the State Plan and the Policy Map and notes any inconsistencies. The municipal reports are combined into a county Cross-Acceptance report and the county then becomes the "negotiating entity" with the Office of Smart Growth (OSG), which is the staff of the State Planning Commission. The OSG staff meets with each county's planning staff to negotiate any inconsistencies and then a public hearing is held in each county. A municipality that disagrees with the county report can also file a dissenting report directly with the OSG.

## 5. Management Considerations by Route Link

The intrinsic qualities at any point along the Southern Pinelands Natural Heritage Trail corridor may be protected by strong land use regulations, by public land ownership, or by both. The hierarchy of land use regulations includes New Jersey's State Growth Plan, the New Jersey Pinelands Commission's Comprehensive Management Plan, Coastal Areas Facilities Review Act regulations and local zoning regulations. Public land ownership includes state parks, forests, and wildlife management areas, county and local parks, and federal national wildlife refuges.

This study's approach to understanding local capacity for managing change along the corridor has been to identify those areas that are substantially protected by public land ownership and restrictive Pinelands management areas, and then look more closely at the remaining areas. To that end, the study identified twenty-one links along the SPNHT scenic byway primarily defined by state and county numbered routes. Each link shares general characteristics or groups of characteristics, such as land uses or scenic qualities that help create somewhat distinctive sub-areas along the corridor. Each link or sub-area was then assessed to determine what areas enjoy a high level of protection and to identify those remaining areas that required further analysis. This next level of analysis included a study of local zoning maps and ordinances, followed by telephone surveys with local representatives.

The twenty-one links are listed below and shown in Figure 4:

Link No.	Route No. or Road Name	Location	Length (miles)
1	CR 542	from CR 643 (Pleasant Mills) to CR 653 (Wading River)	9.9
2	CR 653 & Stage Road	from CR 542 (Wading River) to US 9 (Tuckerton)	8.0
3	US 9 & NJ 167	from CR 539 (Tuckerton) to Garden State Parkway Interchange 50 (New Gretna)	7.5
4	Garden State Parkway	from NJ 167 (GSP Interchange 50, New Gretna) to US 9 (GSP Interchange 48, Chestnut Neck)	2.4
5	US 9	from Garden State Parkway Interchange 48 (Chestnut Neck) to CR Alt 561 (Smithville)	3.9
6	CR Alt 561	from US 9 (Smithville) to Riverside Drive (Port Republic)	3.4
7	Riverside Drive & Mill Road	from CR Alt 561 to CR 624 (Port Republic)	2.0
8	CR 624	from Mill Road (Port Republic) to Mannheim Ave. (Egg Harbor City)	1.8
9	CR 624	from Mannheim Ave. (Egg Harbor City) to CR 653 (South of Weekstown)	4.9
10	CR 563, CR 643 & CR 623	Pleasant Mills, Green Bank and Weekstown	8.5
11	CR 542, CR 658 & CR 623	from CR 623 (Pleasant Mills) to south edge of Elwood	7.3
12	CR 623 & CR 559	from south edge of Elwood to Atlantic County Park at Lake Lenape (Mays Landing)	10.1
13	CR 559, NJ 50 & US 40	from Atlantic County Park at Lake Lenape (Mays Landing) to Hamilton/Weymouth Township Line	1.6
14	NJ 50	from Hamilton/Weymouth Township Line to NJ 49 (Tuckahoe)	11.5
15	CR 649	from NJ 50 (Corbin City) to NJ 49 (Head of River)	4.1
16	NJ 49	from NJ 50 (Tuckahoe) to CR 649 (Head of River)	4.3
17	CR 548	from NJ 49 (Head of River) to NJ 47 (Port Elizabeth)	9.2



Link No.	Route No. or Road Name	Location	Length (miles)
18	NJ 47	from CR 548 (Port Elizabeth) to CR 610 (Dennisville)	15.3
19	CR 610	from NJ 47 (Dennisville) to CR 550 (Woodbine)	3.4
20	CR 550	from CR 610 (Mt Pleasant) to Woodbine/Dennis Township Line	5.3
21	CR 550 & CR 605	from Woodbine/Dennis Township Line (Belleplaine) to CR 548 (Head of River)	4.2

Figure 4: Byway Links



## Link 1: CR 542 from CR 643 (Pleasant Mills) to CR 653 (Wading River)

Length	9.9 miles
County	Burlington, Atlantic
Municipalities	Mullica, Washington
Places	Pleasant Mills, Batsto, Crowleytown, Tylertown, Herman, Green Bank, Wading River
Visual Survey Segments	A16, B04-B09, B03 (partial)
Pinelands Management Areas	Preservation – B03 (partial)-B09, A16 Special Agricultural Production - B05 Pinelands Village – B08 (Tylertown), B07 (Herman & Green Bank), B05 (Lower Bank)
Public land management	Batsto Village – B09 Wharton State Forest – B04-B09, A16 Crowley’s Landing at Wharton State Forest – B09

### **Pleasant Mills to Batsto**

#### *Visual survey segment A16*

This section of the corridor is within the Pinelands Commission’s Preservation management area. It is a very small portion of the byway adjacent to Nescochague Lake with cranberry bogs to the west. This segment traverses the Mullica River in Pleasant Mills. On the east side of the Mullica River, it travels through Wharton State Forest into Batsto.

### **Batsto to Green Bank**

#### *Visual survey segments B07–B09*

This corridor section continues to be bordered on both sides by Wharton State Forest (from Pleasant Mills through Batsto to Crowleytown) and the Pinelands Commission’s Preservation management area. The eastern end of this section contains the Pinelands Village management areas of Tylertown, Herman, and Green Bank.

### **Green Bank to Wading River**

#### *Visual survey segments B03 (partial)–B06*

This section connects the Pinelands Village management area of Green Bank (near the intersection with CR 563) to the Village Management area of Lower Bank (bordering on the south of the byway). It then continues on to Wading River. Most of this section is located in Pinelands Preservation management area.

### **Link 1 Management Capacity Summary**

The scenic byway corridor along CR 542 has a generally high level of protection based on both public land ownership and Pinelands land use regulations. Three areas, however, were identified for further consideration, all in Pinelands Village management areas that include Tylertown, Herman, Green Bank and Lower Bank. A telephone survey confirmed that the scenic byway through these areas is likely to retain its rural character due to restrictive local zoning. While there is currently limited pressure for development here, as one of the most rural Townships supporting the Byway, Washington Township feels it has a limited capacity to manage change.

## Link 2: CR 653 & Stage Road from CR 542 (Wading River) to US 9 (Tuckerton)

Length	8.0 miles
County	Burlington, Ocean
Municipalities	Bass River, Little Egg Harbor
Places	Wading River, Leektown, West Tuckerton
Visual Survey Segments	B01-B03 (partial), O02-O03
Pinelands Management Areas	Preservation – B01-B03 (partial) Rural Development – O03 Regional Growth – O02
Public land management	Bass River State Forest – B01

### **Wading River to Burlington/Ocean County line**

*Visual survey segments B03 (partial) – B01*

This corridor section is primarily within a Pinelands Preservation management area and includes the Bass River State Forest located on both sides of the byway from Leektown east to the Burlington/Ocean county line.

### **Burlington/Ocean County line to West Tuckerton**

*Visual survey segments O03 – O02*

This section of the byway corridor begins in Little Egg Harbor Township, and is divided equally between Rural Development and Regional Growth areas. From the Burlington/Ocean county line at the eastern edge of the Bass River State Forest, and the eastern edge of the Preservation Area, west to Otis Bog Road, this section of the corridor is Rural Development on both sides of the byway, as the land uses shift from forest to rural. It transitions to more suburban development farther east. Then from Otis Bog Road to US 9, the byway is within a Regional Growth area where the land uses start as rural and become more suburban, terminating at a commercial node at US 9. This entire section of corridor is located in the Pinelands National Reserve, but outside of the state designated Pinelands Area.

### **Link 2 Management Capacity Summary**

The scenic byway corridor along CR 653 has a generally high level of protection. From the Burlington/Ocean county line, along Stage Road to its terminus at US 9 in West Tuckerton the character of the byway shifts enormously as the byway user travels from Pinelands management areas Preservation through Rural Development to Regional Growth. In terms of land use experience, the byway user travels from forest to rural to suburban to commercial. One area of focus, stretching from the Burlington/Ocean County line to West Tuckerton was evaluated further. Through an evaluation of zoning and a telephone survey with Little Egg Harbor, little change is likely to occur along this section of the byway due to restrictive residential zoning and lack of developable land.

## Link 3: US 9 and NJ 167 from CR 539 (Tuckerton) to Garden State Parkway Interchange 50 (New Gretna)

Length	7.5 miles
County	Ocean, Burlington
Municipalities	Tuckerton, Little Egg Harbor, Bass River
Places	Tuckerton, West Tuckerton, Giffordtown, Bass River, New Gretna
Visual Survey Segments	O01, O04-O05, B11-B15
Pinelands Management Areas	Preservation – B11 (partial)-B12 (partial) Forest – B13-B15, B11 Rural Development – O05 Regional Growth - O01 (partial), O04-O05 Pinelands Town - O01 (partial) (Tuckerton Borough) Pinelands Village – B11-B14 (New Gretna)
Public land management	Edwin B. Forsythe National Wildlife Refuge – B15 Bass River State Forest – B15

### **Tuckerton to Bass River east of the GSP in New Gretna**

*Visual survey segments O01, O04 – O05, B13 (partial) – B15*

This corridor section traverses four Pinelands management areas, starting with Pinelands Town (Tuckerton Borough), Regional Growth (West Tuckerton), Rural Development (Giffordtown), then Forest to where the Bass River intersects with the GSP east of New Gretna. The corridor is within the Bass River State Forest for approximately one-fifth of the distance of this section. Directly to the west and abutting the Bass River State Forest, the section runs along the Edwin B. Forsythe National Wildlife Refuge on the south side of the byway. The byway corridor here is also located in the Pinelands National Reserve, but outside of the State designated Pinelands Area.

### **Bass River east of the GSP in New Gretna to GSP Interchange 50**

*Visual survey segments B11 – B13 (partial)*

This leg of the link is primarily within a Pinelands Village management area containing New Gretna located on the western side of the GSP. This area begins where the GSP crosses the Bass River south on US 9 to where NJ 167 meets GSP interchange 50. The corridor is outside the Pinelands Village management area near the southern edge of Link 3, just north of GSP Interchange 50 where there is a small section of Preservation area to the west of the byway, then a small section of Forest on both sides of the byway.

### **Link 3 Management Capacity Summary**

The scenic byway corridor along US 9 and NJ 167 has a mixed level of protection based on both public land ownership and Pinelands land use regulation due to the fact that most of the link is within the Pinelands National Reserve Area, yet outside of the Pinelands Area. The area of Link 3 not in the PNR area is primarily the Pinelands Village management area of New Gretna. Two general areas were identified for more focused study in Link 3. One area stretches from Tuckerton Borough, through Little Egg Harbor Township and minimally enters Bass River Township. The other area encompasses and is around the village of New Gretna.

As reported in a telephone survey, the focus area within Tuckerton Borough is unlikely to see any substantial change in use or character due to the borough's thorough land use regulations and its limited build-out potential. It should be noted that Tuckerton is in the process of Plan



Endorsement and Cross Acceptance, has an updated Master Plan and is considering the benefits of the New Jersey Main Street Program.

The corridor in Little Egg Harbor Township has potential to experience change along US 9, where it is zoned for General Business and Highway Businesses and allows commercial development. Unlike Stage Road, described in Link 2, Route 9 offers both build out potential and more lenient zoning.

It should be noted that without performance and design standards, Little Egg Harbor uses Site Plan Review to address issues of buffers and visual quality. For example, recently the Planning Board has required 50 foot park-like landscaped buffers in front of non-residential projects and all parking to be located to the rear of the structure. The Township is in the process of Cross Acceptance, which will create a partnership between the Township and the state for smart growth initiatives. The process, which is likely to conclude within two years, will result in recommended changes in land use regulations. The Township feels that they are likely to have the capacity to manage land use along the corridor.

The second focus area in Link 3 includes lands in and around New Gretna in Bass River Township. The focus area is within the Village management area where more diversity of development is allowed by the Pinelands Comprehensive Management Plan and where local zoning districts include Village Residential and Village Center. Permitted uses within Village Residential are generally restricted to single family though the Township is challenged to maintain the three acre minimum lot size it desires. Village Center zoning includes both single family residential and commercial development. Here the Township is trying to create regulations that will allow new development and redevelopment to reflect historic small scale village center development. An impediment to this desired development is the NJ Department of Transportation's set back requirements of fifty feet from Route 9. New Gretna and the general residential area around it has build out potential that the Township hopes to capitalize on to help it create a walkable village center and supporting neighborhoods that protect the area's resources and rural character.

Bass River, though entirely dependent on volunteer boards and officials to direct and manage land use, has recently begun two initiatives to affect change, including updating zoning regulations and rewriting the master plan for New Gretna.

**Link 4: Garden State Parkway at Interchange 50 over Mullica River from NJ 167 (New Gretna) to US 9 at Garden State Parkway Interchange 48 (Chestnut Neck)**

Length	2.4 miles
County	Burlington, Atlantic
Municipalities	Bass River, Port Republic
Places	Chestnut Neck
Visual Survey Segment	B10
Pinelands Management Areas	Preservation – B10 Forest – B10
Public land management	Port Republic WMA – B-10

**Garden State Parkway at Interchange 50 over Mullica River from NJ 167 (New Gretna) to US 9 (Chestnut Neck) at GSP Interchange 48**

*Visual survey segment B10*

The majority of the length of this link is within the Pinelands Forest management area, except near the southern end where the byway crosses the Mullica River and a Pinelands Preservation management area is located to the west of the byway. South of the Mullica River, this corridor abuts the Port Republic WMA. To the east of the GSP is the area that is within the Pinelands National Reserve PNR, but outside of the State designated Pinelands Area.

**Link 4 Management Capacity Summary**

The scenic byway corridor along the GSP throughout this link has a generally high level of protection afforded it by restrictive Pinelands regulations and is unlikely to experience a change in use or character. There were no areas requiring further study within Link 4.

**Link 5: US 9 from Garden State Parkway Interchange 48 (Chestnut Neck) to CR Alt 561 (Smithville)**

Length	3.9 miles
County	Atlantic
Municipalities	Galloway, Port Republic
Places	Johnsontown, Higbeeville, Smithville
Visual Survey Segments	A12 (partial), A13-A15
Pinelands Management Areas	Forest - A13-A15 Rural Development - A12-A13
Public land management	Edwin B. Forsythe NWR – A13-A15

**US 9 from Garden State Parkway Interchange 48 (Chestnut Neck) to CR Alt 561 (Smithville)**

*Visual survey segments A12 (partial), A13 – A15*

Link 5 is a unique link in terms of regulatory land use control because along its entire western edge is Port Republic City which is neither within the Pinelands Reserve, nor the Pinelands Area, so there are no Pinelands management areas designated for that geographic area, nor does the Pinelands Commission have any development review authority. To the east of the byway, for the entire length of Link 5, is the PNR area where the Pinelands Commission has only an advisory role in development review. The link, on the east side of the byway, abuts the Edwin B. Forsythe NWR in byway **Segments A15, A14, and A13**, to the east of US 9 in

Galloway Township, and is within the Pinelands Forest and Rural Development management areas.

**Link 5 Management Capacity Summary**

The scenic byway corridor along US 9 within Link 5 has a mixed level of protection due to the fact the land along the east side is within the PNR zone, and the land to the west of the roadway does not share that protection. The PNR area, within Link 5, is also predominantly a National Wildlife Refuge thereby adding to the degree of protection through public ownership. The underlying Pinelands management area designation is generally Forest contributing a fairly high degree of protection for the eastern half of this Link. The entire western length of link 5 was included for review since it is outside the PNR. This review included lands in both Port Republic City and Galloway.

The route in Port Republic City runs through lands zoned residential, conservation and preservation with two Commercial Marine districts, primarily built out and a small pocket retained for commercial growth along Route 9 as it reaches the Galloway Township border. The minimum lot size for development within Port Republic City is one acre, and within Agricultural Residential districts it is five acres. Port Republic City has restrictive local zoning and a newly revised Master Plan in place, giving it confidence that it has the institutional capacity to preserve the existing character along the byway corridor.

In Galloway Township, the focus area along Route 9 includes rural residential areas supported by land use regulations created to preserve the existing character. As the corridor nears CR 561 it goes through a locally zoned Community Commercial district, that allows both detached and attached single family dwellings, as well as community commercial facilities that include retail and service facilities, business and professional offices, restaurants, hotels and the like. This area appears to have build-out capacity and the potential for a change in character. Results of the telephone survey note that Galloway has indicated an interest in strengthening its ability to maintain the Township’s rural character whether through regulations or an open space acquisition strategy.

**Link 6: CR Alt 561 from US 9 (Smithville) to Riverside Drive (Port Republic)**

Length	3.4 miles
County	Atlantic
Municipalities	Galloway, Port Republic
Places	Smithville
Visual Survey Segments	A11(partial)-A12 (partial)
Pinelands Management Areas	None
Public land management	None

**CR Alt 561 from US 9 (Smithville) to Riverside Drive (Port Republic)**

*Visual survey segments A11 (partial) – A12 (partial)*

Link 6 is special case in terms of land use control because it is outside both the Pinelands Area and the Pinelands National Reserve. Therefore, development review is the sole responsibility of the municipality. Link 6 was studied further because of the reliance on municipal controls to guide development.

### Link 6 Management Capacity Summary

Link 6 lies within Galloway Township and Port Republic City. In Galloway Township the section of this link between Route 9 and Smithville Boulevard is zoned Planned Community Commercial District (CC), allowing a mix of commercial, single-family, and planned unit developments with attached or detached residential units. From Smithville Boulevard to the municipal boundary with Port Republic City the byway corridor is zoned Neighborhood Residential (NR), in which single-family detached residences are the primary permitted land use. However, the NR district also allows planned unit developments for which preliminary approval was received prior to a 1988 ordinance change, which explains the continuing build-out of residential developments in this portion of the corridor. Galloway's telephone survey concluded that change was unlikely here.

Within Port Republic City, this focus area runs through residential zones with minimum lot sizes of one and five acres, which indicates it is unlikely to experience substantial change.

### Link 7: Riverside Drive and Mill Road from CR Alt 561 to CR 624 (Port Republic)

Length	2.0 miles
County	Atlantic
Municipalities	Port Republic
Places	Port Republic town center and park, Clark's Mill, Unionville
Visual Survey Segments	A08 (partial) – A11 (partial)
Pinelands Management Areas	None
Public land management	Port Republic City Recreation area

### Riverside Drive and Mill Road from CR Alt 561 to CR 624 (Port Republic)

*Visual survey segments A08 (partial) – A11 (partial)*

Link 7 shares the same management and control issues as Link 6.

### Link 7 Management Capacity Summary

The scenic byway corridor along Riverside Drive and Mill Road in Port Republic City is also dependent on local land use regulations to effect development. There are multiple zoning districts in this focus section though primarily residential zones with minimum lot sizes of one and five acres. The telephone survey revealed that all are very restrictive and the Township feels change is highly unlikely.

## Link 8: CR 624 (Clark’s Landing Road) from Mill Road (Port Republic) to Mannheim Ave. (Galloway)

Length	1.8 miles
County	Atlantic
Municipalities	Port Republic, Galloway
Places	Unionville
Visual Survey Segments	A07-A-08 (partial)
Pinelands Management Areas	Preservation – A07-A08 Forest – A07-A08 Rural Development – A07 Pinelands Village – A-08
Public land management	Port Republic WMA – A08

### CR 624 from Mill Road (Port Republic) to Mannheim Ave. (Egg Harbor City)

*Visual survey segments A07 – A08 (partial)*

This corridor section is varied in its Pinelands management areas starting in Pinelands Village on both sides of the byway (near the GSP west of Unionville in Port Republic), then Preservation Area to the north, with Rural Development and Forest Areas to the south, northwest through Galloway Township. Port Republic WMA is located to the northeast along the GSP toward the Mullica River. The Preservation Area stretches all of the way between CR 624 and the Mullica River.

### Link 8 Management Capacity Summary

Link 8 along CR 624 has a high level of protection for the half of the Link in the Preservation and Forest management areas. The other half of this byway link in Pinelands Village and Rural Development is dependent on local decisions since in these management areas any land use may be permitted at a municipality’s option as long as the CMP’s environmental conditions are met. One area, just west of the GSP was assessed further and found to be locally zoned a Pinelands Village Agricultural district where change is very unlikely.

## Link 9: CR 624 (Clark’s Landing Road) from Mannheim Ave. (Egg Harbor City) to CR 563 (south of Weekstown)

Length	4.9 miles
County	Atlantic
Municipalities	Galloway, Egg Harbor City
Location / Description	Weekstown
Places	Clarks Landing, Gloucester Landing
Visual Survey Segments	A05-A06
Pinelands Management Areas	Preservation – A05-A06 Forest – A05-A06
Public land management	Several small parcels under NJ Natural Lands Trust

This corridor link is uniform in terms of Pinelands Commission management areas with Preservation Areas on the north side of the byway from CR 624 to the Mullica River, and Forest Areas on the south side.

### Link 9 Management Capacity Summary

Future development is unlikely to change the character of the byway corridor as it traverses Egg Harbor City due to the protective regulations of Pinelands Forest and Preservation Management Areas as well as local 20-acre residential and preservation area zoning.

### Link 10: CR 563, CR 643 and CR 623 – Pleasant Mills, Green Bank and Weekstown

Length	8.5 miles CR 563 from CR 624 to CR 643: 0.8 miles CR 563 from CR 643 to CR 542: 2.2 miles CR 623/643 from CR 563 to CR 542: 5.5 miles
County	Atlantic
Municipalities	Egg Harbor City, Mullica, Washington
Places	Weekstown, Green Bank, Sweetwater, Pleasant Mills
Visual Survey Segments	A01-A04
Pinelands Management Areas	Preservation – A01 – A04 Forest – A01-A02, A04 Pinelands Village – A02 (Sweetwater), A03 (Weekstown & Green Bank)
Public land management	Wharton State Forest – A03

#### CR 563 from CR 624 (south of Weekstown) to CR 643 (Weekstown)

*Visual survey segments A04, A02 (partial)*

For the first half of this link the corridor travels through the Preservation management area on the north side of the byway, and the Forest management area on the south side (similar to Link 9 above). The second half of the link is within the Pinelands Village management area of Weekstown.

#### CR 563 from CR 643 (Weekstown) to CR 542 (Green Bank)

*Visual survey segment A03*

This corridor is a connecting link between Link 1 and Links 10a and 10c and covers three management areas. This corridor begins in the Pinelands Village of Weekstown. The middle third of the link (as the byway crosses the Mullica River), directly abuts Green Bank State Forest to the west of the byway, and is within the Pinelands Commission Preservation management area. The final section of corridor is within the Pinelands Village of Green Bank, from the edge of the Mullica River north to CR 542.

#### CR 643 and CR 623 from CR 563 (Weekstown) to CR 542 (Pleasant Mills)

*Visual survey segments A02 (partial), A01.*

This corridor section is predominantly within several Pinelands Village management areas. Starting in Weekstown, the Pinelands Village management area is on both sides of the byway. It is followed briefly by Preservation area to the north and Forest to the south before entering the Pineland Village management area to Sweetwater on both sides of the byway. At the northwest edge of the Sweetwater Pinelands Village area the corridor management area changes back to Preservation on both sides of the byway to Pleasant Mills at CR 542.

### Link 10 Management Capacity Summary

This link of the scenic byway has a moderate to high level of protection. Two areas of further study were identified along Link 10 – Weekstown and an area that begins just west of

Weekstown through Sweetwater. Local zoning for both areas are Village districts where regulations allow primarily single family, agriculture and forestry intended to preserve the area's existing character. These regulations and the lack of developable land make a change in the byway's character here unlikely.

## Link 11: CR 542, CR 658 and CR 623 from CR 623 (Pleasant Mills) to south edge of Elwood

Length	7.3 miles
County	Atlantic
Municipalities	Mullica
Places	Pleasant Mills, Nesco, Elwood
Visual Survey Segments	A17-A19
Pinelands Management Areas	Preservation - A17 Forest – A17 - A19 Agricultural Production – A17 Pinelands Village – A17 (Nesco), A19 (Elwood)
Public land management	Hammonton Creek (West) WMA A18-A19

### **Pleasant Mills to Nesco (southern edge)**

#### *Visual survey segment A17*

This section, on the northerly side of the byway, abuts cranberry bogs and is within the Pinelands Agricultural Production management area, from Pleasant Mills to just east of Nesco on CR 542. East of Nesco and the intersection of CR 542 and CR 658, the corridor changes to Pinelands Village management area on both sides of the byway through Nesco. On the southerly side of the corridor half is Pinelands Preservation management area (closer to Pleasant Mills), and, half Pinelands Village management area (Nesco). In the center of this segment, on the southerly side of the byway, the two Pinelands management areas of Agricultural Production and Forest minimally touch the corridor.

### **Nesco (southern edge) to Elwood (northern edge)**

#### *Visual survey segments A18, A19 (partial)*

This corridor link on the westerly side of the SPNHT scenic byway, is within the Hammonton Creek (west) WMA and is within the Pinelands Forest management area on both sides of the byway.

### **Elwood (northern edge) to Elwood (southwestern edge)**

#### *Visual survey segment A19 (partial)*

This section is primarily within the Pinelands Village management area containing Elwood. At the southwestern edge of Elwood the corridor shifts back to Forest management area.

### **Link 11 Management Capacity Summary**

The three sub areas of Link 11 have a moderate to high level of protection since a majority of the byway link is within Forest and Pinelands Village management areas, with smaller areas in the Agricultural Production and Preservation areas. However, two areas were flagged for further analysis: Nesco and Elwood. Mullica Township local zoning districts for these focus areas included highly restrictive Village districts (as discussed under Link 10) and Village Center districts. The Village Center districts of Nesco and Elwood have recently been rezoned to allow commercial and other uses, some of which require site plan approval. Increased commercial development here could include services for byway users. While there is no current pressure for



development that would change the existing character of the corridor, a proactive approach to monitoring and revising land use regulations keeps the Township well positioned to manage change along the byway.

### Link 12: CR 623 and CR 559 from south edge of Elwood to entrance to Atlantic County Park at Lake Lenape (Mays Landing)

Length	10.1 miles
County	Atlantic
Municipalities	Mullica, Hamilton
Places	Weymouth, May's Landing
Visual Survey Segments	A20-A27 (partial)
Pinelands Management Areas	Forest – A19 (partial) – A27 (partial) Regional Growth – A27 (partial)
Public land management	Makepeace Lake (North and South) WMA – A20-A21 Great Egg Harbor (Hamilton South) WMA –A26 Atlantic County Park at Weymouth Furnace - A23 Atlantic County Park at Lake Lenape – A24-A26

#### South of Elwood along CR 623 to the intersection of CR 559

*Visual survey segments A20 – A21*

This link section is within the Makepeace Lake (north and south) WMA and the Pinelands Forest management area.

#### CR 559 from the intersection with CR 623 to entrance to Atlantic County Park at Lake Lenape (Mays Landing)

*Visual survey segments A22 – A27 (partial)*

This section is predominantly within the Pinelands Forest management area, except in the southern portion of the link in Mays Landing where the byway is within a Regional Growth management area on the south side of the roadway. The Regional Growth area extends south of Lake Lenape from CR 606 to the intersection with CR 559 and east to the entrance of the Atlantic County Park at Lake Lenape. In addition to this section being primarily within the Forest management area, the easterly side of the roadway abuts two county park facilities: Atlantic County Park at Weymouth Furnace and Atlantic County Park at Lake Lenape. The Great Egg Harbor (Hamilton South) WMA is located on the eastern side of the roadway, across from the Lake Lenape County property.

#### Link 12 Management Capacity Summary

The two sub areas of Link 12 have a generally high level of protection as most of the byway in this link is Pinelands Forest management area, with a small section in Regional Growth (Mays Landing). Additionally, there is approximately 75% of this link in public ownership between the Makepeace Lake WMA, the Great Egg Harbor (Hamilton South) WMA, and the two Atlantic County Parks at Weymouth Furnace and Lake Lenape. While there appears be little potential for change along Link 12, the accessibility of multiple parks within a limited section of the byway may indicate the need for further consideration of management and interpretation opportunities.



## Link 13: CR 559, NJ 50 and US 40 from entrance to Atlantic County Park at Lake Lenape (Mays Landing) to Hamilton/Weymouth Township Line

Length	1.6 miles
County	Atlantic
Places	Mays Landing town center
Municipalities	Hamilton, Weymouth
Visual Survey Segments	A27 (partial) - A29
Pinelands Management Areas	Forest – A27 (partial), A28, A29 Regional Growth – A27 (partial), A28, A29
Public land management	Atlantic County Park at Lake Lenape – A28

This corridor link on both sides of the byway is within the Pinelands Regional Growth management area within Mays Landing with two exceptions. First, at the northwesterly end of this link, at the entrance to Atlantic County Park at Lake Lenape, the corridor on the northerly side of the roadway abuts the Pinelands Forest management area for a very small distance. Then, after the byway turns south on NJ 50, only the westerly and northerly side of the roadway remains within the Pinelands Regional Growth management area, leaving the easterly and southerly side of the roadway in Pinelands Forest management area that is in the PNR zone to the Hamilton/Weymouth township line, but outside of the State designated Pinelands Area. Within the entire SPNHT byway there are only two places where Pinelands Regional Growth management areas are located, one in the northern loop in Tuckerton in the northeast, and this one along the corridor's central spine in Mays Landing.

### Link 13 Management Capacity Summary

The scenic byway corridor along CR 559, NJ 50, and US 40 was flagged to potentially have a low level of protection as Regional Growth management areas are one of the more permissive management areas the Pinelands Commission oversees. All uses, not otherwise prohibited, may be permitted in regional growth areas. In addition regional growth areas are expected to provide a minimum number of new residential units based on densities per acre of developable land. Therefore this entire link of Mays Landing was looked at more closely.

Within Mays Landing, local zoning districts include residential zones that generally restrict development to single family residential units, planned adult communities, schools, parks and playgrounds, as well as General Commercial and Industrial Business Park (IBP) districts that allow a variety of commercial and industrial development.

Along this link, the historic cotton mill complex in Mays Landing has recently been designated a Redevelopment Area to assure preservation of the site's historic structures and provide residential units with an allowance for limited commercial development. The IBP district across the corridor from this site is now being considered for similar designation. New zoning and design standards would likely be developed if the district is designated a Redevelopment Area. As one of the most developed areas along the corridor, Mays Landing, and its potential changes, will play an important role in providing byway services and offer a distinctively different byway experience.

Change within the General Commercial district further south along the byway corridor is felt to be unlikely. As evidenced by evolving land use regulations that work to preserve local character, Hamilton is confident it has the capacity to manage potential change along the byway corridor.

## Link 14: NJ 50 from Hamilton/Weymouth township line to NJ 49 (Tuckahoe)

Length	11.5 miles
County	Atlantic, Cape May
Municipalities	Weymouth, Estell Manor, Corbin City, Upper
Places	Estell Manor, Estellville, Oakville, Corbin City
Visual Survey Segments	A30-A35, CM01 (partial)
Pinelands Management Areas	Forest – A30 – A35, CM01 (partial) Rural Development – CM01 (partial) Pinelands Village – A30 (Belcoville)
Public land management	Great Egg Harbor (Weymouth) WMA – A30-A31 Peaslee (South) WMA –A33 Atlantic County Park at Estell Manor – A31-A33 Tuckahoe (north) (MacNamara) WMA – A33 Tuckahoe (south) (MacNamara) WMA – A34-A35

### NJ 50 from Hamilton/Weymouth township line to NJ 49 (Tuckahoe)

*Visual survey segments A30 – A35, CM01 (partial)*

This corridor link is predominantly within the Pinelands Forest management area with two exceptions. The northern end of this section contains the Pinelands Village management area containing Belcoville for a small distance south of Mays Landing. The other exception is at the southern end of this section where a very small area on both sides of the byway is within the Pinelands Rural Development management area, located in Tuckahoe, just south of the Tuckahoe River. The entire corridor on the easterly side of the roadway throughout this link is within the PNR zone, where Pinelands Commission role is advisory rather than regulatory. Just north of Corbin City, at the town line, the PNR zone is located on both sides of the byway for the remainder of the link south to Tuckahoe. The corridor on the easterly side of the roadway, and southeast of Belcoville is within the Great Egg Harbor (Weymouth) WMA in Weymouth. The corridor directly south of the Great Egg Harbor (Weymouth) WMA on the easterly side of the roadway abuts the Atlantic County Park at Estell Manor. Farther south along the corridor, north of Corbin City, along the easterly side of the roadway, it abuts a small section of the Tuckahoe (MacNamara) WMA.

### Link 14 Management Capacity Summary

Link 14 along NJ 50 has a moderate to high level of protection. Most of the land designated as Pinelands Forest management area combined with the state wildlife management areas and the Atlantic County Park at Estell Manor provides a strong base for land use management. The PNR zone along the eastern half of the byway is bolstered by the state and county management of the WMAs and the park in those areas. Two areas, Belcoville in Weymouth Township and Tuckahoe in Upper Township were studied further.

In the Belcoville area, the SPNHT travels along NJ 50, the boundary of the Pinelands Area in Weymouth Township. Local zoning districts include Pinelands Village Commercial and Residential along the west side of the corridor and General Commercial and Residential-2 to the east. Along the Great Egg Harbor River and east of NJ 50 the Township is regulated by the New Jersey Department of Environmental Protection, Coastal Area Facilities Review Act (CAFRA).

Weymouth would welcome commercial development within its limited General Commercial district which has some build out potential and appropriate zoning in place. The Landing's

apartment complex within the R-2 (Residential) district is a site that receives sporadic pressure for development that may be incompatible with existing units. The Township, however, owns the balance of the site giving Weymouth adequate control over the development that may occur.

Based on the telephone survey, Weymouth feels it is well poised to manage land use and development along the byway corridor. It has active planning and environmental boards, an updated Master Plan, and state oversight through the Pineland's Commission and CAFRA for all development along the byway corridor.

As the SPNHT enters Upper Township on Route 50 it is within Link 15, however, since this focus area is primarily within Link 15, it is discussed below.

### Link 15: CR 649 from NJ 50 (Corbin City) to NJ 49 (Head of River)

Length	4.1 miles
County	Atlantic
Municipalities	Corbin City, Estell Manor
Places	Corbin City, Head of River, north side of Tuckahoe River, Warners Mill
Visual Survey Segments	A36-A37
Pinelands Management Areas	Forest – A36 – A37 Agricultural Production – A36 – A37
Public land management	Peaslee (south) WMA -A37

#### CR 649 from NJ 50 (Corbin City) to NJ 49 (Head of River)

*Visual survey segments A36 – A37*

This corridor link within Corbin City along the north side of the Tuckahoe River, from NJ 50 west to the municipal line, is within the Pinelands Forest management area. From the municipal line between Corbin City and Estell Manor west to Warners Mill, it abuts a Pinelands Agricultural Production management area on the northerly side of the roadway, with the Pinelands Forest management area continuing on the southerly side of the byway. The corridor on both sides of the byway, from Warners Mill west to Head of River, is within both the Peaslee WMA and the Pinelands Forest management area. Most of this link is within the PNR zone except for the Peaslee WMA located on the northerly side of the roadway.

#### Link 15 Management Capacity Summary

Link 15 along CR 659 has a generally high level of protection due to the amount of public land ownership and Pinelands land use regulations. The PNR zone along most of the byway is additionally bolstered by state ownership and management of the WMA. Two areas within Link 15 were identified for more detailed review, both in Estell Manor City. The local zoning for these areas includes some pockets of Highway Commercial, though the restrictions of limited community commercial facilities make substantial change unlikely. It is also noted that the Regional Growth management area in Estell Manor City has more restrictive local zoning with an Agricultural Production district. In the telephone survey the municipality's representative voiced concern regarding continued residential development and noted it was the town's desire to be more restrictive. The town is in the process of updating its Master Plan and has confidence in its ability to manage its land along the corridor.

Corbin City is represented in Link 15 as well, though there were no focus areas identified in this municipality as it is entirely within a Forest management area in the PNR. The institutional

survey team was not able to obtain zoning or complete a telephone survey with a Corbin City representative.

### Link 16: NJ 49 from NJ 50 (Tuckahoe) to CR 649 (Head of River)

Length	4.3 miles
County	Cape May, Atlantic
Municipalities	Upper, Corbin City
Places	Tuckahoe, Marshallville, Head of River, south side of Tuckahoe River
Visual Survey Segments	CM01(part)-CM03, A38
Pinelands Management Areas	Forest – CM01-CM03, A38 Rural Development – CM01 – CM02 Pinelands Village – CM01 – CM02 (Tuckahoe)
Public land management	Peaslee (south) WMA - A38 Belleplain State Forest – CM-03

#### **NJ 49 from NJ 50 (Tuckahoe) to CR 617 (Marshallville)**

*Visual survey segments CM01 – CM02*

This section of Link 16 is half Pinelands Forest management area on the northerly side of the roadway, from Tuckahoe west to Marshallville, also from NJ 49 north to the Tuckahoe River. Along the southerly side of the byway from Tuckahoe to Marshallville, the corridor begins with a very small Pinelands Rural Development management area located on the easterly side of the Pinelands Village management area of Tuckahoe; and changes to the Village management area that stretches for half the length of this link. The other half of the corridor, continuing along the south side of the roadway, is a large Pinelands Rural Development area.

#### **NJ 49 from CR 617 to CR 649 (Head of River)**

*Visual survey segments CM03, A38*

This portion of the link is within the Pinelands Forest management area. Along the southern edge, it is also within the Belleplain State Forest. The north and easterly sides of the byway are in the PNR zone. At Head of River, the Peaslee WMA is located on both sides of the byway, north of the Tuckahoe River.

#### **Link 16 Management Capacity Summary**

The scenic byway corridor along NJ 49 has a moderate to high level of protection. Most of the land has both strong land management standards and public ownership. The PNR zone along most of the byway is further strengthened by state ownership and management of the WMA. While similar to Link 15, further analysis was conducted for an area that includes both Tuckahoe and Marshallville.

As the SPNHT enters Upper Township and turns onto Route 49 it is within the local zoning district of Tuckahoe Village established to preserve the unique and historical character of the structures throughout the area and encourage appropriate redevelopment. It then traverses the Tuckahoe River district around Marshallville that generally limits development to agriculture and single family uses.

A telephone interview with the township representative confirms that Tuckahoe Village is generally built out, limiting change primarily to redevelopment and unlikely to substantially affect

the character of land use along the byway. Marshallville is restricted by water resources and protective zoning and is substantially built out making change here unlikely as well.

Bridge and road repairs are expected to improve conditions along the byway on both NJ 50 from the Tuckahoe River Bridge to Marshallville Avenue in the near future and at the site of the Mill Creek or Marshallville Avenue bridge in the long term. It should also be noted that the bridge crossing Mill Creek west of Marshallville is anticipated to be out for an extended period and an alternate route back to NJ 49 may be required.

Upper Township is confident that it has the capacity to manage land use along the corridor within its boundaries.

### Link 17: CR 548 from NJ 49 (Head of River) to NJ 47 (Port Elizabeth)

Length	9.2 miles
County	Cape May, Cumberland
Municipalities	Upper, Dennis, Maurice River
Places	Head of River, Port Elizabeth
Visual Survey Segments	CM04-CM05, C01
Pinelands Management Areas	Forest – CM04 – CM05 Pinelands Village – C01 (Port Elizabeth)
Public land management	Peaslee (south) WMA - CM04-CM05 Belleplain State Forest – CM04-CM05

#### CR 548 from NJ 49 (Head of River) to NJ 47 (Port Elizabeth)

*Visual survey segments CM04 – CM05, C01*

Link 17 abuts the Peaslee WMA on its north and Belleplain State Forest on its south for the eastern half of the length of the corridor. The western half of Link 17 is within Forest management area. The western terminus of this link contains the Village management area of Port Elizabeth.

#### Link 17 Management Capacity Summary

The corridor along Link 17 on CR 548 enjoys a high level of protection. Most of the land is designated as Pinelands Forest management area and is owned and managed by the State. The west end of Link 17 around Port Elizabeth is a focus area, but is addressed in the next section under Link 18, which contains the majority of this focus area.

## Link 18: NJ 47 from CR 548 (Port Elizabeth) to CR 610 (Dennisville)

Length	15.3 miles
County	Cumberland, Cape May
Municipalities	Maurice River, Dennis
Places	Port Elizabeth, Bricksboro, Delmont, Eldora, Dennisville
Visual Survey Segments	C02-C07, CM06-CM08
Pinelands Management Areas	Forest – C02-C04, C06-C07, CM06-CM08 Rural Development – C03-C07, CM08 Pinelands Village – C02 (Port Elizabeth & Bricksboro), C03 (East of Dorchester), C06 (Delmont), CM06 (Eldora), CM08 (North Dennis & Dennisville)
Public land management	Dennis Creek (north) WMA – CM06-CM07, C07 Heislerville (north, central, & south) WMA – C03-C05 Belleplaine State Forest – CM07-CM08 Leesburg State Prison – C05

### **NJ 47 from CR 548 (Port Elizabeth) to the Maurice River / Dennis Township line**

*Visual survey segments C02 – C07 (partial)*

This link sees a variety of management areas starting at its northern end in the Pinelands Village of Port Elizabeth followed by Bricksboro both on the easterly side of the byway, and Pinelands Forest management area on the westerly side. South of Bricksboro there is a small Pinelands Forest management area on both sides of the roadway, where the westerly side of the roadway abuts the Heislerville (north) WMA. The corridor then goes through a large Rural Development area until it returns through another Village management area to the east of Dorchester. South of the Pinelands Village management area, Link 18 continues through a Forest management area where the easterly side of the roadway abuts another property of the Heislerville (north) WMA. The next Rural Development management area located along the link contains the Leesburg State Prison on the eastern side of the roadway. Traveling south and southeast the corridor goes through the Pinelands Village of Delmont on the east and northerly side of the roadway as NJ 47 turns from heading south to east. A Rural Development management area is located to the west and south of the Delmont area.

### **NJ 47 from the Maurice River / Dennis Township line to CR 610 (Dennisville)**

*Visual survey segments C7 (partial), CM06 – CM08.*

Between the Pinelands Villages of Delmont and Eldora is the Dennis Creek North WMA on the southerly side of the roadway and it is also a Forest area on both sides of the byway where the West Creek flows south to the ocean. The Eldora Village management area is located on the northerly side of the byway with the Dennis Creek North WMA and Pinelands Forest management area to the south. Between Eldora and North Dennis Pinelands Villages is another area of Forest on both sides of the roadway. At the eastern end of this link is a Pinelands Village management area on the northern side of the byway that comprises the villages of North Dennis and Dennisville. The corridor on the southerly side of the roadway, south of North Dennis, abuts the Belleplaine State Forest and is a Forest management area. A Rural Development management area is located south of the Dennisville Village area to the intersection with NJ 47 and CR 610 in Dennisville.

### **Link 18 Management Capacity Summary**

The scenic byway corridor along Link 18 has a moderate level of protection as its pattern of management areas nearly alternates between the three areas of Village, Forest, and Rural Development. Since Rural Development management areas are transitional areas that are



intended to balance environmental and development values between conservation and growth areas, municipalities have flexibility in providing for development.

Focus areas were identified along the entire length of Link 18 from Port Elizabeth to Dennisville, including Bricksboro, the Leesburg site, and Delmont in Maurice River Township and Eldora, and North Dennis in Dennis Township.

Focus areas in Maurice River include the Pinelands Village and Rural Development management areas. Corresponding local zoning districts include Pinelands Village Center (PVC3) districts that allow single family and village-oriented commercial or retail with a typical 3.2 acre min lot size. It also includes a Pinelands Conservation District for single family and horticultural uses requiring a minimum lot of 25 acres for residential units and a similar Pineland Rural Development Area – Conservation District requiring a fifteen acre minimum lot for single family units. The Village Highway Business (PVHB) district does allow for village-oriented business and appears to have capacity for additional build-out on multiple lots.

A notable and large landmark along this link is the Leesburg Correctional Facility. Local zoning (PSI) here allows redevelopment for agricultural and horticultural uses including research centers or facilities, as well as state institutions, campgrounds, parks and similar uses.

The final local zoning district to consider in Maurice River Township is the Pinelands Village Business district in Delmont that allows a large variety of uses from single family detached to many businesses including conditional uses such as neighborhood shopping centers, gasoline service stations, and multi-family dwellings.

Development along the length of the corridor in this link must be responsive to two, and sometimes three, sets of regulations since the eastern side of the road is in the Pinelands Area, and the western side of the road is within the CAFRA zone. While CAFRA doesn't regulate land uses or generally affect the visual quality of the built environment, it may limit development by requiring a higher level of commitment to environmental standards. The telephone survey with Maurice River confirmed that, with the combination of no pressure for change and restrictive regulations, there is little potential for change along this section of the link.

The focus areas of Eldora and North Dennis up to Dennisville in Dennis Township are all within several Pinelands Village management areas and Pinelands Village and Residential local zoning districts (PV and R-3) where only single family residential uses, playgrounds, conservation area, churches and schools are permitted. Minimum lot sizes are three acres with a 100 foot to 200 foot setback requirement. As in abutting Maurice River Township, Dennis Township is experiencing no development pressure and sees change as highly unlikely. Capacity for handling any change in Dennis Township, however, would be limited due to restricted staffing.

## Link 19: CR 610 from NJ 47 (Dennisville) to CR 550 (Woodbine)

Length	3.4 miles
County	Cape May
Municipalities	Dennis, Woodbine
Places	Dennisville, Mt Pleasant
Visual Survey Segments	CM09-CM10
Pinelands Management Areas	Forest – CM09 – CM10 Pinelands Town – CM10 (Woodbine Borough) Pinelands Village – CM09 (Dennisville)
Public land management	Cape May NWR, Great Cedar Swamp Division – CM10

### CR 610 from NJ 47 (Dennisville) to CR 550 (Woodbine)

*Visual survey segments CM09 – CM10*

This corridor link is predominantly encompassed by Forest management area, except at the southwestern end at the Dennisville Village area on the northerly side of the byway, and at the northeastern end of the byway in Mt Pleasant at the Town management area of Woodbine Borough. Along the southeast side of the roadway there are two access points to the Cape May National Wildlife Refuge's Great Cedar Swamp Division that are within the Pinelands Forest management area and the PNR zone.

### Link 19 Management Capacity Summary

The scenic byway corridor along CR 610 has a moderate level of protection as the Town management area allows commercial and industrial development with flexibility by the municipality. This particular Pinelands Town is one of only two Town management areas along the SPNHT byway, with the other being Tuckerton Borough in the northeast corner of the northern loop of the byway.

Two areas, not afforded the protection of public ownership or the most restrictive Pineland's management, and therefore considered further are Dennisville in Dennis Township and just a small section along CR610 in Woodbine before the byway turns on CR 550. As the balance of the Woodbine focus area is in Link 20, it is considered within that link.

Dennisville is within a Pinelands Village management area and has Pinelands Village and Highway Commercial zoning districts, again allowing only single family, conservation, playgrounds, churches and schools in the Village district and restricted commercial development in the Highway Commercial district where it has seen some conversions from residential to gift and antique shops. Dennisville is well built out with little capacity for additional growth and is unlikely to change character.

## Link 20: CR 550 from CR 610 (Mt Pleasant) to Woodbine/Dennis township line

Length	5.3 miles
County	Cape May
Municipalities	Woodbine
Places	Mt Pleasant, Woodbine Borough
Visual Survey Segments	CM11-CM14(partial)
Pinelands Management Areas	Pinelands Town – CM11 – CM14 (partial) (Woodbine)
Public land management	None

### **CR 550 from CR 610 (Mt Pleasant) to Woodbine/Dennis township line**

*Visual survey segments CM11 – CM14 (partial)*

Link 20 is entirely the within the Town management area of Woodbine Borough, from Mt Pleasant in the southeast to the Woodbine and Dennis town line at the northwest end of this link on CR 550.

### **Link 20 Management Capacity Summary**

The Pinelands Town management area of Woodbine Borough comprises the entirety of Link 20 and has a low to moderate level of protection from Pinelands regulations as Pinelands Town areas are largely dependent on local controls to regulate growth. This suggested that the area be studied further to determine how local regulations would manage change along this section of the corridor.

While Woodbine is one of the most developed areas along the SPNHT corridor hosting an airport, industrial park zoning, a state institution for the disabled, and densely developed residential neighborhoods, there are opportunities for continued development that the Borough is taking steps to address. Residential build-out potential for sites directly abutting the corridor is unlikely to change the corridor’s existing character as one, two and five-acre minimum lot sizes are standard for the Borough’s residential and agricultural districts. The Town Commercial zone invites a greater diversity of development, allowing both single and multi-family residential, as well as commercial development. East of Woodbine’s commercial center and residential districts, the Borough is developing two new districts intended to enhance light industrial and commercial development around the airport. This could change the intensity of development in the area and provide expanded services for byway travelers.

The telephone interview with the Mayor of Woodbine confirms that the Borough has the capacity to manage land use along the corridor. The Borough is in the process of updating zoning on both sides of CR550 as well as creating a master plan for the airport site. It has also recently received completed a Bicycle, Pedestrian and Equestrian Planning study that inventoried, assessed and recommended circulation improvements including sidewalks, traffic calming, and recreation trails.

## Link 21: CR 550 and CR 605 from Woodbine/Dennis township line (Belleplain) to CR 548 (Head of River)

Length	4.2 miles
County	Cape May
Municipalities	Dennis, Upper
Places	Woodbine Borough, Belleplain
Visual Survey Segments	CM14 (partial)-CM16
Pinelands Management Areas	Forest – CM14-CM16 Pinelands Village – CM15 (Belleplain)
Public land management	Belleplain State Forest – CM14-CM16

### CR 550 to CR 605 from Woodbine/Dennis township line to Belleplain

*Visual survey segments CM14 (partial)*

This portion of Link 21 is entirely within the Belleplain State Forest and the Pinelands Forest management area, from the Woodbine and Dennis town line in the southeast of this link on CR 550, to the southeast edge of the Pinelands Village management area containing Belleplain.

### CR 550 at CR 605 (Belleplain) to CR 548 (Head of River)

*Visual survey segments CM15 – CM16*

This section includes the Pinelands Village management area of Belleplain on CR 550, and continues northeast on CR 605 beyond the Belleplain Village to Head of River. Northeast of the Belleplain Pinelands Village is Belleplain State Forest, that is also a designated Forest management area all of the way to Head of River.

### Link 21 Management Capacity Summary

The scenic byway corridor along CR 550 and CR 605 has a moderate to high level of protection due to a combination of public land ownership and the predominance of restrictive Forest management areas. The one area studied further was in Belleplain in a Pinelands Village management area and the same local zoning district that restricts development to single family residential, parks, schools and churches. Belleplain is generally built out with little opportunity for growth.

## Summary of Management Issues

This review of public land ownership patterns, Pinelands management area designation, and local land use regulation reveals a high level of corridor management capacity along most of the scenic byway corridor:

- Public land ownership dominates large areas along the corridor and ensures that protection of the natural environment will be a top priority. Access, visibility, maintenance and interpretation are the management issues generally associated with these lands.
- The management areas defined by the Pinelands Comprehensive Management Plan provide effective and consistent regulation along the length of the scenic byway as local zoning is highly responsive to its intent. Outside Pinelands Forest and Preservation management areas, such as in local village centers and along regional highways where an increase in density or diversity of use is desired, the challenge will

be to assure that new and redevelopment will support the desired character and functionality of the scenic byway.

- While many municipalities along the corridor rely on part time and volunteer staff, boards and commissions to develop, administer and enforce land use regulations, most feel that they have the tools and the capacity to continue managing land use issues. Providing appropriate resources and strategies, and identifying opportunities for supportive services will be fundamental to promoting effective management along the entirety of the corridor.

This study identifies several localized areas where additional management measures might be considered, as follows:

- Little Egg Harbor Township, Route 9 commercial area (Link 3)
- New Gretna, Bass River Township (Link 3)
- Route 9 and 561 near and in Smithville, Galloway Township (Link 5)
- Nesco, Mullica Township (Link 11)
- Elwood, Mullica Township (Link 11)
- Hamilton Township (Link 12)
- Mays Landing, Hamilton Township (Link 13)
- Belcoville, Weymouth Township (Link 14)
- Between Tuckahoe and Marshallville, Upper Township (Link 16)
- Woodbine, airport and industrial area, Woodbine Borough (Link 20)

These management focus areas will be addressed in subsequent phases of the corridor management planning process.

## Attachments

### Municipal Information Sources

The information in this report on local institutional management capacity was gathered from two primary sources: review of zoning ordinances and maps, and telephone interviews with municipal officials. The following is a list of documents and contacts for each municipality:

Municipality	Documents	Contact
Washington Township	Zoning Map	Dudley Lewis*, Committeeman telephone interview, July 9, 2008
Bass River Township	Zoning Map (Pinelands Area only)	Tim Lovingham* telephone interview, July 21, 2008
Tuckerton Borough	Zoning Map, Zoning Ordinance, chapter 255	Elizabeth Moritz* telephone interview, July 16, 2008
Little Egg Harbor Township	Zoning Map	Gene Kobryn* telephone interview, July 9, 2008
Galloway Township	Zoning Map, Land Management Ordinance, chapter 223,	Eric Shrading* telephone interview, July 15, 2008
Port Republic City	Zoning Map	Mayor Gary Giberson* telephone interview, July 14, 2008
Egg Harbor City	Zoning Map,	Dick Colby, e-mail interview July 22, 2008
Mullica Township	Zoning Map, Land Development Ordinance, chapter 144	Kathy Chasey* telephone interview, July 15, 2008
Hamilton Township	Zoning Map, Land Use and Development Ordinance, chapter 203	Phil Sartorio* telephone interview, July 15, 2008
Weymouth Township	Zoning Map, Land Use Ordinance, chapter 155	Michael Hogan* telephone interview, July 15, 2008
Estell Manor City	Zoning Map, Zoning Ordinance, chapter X	James Owen* telephone interview, July 16, 2008
Corbin City	Zoning Map	Carl Saunders telephone interview, unavailable
Upper Township	Zoning Map, Zoning Ordinance, chapter XX	Paul Dietrich Sr. telephone interview, July 28, 2008
Dennis Township	Zoning Map	Elieen McFilin telephone interview, July 15, 2008
Woodbine Borough	Zoning Map	Mayor William Pikolycky* telephone interview, July 21, 2008
Maurice River Township	Zoning Map	Linda Costello* telephone interview, July 16, 2008

\*Member, Heritage Trail Committee



## Telephone Survey Format

**Southern Pinelands Natural Heritage Trail  
Scenic Byway Corridor Management Plan – Task 7: Institutional Survey**

Script / Notes for Contacting Municipalities Re: Corridor Management Capacity

*[Reference information]*

Municipality: **MUNICIPALITY**

Reference documents:

Zoning available on line?

Other documents?

Focus section 1:

In Pinelands Area?

In Pinelands National Reserve?

Pinelands Management Area(s)

Local zoning district(s)

Byway link

Focus section 2:

In Pinelands Area?

In Pinelands National Reserve?

Pinelands Management Area(s)

Local zoning district(s)

Byway link

Focus section 3:

In Pinelands Area?

In Pinelands National Reserve?

Pinelands Management Area(s)

Local zoning district(s)

Byway link

*[Initial contact]*

*Intro:*

- *This is [SB/RW] from Taintor & Associates in Massachusetts.*
- *I'm one of the consultants working on the Scenic Byways Corridor Management Plan for the Southern Pinelands Natural Heritage Trail.*
- *I'm calling you because you are our contact person (or one of our contact persons) for **Township/Borough/City**.*

The Corridor Management Plan that we're preparing has to meet certain requirements established by the New Jersey Department of Transportation. One of these requirements is to talk to representatives of the individual byway communities to get information on each community's capacity for managing development and change along the byway corridor.

This is primarily about land use regulations, including zoning and site plan review, but could also encompass other management tools such as historic districts, environmental regulations, landscaping standards, and so forth. Some of the issues that we are interested in include

- the land uses that are permitted along the scenic byway,
- the intensity of development that is permitted (including regulations on residential density, lot coverage, building height, open space, etc.),
- regulations on the visual character of development in the corridor, such as landscaping and screening standards, sign regulations, or building design standards

I've called you because you are the scenic byway contact person [*or one of the contact persons*] for **Township/Borough/City**. Do you think that you might be able to answer questions about the township's / borough's/ city's role in land use management along the corridor? If not, who would be the best person for me to talk to? **Name and contact information**

*[Actual survey starts here, once you're talking to the right person. Repeat explanation at the top of previous page if this is not the original byway contact person.]*

Rick Taintor and other members of the consulting team have done a considerable amount of field work along the entire scenic byway route for the past 6 months, and we've been doing research here in the office on land use management. Quite a lot of the byway is protected open space such as state forests, county parks, or the national wildlife refuge; and these areas are not likely to change much in character. There are also some areas that are designated in the Pinelands Management Plan as Preservation or Forest areas, where development is strictly controlled.

So in this survey we're focusing our attention on other areas that might grow or change, and where the Corridor Management Plan might provide some guidance. The area(s) that we're looking at within Township/Borough/City is/are: **Byway section (or sections)**.

*[If necessary, repeat the following questions for each byway focus area.]*

1. What land uses are permitted along this section of the scenic byway corridor?
2. What dimensional or density standards apply in this section of the corridor?  
maximum lot coverage: \_\_\_\_\_  
minimum lot area: \_\_\_\_\_  
required building setbacks: \_\_\_\_\_
3. Do the zoning regulations support or encourage the existing character of development along the roadway?
4. Is there pressure for development that would change the existing character of this section of the corridor? For example, have there been proposals from property owners or developers for changes to the zoning? How has the township/borough/city responded to these proposals?
5. Are there regulations or standards in place to address issues of:  
design \_\_\_\_\_  
screening \_\_\_\_\_  
lighting \_\_\_\_\_  
signage \_\_\_\_\_
6. Are there any specific plans in place for this area, of which we should be aware?  
road improvement plans \_\_\_\_\_  
bridge reconstruction plans \_\_\_\_\_  
traffic lighting plans \_\_\_\_\_  
bicycle route/lane plans \_\_\_\_\_

rail-trail or pedestrian plans \_\_\_\_\_

sidewalk improvement plans \_\_\_\_\_

street tree planting programs \_\_\_\_\_

village lighting improvement plans \_\_\_\_\_

signage design standards \_\_\_\_\_

7. In your opinion, should the community be thinking about changing any existing regulations, or adopting new ones, to better manage development along the corridor?

## New Jersey Important Bird Areas Site Descriptions<sup>14</sup>

As discussed in Section 2, the Southern Pinelands Natural Heritage Trail passes through nine Important Bird Areas identified by the New Jersey Audubon Society. The following site descriptions, from New Jersey Audubon's IBA website, summarize the significance of these nine sites for wildlife habitat.

### **Wharton State Forest**

Wharton State Forest is the largest single tract of land within the New Jersey State Park System and is a major component of the largest remaining contiguous forest blocks in the state. Located in the Pinelands Region, the area is composed of mature pine forest, oak forest, pine/oak forest, Atlantic white cedar (*Chamaecyparis thyoides*) swamps, Tupelo/Maple swamps and fallow cranberry bogs. The site includes the headwaters of the Mullica and Batso Rivers and the southern headwaters of Rancocas Creek. Friendship Bogs and several privately owned parcels are also included in this site.

### **Mullica River Corridor**

Located in the central pinelands of southern New Jersey, the Mullica River drains the largest and most pristine watersheds in the Pinelands. Habitats adjacent to the river include mixed upland forest, primarily dominated by pitch-pine (*Pinus rigida*) and forested wetland composed of Atlantic white cedar (*Chamaecyparis thyoides*). Tidal salt and brackish marshes dominate the area.

### **Bass River Marsh**

Bass River Marsh is located north of Port Republic and bordered by the Mullica and Wading Rivers to the southwest and to the east by Bass River State Forest (SF) and Edwin B. Forsythe National Wildlife Refuge (NWR). This site includes the fresh and saltwater wetlands of the lower portion of Bass River and forms an arm of the Mullica River Estuary. Portions of the site are contained within Edwin B. Forsythe NWR and Bass River State Forest while a significant land base remains in private ownership.

### **Edwin B. Forsythe National Wildlife Refuge – Brigantine Division**

The Brigantine Division of Edwin B. Forsythe National Wildlife Refuge was originally established in 1939 to protect important wintering habitat for waterfowl, especially American Black Ducks and Brant. In 1984 the two divisions were combined under the Forsythe name and in 1986 the refuge was designated a Wetland of International Importance for its ability to support a wide variety of waterbirds throughout the year. The Brigantine Division features Little Beach, a refuge for beach nesting birds, and 1415 acres impounded marsh habitat that support a diversity of wildlife. The site intersects the Little Egg Inlet Natural Heritage Priority Macrosite, designated by the New Jersey Department of Environmental Protection as some of NJ's most significant habitats.

### **Maurice River Corridor**

This site includes the Maurice River, its associated riparian habitats, Union Lake and three major tributaries; the Menantico, Manumuskin and Muskee Creeks. The open waters of the Maurice River are flanked by extensive tidal salt marsh and large tracts of undeveloped forested wetland and upland forest. The Maurice River drains the southwestern portion of the Pinelands and serves as a valuable link between the Pinelands National Reserve and

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<sup>14</sup> New Jersey Important Bird Areas Site Guide, <http://www.njaudubon.org/Tools2.Net/lbba/SiteListing.aspx> (accessed 7/21/2008).

the Delaware Estuary. The brackish wild rice marshes in the upper portion of the site are the largest stands in New Jersey. The site includes the Maurice River North and the Maurice River South Natural Heritage Priority Sites, designated by the New Jersey Department of Environmental Protection (NJDEP) as some of the most significant natural areas in NJ. In 1993, the Maurice River and its tributaries were recognized as a Wild and Scenic River by the National Park Service. This designation protects the waters of many rivers throughout the country from inappropriate uses. The river boasts a rich history dating back to the Lenni Lanape Indians who depended on the river's resources for survival. Its extensive maritime history includes oystering, crabbing and other fisheries.

### **Peaslee Wildlife Management Area**

Peaslee Wildlife Management Area (WMA) is bordered by the Manumuskin River to the west and the Tuckahoe River to the east. It is the second largest WMA in New Jersey and is also the southern-most example of a true Pine Barrens community, characterized by a predominance of pine-oak forest. Other habitat types found in this IBA include grasslands, cultivated fields and forested wetlands. The site intersects the Manumuskin Natural Heritage Priority Site, which encompasses the Manumuskin River and extensive freshwater marsh dominated by wild rice.

### **Belleplaine State Forest**

Located in northwest Cape May County, Belleplaine State Forest contains mixed oak-pine forests, Atlantic white cedar (*Chamaecyparis thyoides*) and hardwood swamps, grasslands, shrub/scrub habitat and several lakes. This site includes the contiguous wetlands of the Woodbine Bogs Natural Heritage Priority Site as well as Lake Nummy, a 26 acre lake named for the last Lenni Lenape Indian chief. In 1933, shortly after Belleplaine was established, the Civilian Conservation Corps (CCC) set up camp to provide labor for the forest. For eight years, the CCC constructed the State Forest's headquarters, maintenance buildings, a road system, bridges, dams and Lake Nummy. Belleplaine State Forest was established to provide recreation, wildlife management, timber production and water conservation.

### **Tuckahoe (Lester G. MacNamara) Wildlife Management Area**

The Tuckahoe Wildlife Management Area (WMA) straddles Atlantic and Cape May Counties in southern New Jersey. It is bordered by the Great Egg Harbor River to the northeast and is intersected by the Middle and Tuckahoe Rivers. This site is composed of a diversity of habitats including extensive tidal salt marsh, mixed upland forest, and freshwater rivers and impoundments. The site includes the Tuckahoe Corbin Salt Marsh Natural Heritage Priority Macrosite, designated by NJ Department of Environmental Protection (NJDEP) as some of the state's most significant natural areas.

### **Cape May National Wildlife Refuge – Great Cedar Swamp Division**

The Cape May National Wildlife Refuge (NWR), composed of the Delaware Bay Division, the Great Cedar Swamp Division and Two Mile Beach Unit, was established in 1989 with the purchase of 90 acres from The Nature Conservancy. The Great Cedar Swamp Division is located in Upper and Dennis Townships and encompasses 7700 acres of the Great Cedar Swamp a large Atlantic white cedar (*Chamaecyparis thyoides*) swamp. The site contains significant amounts of old-growth hardwood swamp and contiguous upland forest as well as salt marsh and grassland areas. The site includes the Great Cedar Swamp Natural Heritage Priority Macrosite, containing a large organic-soil wetland in the headwaters of Dennis Creek and Cedar Swamp Creek.