



New Jersey Pinelands Commission

Annual Report 2016

Mission Statement of the New Jersey Pinelands Commission

The mission of the New Jersey Pinelands Commission is to preserve, protect and enhance the natural and cultural resources of the Pinelands National Reserve, and to encourage compatible economic and other human activities consistent with that purpose.

Cover photo: The Pinelands Commission helped to preserve nearly 500 acres in the Pinelands through its Pinelands Conservation Fund in 2016, including the 414-acre Bear Swamp Headwaters property in Southampton and Tabernacle townships in Burlington County.

Photo by Paul Leakan/New Jersey Pinelands Commission

New Jersey Pinelands Commission 2016

Gubernatorial Appointees

Candace M. Ashmun
D'Arcy Rohan Green
Mark S. Lohbauer
Gary Quinn

Bob Barr
Edward Lloyd
Richard H. Prickett

U.S. Secretary of the Interior's Appointee

Joseph DiBello

County Appointees

Atlantic County

Paul E. Galletta, Vice Chairman

Burlington County

Sean W. Earlen, Chairman

Camden County

Edward McGlinchey

Cape May County

William J. Brown

Cumberland County

Jane Jannarone

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Pinelands Commission Highlights for 2016

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- **Federal appointee Joseph DiBello announces retirement.** Page 2.
- **Commission drafts a series of potential rule changes.** Pages 3-4.
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- **Commission preserves nearly 500 acres in the Pinelands through the Pinelands Conservation Fund.** Pages 8-9.
- **Commission scientists continue to monitor water quality as part of the Long-term Environmental Monitoring Program.** Page 10.
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- **Commission approves 31 public development applications in the Pinelands.** Pages 15-17.
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- **Commission awards bid to convert a portion of the Richard J. Sullivan Center for Environmental Policy and Education into a Pinelands Visitor Center.** Pages 21-22.

Commission Gains New Chairman, Member in 2016

The Pinelands Commission gained a new Chairman and a new member in 2016, as Governor Chris Christie appointed Sean W. Earlen as the panel's new Chair and Guiseppe (Joe) Chila joined the Commission as Gloucester County's new representative.

Earlen presided over his first meeting as the Commission's Chairman on February 12, 2016. Earlen replaced Mark S. Lohbauer, who had served as the agency's Chairman since 2011 and continues to serve as a gubernatorial representative on the Commission. Earlen has represented Burlington County on the Commission since August 2011.



Sean W. Earlen

A resident of Lumberton, Earlen has served on Lumberton's Township Committee since 2011 and is currently the township's Mayor. He has also served on Lumberton's Joint Land Use Board since 2010. Earlen has also served on the Board of Directors at the New Jersey Building Authority since 2012. Earlen is the Vice President of Real Estate, Environmental & Public Affairs for Constructural Dynamics, Inc. of Fairless Hills, PA.

The Commission gained a new member when Chila joined the agency's board on February 12, 2016. Chila is serving his fourth term on the Gloucester County Board of Chosen Freeholders and his fifth year as Deputy Director.



Guiseppe (Joe) Chila, pictured left, joined the Commission as Gloucester County's new representative on February 12, 2016. Deputy Attorney General Sean Moriarty, pictured right, administered the oath of office. Photo/Paul Leakan

Chila resides in Woolwich Township, where he served as Mayor from 2003-2010. During that time, he instituted smart growth principles in development and focused on preserving farmland and open space. Chila graduated from Paulsboro High School and the Gloucester County Institute of Technology. He is a member of the International Brotherhood of Electrical Workers Lu. AFL-CIO, and he serves on the Gloucester County Board of School Estimates, the Advisory Board for the Gloucester County Veteran's Cemetery and the Board of the United

Way of Gloucester County. Chila served as President of the Southern New Jersey Freeholders' Association in 2015, and he was named Freeholder of the Year by the New Jersey Conference of Mayors.

Chila replaced Fran Witt as Gloucester County's representative on the Commission. Witt stepped down from the Commission on December 31, 2015. He had been a member of the Commission since February 13, 2004.

The Pinelands Commission's 15-member board consists of seven members who are appointed by the New Jersey Governor, one member appointed by each of the seven Pinelands counties, and one member appointed by the U.S. Secretary of the Interior. Commission members serve staggered, three-year terms and are uncompensated for their service.

Federal Appointee Joseph DiBello Announces Retirement



Joseph DiBello

The Pinelands Commission's board saw one final change in late 2016 as Federal appointee Joseph DiBello announced his retirement from the National Park Service (NPS), effective January 3, 2017.

A resident of Ardmore, Pa., DiBello had served as the U.S. Secretary of the Interior's appointee on the Commission since November 2012. He was a member of the Commission's Policy and Implementation Committee, Personnel and Budget Committee, Plan Review Committee and Agriculture Committee.

DiBello was employed by the NPS for 42 years. He started his career as a planner for the U.S. Department of the Interior in 1974, then went on to conduct special studies and planning projects for the NPS. He most recently served as the Superintendent of the Washington Rochambeau National Historic Trail, which traverses nine states and Washington, D.C.

During his tenure on the Commission, the National Park Service greatly advanced the Commission's efforts to preserve, protect and enhance the resources of the Pinelands, including providing funding to support the Commission's Long-term Environmental and Economic Monitoring programs, as well as funds for education and outreach materials that raise awareness and appreciation of the Pinelands. The Commission adopted a resolution to express its appreciation for DiBello's service on December 9, 2016.

Chapter 1: Land Use & Planning

Pinelands Comprehensive Management Plan (CMP) Amendments

In 2016, the Commission's staff drafted a series of potential rule changes that were



Above: The Pinelands Commission discussed numerous potential rule changes that were drafted in 2016.

Photo/Paul Leakan

recommended through the recent in-depth review of the Pinelands Comprehensive Management Plan (CMP), the rules that govern land use, development and natural resource protection in the Pinelands Area.

The Commission completed its fourth review of the CMP in 2014, a process that resulted in dozens of recommendations for rule amendments. The draft rule changes address many of these recommendations and would:

- better protect the Black Run Watershed, an area of southern Medford and Evesham townships that contain an abundance of important natural resources.
- update the CMP's sign regulations. In recent years, a number of municipalities have adopted ordinances that authorize the use of signs that feature digital technology, including video, flashing lights and changing text. The CMP, however, prohibits the use of motion and changing lights in on- and off-site signs. Staff reviewed the on- and off-site sign standards to determine whether and where digital sign technology should be permissible in the Pinelands. Under the draft rule changes, the regulation of on-site signs would be delegated to municipalities. Municipalities would determine whether and where on-site signs using digital technology should be permitted. The possible rule changes would also allow existing and new billboards in Regional Growth Areas and Pinelands Towns to use digital technology subject to certain conditions. Old, nonconforming billboards in conservation areas would be prohibited from converting to digital technology;
- change the Commission's fee schedule for reviewing development applications. The rule changes would add specific fees for general development plans, reduce fees for solar energy facilities, eliminate the need for applicants to submit sworn statements of

construction costs, increase most fees by 25% and update escrow provisions to include facilities, services and other unusual expenditures related to an application;

- eliminate the requirement that towns/applicants submit names and addresses of people who “actively participate” on applications at Planning Board meetings;
- define “mail” to include “e-mail,” eliminate certified mailing requirements for the Commission and towns, eliminate the requirement for applicants to post notices on properties and require the Commission to post notices on its website;
- clarify the circumstances under which municipalities will not need to install impermeable caps on their closed landfills;
- allow alternate design wastewater treatment systems to be used for the expansion of or changes to existing nonresidential uses in the Rural Development Area, Agricultural Production Area, Forest Area and infill areas.

The draft rule changes have been submitted to the Governor’s Office for its review.

Revising the Commission’s Memorandum of Agreement Process

In March 2016, the Pinelands Commission’s board endorsed a revised guidance document that the agency uses before considering whether to enter into an intergovernmental Memorandum of Agreement (MOA).

The Pinelands Comprehensive Management Plan (CMP) allows the Commission to enter into an intergovernmental agreement that authorizes a public agency to undertake development activities that are not fully consistent with Pinelands land use and development standards. The agreements must include measures that will provide at least an equivalent level of protection of the Pinelands.

As an outgrowth of its recent in-depth review of the CMP, the Commission formed a Memorandum of Agreement (MOA) Policy Advisory Committee that reviewed the agency’s process for considering MOAs. The ad hoc committee, which is composed of Commissioners and members of the public, recommended a series of changes to the Commission’s guidance document for entering into MOAs.

The revised document calls for the full, 15-member Commission to authorize staff to either proceed with or decline proposals to enter into an intergovernmental agreement. The process

also calls for the Commission to establish a schedule for considering the agreement, and it explicitly states that the agency involved may need to provide an escrow to the Commission.

The revised guidance document is available on the Pinelands Commission's website (<http://www.state.nj.us/pinelands/appli/moas/2016%20final%20MOA%20process.pdf>).

Combating Damages Wrought by Off-road Vehicles in Wharton State Forest

Throughout 2016, the Commission took several steps to help combat the damages wrought by off-road vehicle use in Wharton State Forest, a 122,880 acre forest located in the Pinelands.

In recent years, users of Wharton State Forest have voiced concerns about the extensive damages being caused by illegal, off-road vehicle use in the forest.

To gain a better understanding of the problem, the Commission invited staff from the New Jersey Department of Environmental Protection (NJDEP) to attend several Commission meetings.

Additionally, staff from the Commission and NJDEP took Commissioners on a tour of damaged areas in Wharton in March 2016.



Above: Several Commission members surveyed the damages caused by off-road vehicle use in Wharton State Forest in 2016. Photo/John Bunnell

In October 2016, Commission staff compiled and provided the NJDEP with a database of sites within Wharton State Forest that have been damaged by off-road vehicle use. At the direction of the Commission, staff has also met with the NJDEP to discuss the development of guidance to identify areas where recreational motor vehicle use would be appropriate in Wharton.

Protecting Roadside Plants

The Commission continued to advance efforts to better protect roadside habitat in the Pinelands in 2016.

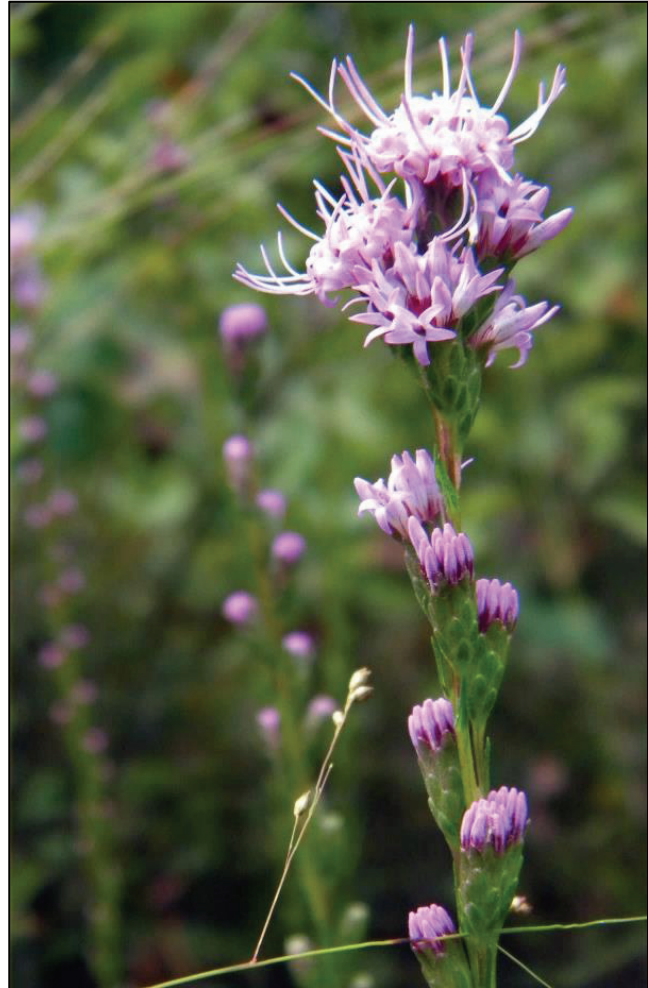
The Commission launched the initiative in 2009 by working with the Pinelands Preservation Alliance, state and county transportation officials, and local botanists to develop best management practices (BMPs) for the mowing and maintenance of Pinelands roadsides. During the years that followed, the Commission incorporated the mowing and maintenance practices into Memorandums of Agreement that it reached with five of the seven Pinelands Area counties.

The mowing and maintenance BMPs call for a combination of relatively minor adjustments to roadside management with the goals of ensuring safe transportation corridors while allowing native vegetation to complete its life cycle and perpetuate native populations.

In 2016, staff conducted an effort to reconnect with the county staff responsible for implementing the mowing and maintenance BMPs in order to improve compliance. Staff also produced a clarification/guidance document and distributed laminated copies to each of the participating counties with the intent that the mowing crews have a copy with them while in the field.

Staff also prepared and released a webpage on the Commission's website to describe the mowing and maintenance BMPs (<http://www.nj.gov/pinelands/landuse/current/roadhab/>). Copies of the mowing and maintenance BMPs, as well as the clarification/guidance document, may be downloaded from the webpage.

To improve interagency cooperation, Commission staff has been meeting with each of the signatory counties (Atlantic, Burlington, Camden, Gloucester, and Ocean). The meetings helped to resolve some of the challenges experienced by the counties in executing the mowing and maintenance BMPs.



Above: Roadsides in the Pinelands provide important habitat for many colorful plants, including Blazing Star.

Photo/Robyn A. Jeney

Assessing Uncapped Landfills in the Pinelands Area

In 2015, the Commission completed its work with the U.S. Geological Survey (USGS) to develop a software tool that can be used to preliminarily evaluate the potential ecological and public health risks associated with uncapped landfills in the Pinelands Area. The groundwater transports model provides information necessary to characterize the “level of concern” posed by potential leachate plumes from 61 Pinelands landfills to nearby wetlands, surface water bodies, streams, ponds and drinking water wells. The screening-level analysis provides information that will help the Commission review proposals for the closure and reuse of landfills.

Commission staff is using the screening tool to assist the Borough of South Toms River, the City of Estell Manor, the City of Port Republic and the Township of Medford in identifying potential landfill leachate receptors and in developing targeted groundwater assessment programs that are integral to their proposed landfill closure plans.

Monitoring the Pinelands Economy

The Commission continues to monitor the economic health of Pinelands municipalities through its Long-term Economic Monitoring Program.

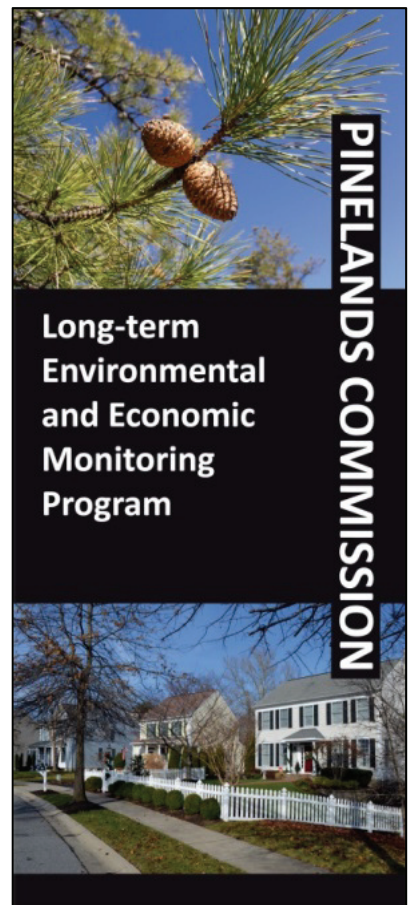
The Commission’s staff issued its annual Long-term Economic Monitoring Report in June 2016, and it includes data for 2015.

The report is funded by the National Park Service, and it provides data on 21 different economic variables. The 2015 report includes the poverty rate as a supplemental variable, along with data regarding towns that are partly inside and outside of the Pinelands Area boundaries.

The full report for 2015 is available on the Commission’s website. The address is:

<http://www.nj.gov/pinelands/landuse/current/economic/index.shtml>.

In an effort to raise awareness about the agency’s Long-term Economic and Environmental Monitoring programs, Commission staff created and distributed a new brochure in



May 2016. The brochure (shown on page 7) is available on the Commission's website. The address is:

<http://www.nj.gov/pinelands/infor/online/LTEM%20Economic&Science%20Brochure%20for%20web.pdf>.

Reviewing Municipal Ordinances

Amendments to certified county and municipal master plans and land use ordinances must be submitted to, and approved by, the Commission. During 2016, the Commission received and reviewed 76 ordinance and master plan amendments from 28 different municipalities. This included redevelopment plans in the Town of Hammonton's Gateway/White Horse Pike Redevelopment Area, Hamilton Township's Mays Landing Historic Redevelopment Area and South Toms River's Municipal Complex Redevelopment Area.

Chapter 2: Permanent Land Protection

Pinelands Conservation Fund

In 2016, the Pinelands Commission helped to permanently preserve nearly 500 acres in the Pinelands through the Pinelands Conservation Fund (PCF).

The Commission provided \$150,000 toward the Trust for Public Land's total \$600,000 cost to acquire the 414-acre Bear Swamp Headwaters property

in Southampton and Tabernacle townships in Burlington County. The property is located in Pinelands Rural Development and Regional Growth areas and it features tributaries to the Bear Swamp River.



Above: The Commission provided funds to help preserve 61-acre Deetz property in 2016. Photo/Paul Leakan

The Commission provided \$82,500 toward the Ocean County Natural Lands Trust's total \$247,500 cost to acquire the 61-acre Deetz property in Barnegat Township, Ocean County

(please see the photo on page 8). The property is located in a Pinelands Forest Area and it features tributaries to Oyster Creek. It is also adjacent to the Greenwood Forest Wildlife Management Area.

Lastly, the Commission provided \$11,000 toward the Ocean County Natural Lands Trust's total \$33,000 cost to acquire the 11-acre Toms River Ridgeway-Fagan property in Jackson Township, Ocean County. The property is located in a Pinelands Forest Area and it features a tributary to the Ridgeway Branch of the Toms River. The land is entirely wetlands, and it is adjacent to the Joint Base McGuire-Dix-Lakehurst.

From 2007 to 2016, the Commission contributed \$8.9 million to 36 land acquisition projects in the Pinelands Area. All 36 of these projects have been completed as of December 31, 2016, resulting in the permanent protection of 8,188 acres.

The PCF was created in 2004 as part of an agreement with the New Jersey Board of Public Utilities to permit the construction and upgrade of an electric transmission line through eastern portions of the Pinelands. Under the agreement, the special fund was established to further the Pinelands protection program and ensure a greater level of protection of the unique resources of the Pinelands Area. The utility that built the transmission lines, Atlantic City Electric (formerly Conectiv), provided \$13 million to establish the fund. The policies for the PCF include four principal objectives: permanent land protection, planning and research activities, education and outreach and community planning and design.

Pinelands Development Credit Program

The Pinelands Development Credit Program is a regional transfer of development rights program that preserves important agricultural and ecological land. Pinelands Development Credits (PDCs) are allocated to landowners in Pinelands-designated Preservation, Agricultural and Special Agricultural Production Areas, which are the sending areas. These credits can be purchased by property owners and developers who are interested in developing land in Pinelands-designated Regional Growth Areas, which serve as the receiving areas, and can be used to increase the densities at which they build. Once those credits are "severed" from a sending area property, the property is permanently protected by a conservation or agricultural deed restriction and credits on the property can be sold. Credits are bought and sold in one-quarter credit units called "rights."

During 2016, 33 rights were severed, protecting 409 acres of land. A total of 6,045 rights were severed from 1982 to 2016, protecting 51,990 acres. In 2016, the mean sales price of PDCs was \$8,900 per right.

Chapter 3: Science and Research Activities

Long-term Environmental Monitoring Program

In 2016, Commission scientists continued to conduct Long-term Environmental Monitoring Program research.

As part of the Commission Pinelands-wide water-quality monitoring, scientists have measured water quality at 47 stream sites on a bimonthly basis since 2006. One of the parameters measured is pH, which indicates whether the stream water is acidic or alkaline. In 2016, Scientists began to analyze the pH data for an 11-year period to determine if pH was increasing, decreasing, or remaining relatively constant over time. Most of the streams exhibited relatively stable pH during the study period, however, several stream sites showed increasing pH. Stream sites with increasing pH were among those with the greatest amount of altered land developed and upland agricultural land) in their watersheds.

One of the stream sites with the greatest increase in pH during the study period was Four Mile Branch at Lighthouse Drive. In 2012, which is the most recent year that land-use data are available for New Jersey, 41% of the Four Mile Branch watershed above Lighthouse Drive was altered land. Almost all of this altered land was developed land.



Above: Four Mile Branch at Lighthouse Drive showed an increase in stream pH during the 11-year study of water-quality trends.
Graphic/John Bunnell

Also as part of the Long-term Environmental Monitoring Program, each month, scientists recorded water levels at 35 forest plots and 30 ponds, and maintained continuous water-level recording devices installed in seven other ponds. The Commission has also monitored calling frogs and toads at 20 ponds since 1996.

Pond-vulnerability Study

Commission scientists continued to make progress on a study to characterize the vulnerability of Pinelands ponds to surrounding land uses. These ponds are typically called “intermittent” because they are not usually connected to streams and occasionally dry out, creating largely fishless environments that serve as important breeding grounds for frogs and toads, such as the rare Pine Barrens treefrog. Intermittent ponds also provide habitat for many rare plants, such as pink tickseed (*Coreopsis rosea*).

Scientists began the first phase of the project by using aerial photography to compile an inventory of approximately 2,700 natural Pinelands ponds. Ninety-nine of these ponds were selected for the study. From 2014-2016, scientists monitored water quality and water



Above: Pink tickseed (*Coreopsis rosea*) is a rare plant that can be found in Pinelands ponds. Photo/John Bunnell

levels and completed plant, frog and toad, fish, and dragonfly and damselfly surveys at the 99 ponds. The field work for the study has been completed and, in 2017, Commission scientists will quantify the impact of land use on these ponds.

The Commission will identify and prioritize ponds that need enhanced protection and may evaluate potential planning and regulatory measures to better protect these ponds.

The study is being funded, in part, by a grant from the U.S. Environmental Protection Agency (EPA). The Commission is supplementing the EPA grant funding by contributing funds from its Pinelands Conservation Fund (please see page 9 for more information about the Fund).

Created-wetland Study

Like natural wetlands, created wetlands can provide the habitat necessary for wetland-dependent plants and animals, especially in human-dominated landscapes where natural wetlands may have been degraded or eliminated. As part of another study, Commission scientists mapped the location of two types of created wetlands commonly found in the Pinelands,



Above: An example of an excavated pond in the Pinelands in Eldora, NJ.
Photo/John Bunnell

shallow excavations that intercept the groundwater (excavated ponds) and excavations designed to receive stormwater (stormwater basins). About 1,700 excavated ponds and 1,400 stormwater basins have been mapped. Fifty-two excavated ponds and 46 stormwater basins were selected for the study.

As part of the study, scientists will compare water-quality, hydrologic, and biological attributes between both types of created wetlands and the natural ponds from the Pond-vulnerability Study described above. In collaboration with the U.S. Geological Survey and Montclair University, sites that represent a subset of each type of wetland are being sampled for current-use pesticides and emerging-amphibian pathogens. From 2014-2016, scientists monitored water quality and water levels and completed plant and animal surveys at the 98 created wetlands, and sampled the subset of each wetland type for pesticides and pathogens.

In 2017, Commission scientists will quantify the impact of land use on these wetlands and compare these created wetlands to natural ponds from the Pond-vulnerability Study.

As with the Pond-vulnerability Study, the Created-wetland Study is also being funded by a grant from the U.S. EPA and a match by the Commission through the Pinelands Conservation Fund (please see page 9 for additional information about the Fund).

Right-of-way Vegetation Monitoring

In cooperation with the New Jersey Board of Public Utilities, Atlantic City Electric, Jersey Central Power and Light, and Public Service Electric and Gas, the Commission initiated a pilot program in 2009 to implement a vegetation-management plan for the land beneath high-voltage electric-transmission lines in the Pinelands.



Above: In 2016, Commission scientists completed routine annual vegetation surveys on electric-transmission rights-of-way such as this one in Ocean County.
Photo/John Bunnell

As part of that pilot program, each year, Commission scientists monitor vegetation in the managed rights-of-way in plots that represent different vegetation type/vegetation-management prescription combinations. The monitoring will help determine if the vegetation-management prescriptions have resulted in relatively stable and sustainable early successional habitats that are characteristic of the Pinelands and which provide habitat for native-Pinelands plants and animals, including threatened and endangered species. In 2012, scientists measured vegetation in reference plots in the forest adjacent to each managed right-of-way to determine if the right-of-way vegetation was similar to and characteristic of the nearby Pinelands forest.

In 2016, scientists completed the routine annual vegetation surveys and initiated an analysis to compare the managed right-of-way and adjacent forest vegetation. The analysis will be completed in 2017.

The pilot program is funded by the Atlantic City Electric, Jersey Central Power and Light, and Public Service Electric and Gas.

Endocrine Disruption Study

The William Penn Foundation recently dedicated significant funding towards scientific research in the Delaware River Watershed through the Delaware Watershed Research Fund. The Academy of Natural Sciences is administering the funding. The Kirkwood-Cohansey aquifer, which underlies the Pinelands, was identified as one of the research areas eligible for funding. Commission and USGS scientists proposed a study to investigate point and non-point sources of endocrine



Above: The green frog, a common Pinelands frog, is one of the species to be studied in the Endocrine Disruption Study Photo/John Bunnell

disrupting chemicals and the potential impacts on fish and frogs in the Pinelands. The proposed study was awarded funding in 2016 for work to begin in 2017.

The endocrine system is a collection of tissues in animals that produce hormones to regulate essential life processes, such as metabolism, tissue function, reproduction, and development. A large group of natural and synthetic chemicals are known to disrupt endocrine function. Examples include plant hormones, plastic components, flame retardants, surfactants, fragrances, pesticides, etc. Endocrine disrupting chemicals, or EDCs, are a global environmental problem and have been linked to reproductive and developmental abnormalities in a variety of animal species, especially fish and amphibians.

Commission and USGS scientists proposed to sample water chemistry and fish above and below municipal wastewater treatment plants, which represent direct point sources of EDCs, and water chemistry and frogs at ponds and stormwater basins, which may receive indirect non-point sources of EDCs from runoff and the aquifer. Results from these sites will be compared to those from appropriate minimally impacted reference sites.

The study is being funded by a grant from the Delaware Watershed Research Fund, a match by the Pinelands Commission, and a match by the USGS.

Pinelands Research Series

The Pinelands Research Series was initiated in 2012 to provide a regular forum for scientists to present and discuss Pinelands-related research. This is a free event that is open to the public and hosted by the Commission.

In 2016, the Commission hosted nine presentations that covered a wide range of research topics, including forest modeling, assessing the biotic integrity of streams, the newly described Atlantic Coast leopard frog, coyotes in New Jersey, endocrine disruption and intersex in fish, ecosystem services that insects provide, hormones and ectoparasites of eastern fence lizards, aquatic invertebrates in the Barnegat Bay, and the nutrient history and ecosystem services of tidal marshes.

A full listing of previous and upcoming presentations can be found on the Commission's website at: <http://www.nj.gov/pinelands/science/pinesseries/>.

Chapter 4: Regulatory Activities

Permitting

The Commission's staff reviews municipal and county (public) permitting decisions and private development applications to determine compliance with the Pinelands Comprehensive Management Plan. In 2016, the Commission's Project Review Office received 364 new applications (including public and private applications).

During the year, actions were taken on 1,585 applications. A total of 33 actions were taken on applications through the Local Review Officer Program, which expedites the approval process by having municipal officers review certain applications, without the need for the Commission's review first, and through streamlining agreements.

The Pinelands Commission approved 31 development applications from local, county and state entities in 2016, including:

- the development of a 3,500 square foot Interpretive Center building and other improvements within Lake Lenape Park in Hamilton Township, Atlantic County;
- improvements to the existing Garden State Parkway Maintenance Facility in Galloway Township, Atlantic County;

- the construction of a compressed natural gas fueling facility in Woodbine Borough, Cape May County;
- a 15-foot widening of the existing aircraft taxiway at the Atlantic City International Airport in Egg Harbor Township, Atlantic County;
- the demolition of three schools that are 50 years or older and the construction of a 134,506 square foot school in North Hanover Township, Burlington County;
- the construction of a 3,612 square foot municipal garage in Hammonton, Atlantic County;
- the establishment of a public education center at the site of the historic Cedar Bridge Tavern and the development of a single family dwelling (caretaker's residence) in Barnegat Township, Ocean County;
- the establishment of a recreational dog park in Hammonton, Atlantic County;
- the construction of an 11,350 square foot student center building at the Atlantic Cape Community College in Hamilton Township, Atlantic County;
- the construction of a 6,000 square foot public works building and a 2,000 square foot salt storage shed in Southampton Township, Burlington County;
- the reconstruction of a previously existing retail commercial building in Buena Vista Township, Atlantic County;
- the construction of a bicycle path along Himmelein and Stokes roads in Medford Township, Burlington County;
- the widening of the Atlantic City Expressway Bridge No. 20 in Egg Harbor Township, Atlantic County;
- the reconstruction of the Lake Mishe Mokwa Dam in Medford Lakes Borough, Burlington County;
- the construction of a 1,500 square foot concession building and the expansion of an existing parking lot in Hamilton Township, Atlantic County;

- the construction of a 2,500 square foot municipal mechanical building in Hammonton, Atlantic County;
- the development of a bicycle path in Hammonton, Atlantic County;
- the demolition of three buildings that are 50 years old or older and the construction of an 11,502 square foot emergency services building in Waterford Township, Camden County; and
- the construction of a 1.66-acre ground-mounted solar array in Folsom Borough, Atlantic County.

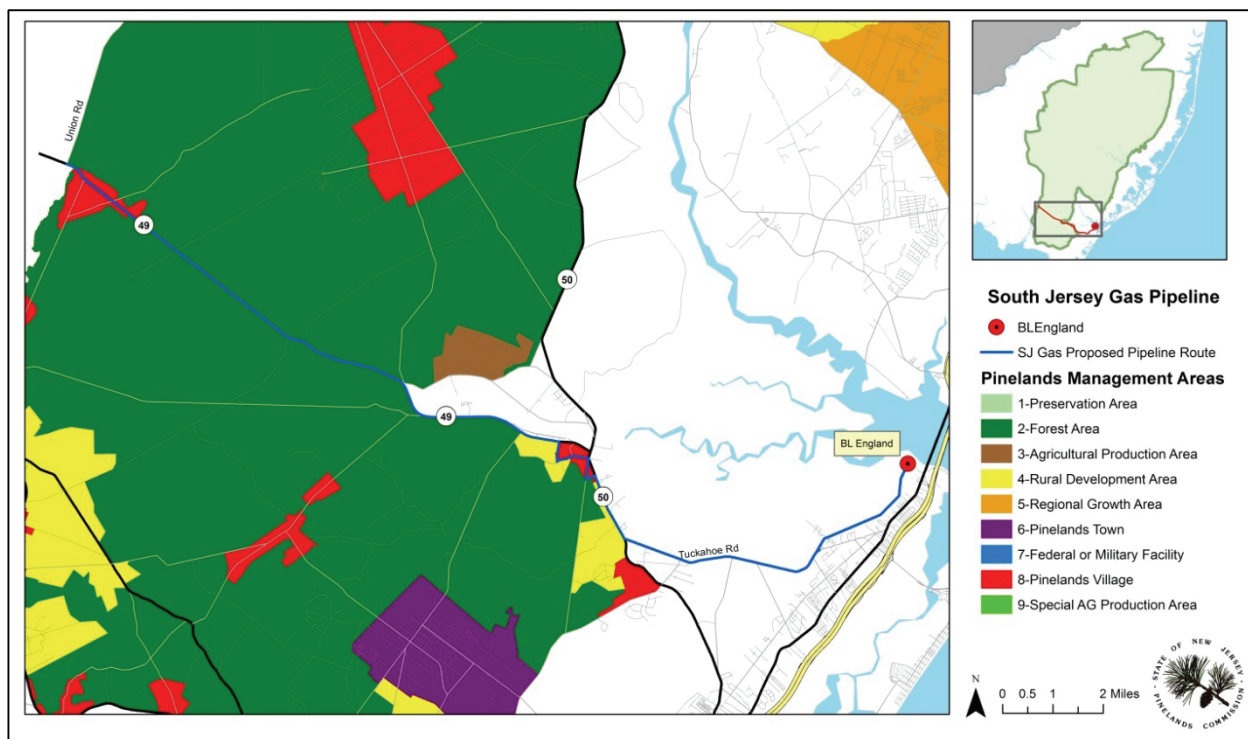
The Commission also has the authority to issue Freshwater Wetland General Permits in the Pinelands Area on behalf of the New Jersey Department of Environmental Protection. The Commission issued eight such permits in 2016.

Review of South Jersey Gas' Proposed Pipeline

In 2016, the Commission continued to process the South Jersey Gas Company's application to install a natural gas pipeline in the southern portion of the Pinelands.

South Jersey Gas is proposing to build a 24-inch natural gas main beneath or alongside existing roadways from Maurice River Township, Cumberland County, to the B.L. England Electric Generating Station in Upper Township, Cape May County. The gas main would repower the B.L. England from coal to natural gas in accordance with an Administrative Consent Order issued by the New Jersey Department of Environmental Protection. The pipeline would traverse 15 miles of the Pinelands Area and seven miles of the Pinelands National Reserve before connecting to the B.L. England plant. Of the 15 miles in the Pinelands Area, 2.8 miles are located in Pinelands Villages, 2.54 miles are located in a Pinelands Rural Development Area and 9.51 miles are located in a Pinelands Forest area. (Please see the map on page 18.)

South Jersey Gas applied to build the pipeline in July 2012. The Commission's staff drafted an inconsistent Certificate of Filing in July 2013. The agency then considered entering into a Memorandum of Agreement (MOA) that would allow the project to move forward. However, the proposed MOA did not garner the eight affirmative votes needed for its passage.



Above: Map of the South Jersey Gas Company's proposed natural gas pipeline in the Pinelands.

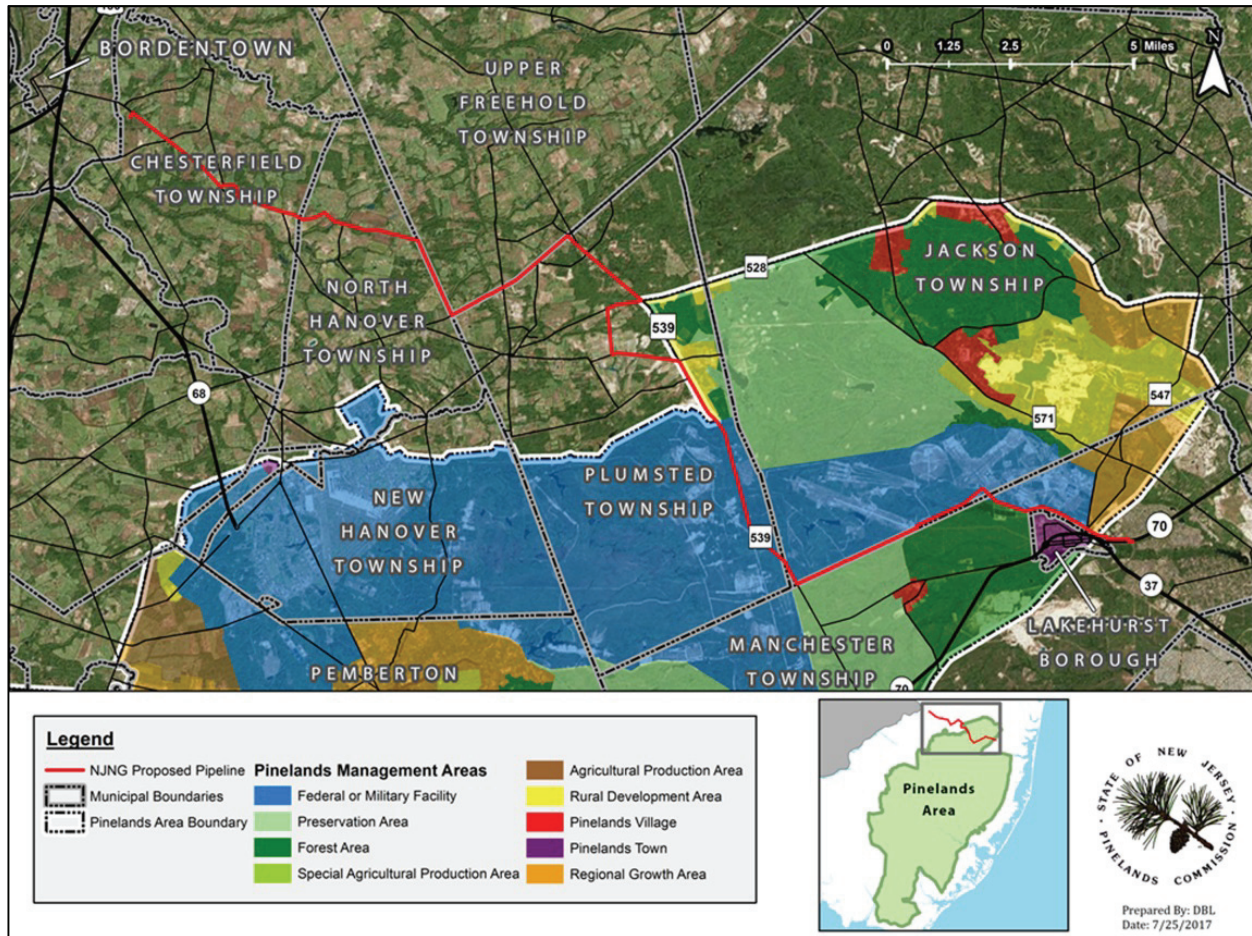
South Jersey Gas provided additional information in its amended application in May 2015. The Commission's staff issued a Certificate of Filing in August 2015, deeming the project consistent with Pinelands rules. In response to legal filings, the Appellate Division of the Superior Court of New Jersey issued a decision that remanded the Certificate of Filing back to the Commission for its review of the staff's consistency determination. In December 2016, the Commission adopted a resolution that identified the process by which the agency reviewed the court's decision in accordance with the remand. Specifically, the process calls for the Commission to provide the public with the opportunity to comment on the staff's consistency determination. Following the close of the public comment period, the Commission's staff will review the record and all public comments, then prepare a recommendation as to whether to affirm the prior consistency determination. The full 15-member Commission will then either approve or deny the recommendation.

Review of New Jersey Natural Gas' Proposed Pipeline

The Commission also continued to process the New Jersey Natural Gas Company's proposal to install a natural gas pipeline in the Pinelands.

New Jersey Natural Gas is proposing to build 12.1 miles of a 30-inch natural gas main within the existing rights-of-way along Route 539 and Route 547 in Jackson Township, Manchester Township and Plumsted Township in the Pinelands. The total length of the project is 30 miles,

as it would start in Chesterfield Township, Burlington County, which is outside of the Pinelands. (Please see the map below).



Above: Map of the New Jersey Natural Gas Company's proposed natural gas pipeline.

New Jersey Natural Gas applied to build the pipeline in April 2015. The Pinelands Commission issued a Consistent Certificate of Filing for the project on December 9, 2015.

As was the case with the South Jersey Gas application, several legal appeals were filed. In December 2016, the Pinelands Commission adopted a resolution seeking a remand from the Appellate Division so that the Commission can review the staff's consistency determination in accordance with the same process that will be followed for the South Jersey Gas application. (Please see pages 17-18.)

Violations

The Pinelands Commission continues its efforts to provide assistance to municipalities in pursuing and resolving violations of the local land use ordinances and Pinelands regulations. A total of 76 violations were identified in 2016.

Chapter 5: Public Information, Participation & Education

Outreach and Education

The Commission's Communications and Public Programs Office staff handled 120 press inquiries and responded to more than 1,400 public inquiries regarding the Pinelands in 2016.

Staff organized and carried out its tenth annual, Pinelands-themed World Water Monitoring Challenge event. Held at the historic Batsto Village, the

event attracted more than 250 students and teachers who gauged Pinelands water quality and learned about the importance of protecting the region's unique natural and historic resources. The students measured the levels of pH or acidity in water, as well as water clarity, temperature and dissolved oxygen. Water in the Pinelands is generally undisturbed, has a low pH and low dissolved solids, enabling it to support uniquely adapted Pinelands plants and animals. The students' findings were posted on the World Water Monitoring Day Web site, where test results can be compared over time. In addition to assisting with the water tests, staff from the Pinelands Commission used nets to catch native Pinelands fish and demonstrated how the Commission protects wetlands and habitat for rare plants and animals.

In addition, Commission staff members educated approximately 1,400 students during in-class education programs and field trips in 2016.



Above: Commission staff education more than 250 students during the World Water Monitoring Challenge at Batsto in 2016. Photo/Paul Leakan

Pinelands Short Course

The 27th annual Pinelands Short Course featured 32 presentations that explored the unique history, ecology, culture and music of the Pinelands. The daylong event was held at The Richard Stockton College of New Jersey in Galloway Township, Atlantic County on March 12, 2016.



Above: The 27th annual Pinelands Short Course featured 18 new programs, including a performance by the Greater Pinelands Dulcimer Society.

Photo/Paul Leakan

More than 400 people attended the Short Course. The event included 18 new programs: the Wild Turkey and its Reintroduction, the Suburbanization of the Jersey Devil, the Soldiers and Seductress Who Helped Facilitate Washington's Christmas Victory in Trenton in 1776, a new Pine Barrens film, Butterflies and Caterpillars of the Pinelands, Monitoring Ospreys, the Spring Bird Migration, Soil Health Improvement, a Pinelands Overview, Wharton State Forest, Birding in Atlantic County, Sustainable Forest Management, Moths of New Jersey, the Centennial of the Highbush Blueberry, the History of the former Coast Guard Station 119, a Photographic Exploration of the Pinelands, Ecological Forest Management and a performance by the Greater Pinelands Dulcimer Society.

The event is registered with the New Jersey Department of Education, and professional development credits are available to New Jersey teachers who attend.

Pinelands Visitor Center:

The Commission continued to advance a major project to convert a portion of its headquarters into an official Pinelands Visitor Center.

After reviewing and scoring four bids, the Commission in February 2016 awarded a \$368,849 contract to Drill Construction of West Orange, NJ, to create and install exhibits in the Richard J.

Sullivan Center for Environmental Policy and Education, which is located on 15 Springfield Road in Pemberton, NJ.

Throughout 2016, Commission staff worked to obtain the necessary permits to move forward with construction. Staff also worked to acquire numerous Pinelands artifacts that will be displayed in the Visitor Center. Rowan College at Burlington County donated dozens of items from their Pinelands Collection, including a split oak basket, a cranberry scoop and various glass bottles and vases. The items will be displayed in the Visitor Center.

The exhibits were designed with funding from the National Park Service. The Commission is funding the fabrication and installation of the exhibits with monies from the Education and Outreach component of the Pinelands Conservation Fund.

Chapter 6: Finances

Fiscal & Budget

The Commissions Operating Budget for Fiscal Year 2017 totaled \$4,641,712.00. Of this, \$3,988,822.00, or 86% percent, was budgeted for personnel expenses.

Budgeted revenue sources included \$155,000 in federal grants, a \$2,649,000 State appropriation, \$785,200 in State grants and other State funding, \$500,000 in application fees and \$552,512 from the Commissions fund balance and reserves.

The 2017 budget for the Kirkwood-Cohansey Study, funded through legislation passed in 2001, was \$153,116. The budget for the Pinelands Conservation Fund was \$1,816,792.

Once it is completed, the Commissions Audit Report for Fiscal Year 2016, which ended June 30, 2015, will be posted on the State Auditors web site. The website address is: http://www.njleg.state.nj.us/legislativepub/auditreports_department.asp. The report also will be available on the Pinelands Commissions web site: www.nj.gov/pinelands.


Pinelands Application Fees

Since April 2004, the Pinelands Commission has received application fees to partially underwrite the direct costs associated with reviewing development applications in the Pinelands Area.

During Fiscal Year 2017, unaudited application fee revenues totaled \$343,197 (\$302,928 less than Fiscal Year 2016).

Certification

As required by State Executive Order #37, all State authorities are required to certify that during the preceding year the authority has, to the best of its knowledge, followed all of the authority's standards, procedures, and internal controls. I hereby certify to the best of my knowledge that, during the 2016 calendar year, all of the Commission's standards, procedures, and internal controls were followed.

A handwritten signature in black ink, appearing to read "Nancy Wittenberg", written over a horizontal line.

Nancy Wittenberg
Executive Director

