



**New Jersey
Pinelands Commission**

Annual Report 2017

**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: Grass pink is among nearly 30 species of wild orchids that grow in the Pinelands.

Photo by Paul Leakan/New Jersey Pinelands Commission

New Jersey Pinelands Commission 2017

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

Frank Hays (January - March)

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
(January - October)

Cumberland County

Jane Jannarone

Gloucester County

Guiseppe (Joe) Chila

Ocean County

Alan Avery, Jr.

Executive Director

Nancy Wittenberg

New Jersey Pinelands Commission

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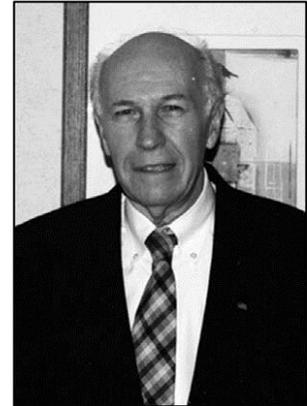
Website: www.nj.gov/pinelands

Longtime Commission member steps down

One of the longest serving members in the Pinelands Commission's history stepped down in late 2017.

William (Bill) J. Brown served as Cape May County's representative on the Pinelands Commission from March 1982 until October 2017. Brown's tenure on the Commission is the second longest in the agency's history.

A resident of Upper Township, Brown is a longtime, licensed insurance agent. He served as a Petty Officer in the U.S. Navy during World War II and he retired from 25 years of service as an engineer at the Woodbine Developmental Center.



William Brown

He served on the Commission's Personnel and Budget Committee, Public and Governmental Programs Committee, Intergovernmental Committee, By-Laws Committee and Work Plan Committee.

During his tenure, the Commission certified the master plans and land use ordinances of all 53 municipalities and seven counties in the Pinelands. It also adopted 43 amendments to the Pinelands Comprehensive Management Plan and completed four in-depth reviews of the Plan.

In December 2017, the Commission passed a resolution thanking Brown for his commitment to the Pinelands and his service as a member.

Federal representative Frank Hays (1958-2017)

The Pinelands Commission was struck by the tragic loss of one of its members as federal appointee Frank Hays passed away suddenly on March 3, 2017.

Hays was appointed as the U.S. Secretary of the Interior's designee on the Commission's 15-member board in January 2017.

At the time of his passing, Hays served as the Associate Regional Director for Resource Stewardship and Compliance in the National Park Service's Northeast Regional Office in Philadelphia. In that capacity, Hays managed the region's Cultural Resource,



Frank Hays

Natural Resource, and Resource Planning and Compliance programs. Prior to joining the Northeast Regional Office, Hays was the superintendent of the Western Arctic National Parklands (WEAR), including Cape Krusenstern National Monument, Kobuk Valley National Park, and the Noatak National Preserve.

Hays began his career with the National Park Service in 1980 as a seasonal park ranger at Zion National Park. He worked in a variety of positions at Grand Canyon National Park, Chaco Culture National Historical Park, Saguaro National Park and Dinosaur National Monument.

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.

Land Use & Planning



Above: The Pinelands Commission adopted several rule changes in 2017.
Photo/Paul Leakan

Pinelands Comprehensive Management Plan (CMP) Amendments

In December 2017, the Commission adopted several amendments to the Pinelands Comprehensive Management Plan (CMP), the rules that govern land use, development and natural resource protection in the Pinelands Area.

The adopted amendments:

- 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 rule changes, the regulation of on-site signs is delegated to municipalities. Municipalities will determine whether and where on-site signs using digital technology should be permitted. The rule changes 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 are prohibited from converting to digital technology;

- change the Commission’s fee schedule for reviewing development applications. The rule changes 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; and
- authorize the use of the FAST technology for residential development on a permanent basis in recognition of its demonstrated success in meeting CMP water quality standards. The Pinelands Commission’s alternate design treatment systems pilot program has introduced eight nitrogen-reducing wastewater treatment technologies to the Pinelands Area as a means for unsewered residential development to meet Pinelands water quality standards on lots that are smaller than 3.2 acres. Three of these technologies have been permanently approved after having successfully passed a rigorous testing program. The approved technologies include the Amphidrome and Bioclere systems that are approved for use on minimum one acre parcels and the recently approved FAST technology that is now authorized for use on minimum 1.4 acre parcels. The remaining four technologies that are subject to continued piloting include the BioBarrier, Busse GT, Hoot ANR, and SeptiTech systems.

Off-road Vehicle Damage in Wharton State Forest

Throughout 2017, 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.

In October 2016, Commission staff compiled and provided the New Jersey Department of Environmental Protection (NJDEP) with a database of sites within Wharton State Forest that have been damaged by off-road vehicle use. Commission staff also provided the NJDEP with guidance on a pilot project that resulted in the installation of wooden barriers that seek to protect intermittent ponds in Wharton State Forest from off-road vehicle damage. The barriers were installed in early 2017. (Please see the photo below.)

In 2017, after receiving and considering extensive public comment on the matter, the Commission assembled sections of United States Geological Survey Topographic maps from 1972, 1981, 1995 and 1995 to establish a map depicting the existing roads in Wharton State Forest.



Above: In 2017, Pinelands Commission staff helped to provide the NJDEP with guidance on a project that resulted in the installation of wooden barriers that protect intermittent ponds such as this one in Wharton State Forest. Photo/John Bunnell

In September 2017, the Commission adopted a resolution that uses these roads as a baseline for existing roads in Wharton State Forest, while designating these roads as being appropriate for recreational use by motor vehicles. The resolution was forwarded to the NJDEP, and the

Commission has continued to work with the department on efforts to address illegal, off-road vehicle use in the forest.

Pinelands Long-Term Economic Monitoring Program Re-examination

Commission staff commenced a re-examination of the Pinelands Long-Term Economic Monitoring (LTEM) Program in the spring of 2017. The goal of the LTEM program is to continually evaluate the health of the Pinelands economy in an objective and reliable way. Since its inception in the mid-1990s, this program, in conjunction with the Long-Term Environmental Monitoring program, has provided essential information to the Pinelands Commission and its stakeholders.

A re-examination of the program was initiated upon the recommendation of the National Park Service, who has funded both monitoring programs since their inception. As part of this re-examination process, staff facilitated two stakeholder meetings to receive feedback on the existing products of the program as well as how the program could be improved. The first stakeholder meeting was held on August 9, 2017 and was attended by 20 invitees affiliated with various local governmental and non-governmental agencies involved in community and economic development. The second meeting was held October 27, 2017 and was attended by 10 invitees with expertise in the available data and analytical methods germane to the work of the LTEM program.

The Commission also contracted with Rutgers University faculty to attend both stakeholder meetings and to provide a report that evaluated the content and format of the annual LTEM report. Rutgers' report also provided recommendations for improvement and suggestions for potential special studies. The report was finalized in June of 2018.

Staff will be working to implement recommendations from the process in the next year.

Long-Term Comprehensive Wastewater Plan in Hammonton

Throughout much of 2015 and all of 2016 and 2017, the Town of Hammonton has worked to successfully eliminate all wastewater discharges to Hammonton Creek. This achievement is the direct result of the Town's investment in a state-of-the-art drip irrigation system along with its operation of its network of groundwater recharge lagoons, all of which brings the Town's wastewater treatment facility into full compliance with the Pinelands Comprehensive Management Plan (CMP).

Hammonton's drip irrigation system was first installed as a small scale pilot project with drip

tubing placed above ground on a wooded plot adjacent to the infiltration lagoons. After that small sale system was proven to be reliable, additional drip tubing was installed on a larger wooded area on the facility. Subsequently, subsurface drip tubing was installed at multiple depths beneath the Town's nearby recreational turf fields resulting in the conservation of potable water supplies that were once used to irrigate the turf fields.

In addition to the Town's construction and successful operation of its effluent dispersal facilities, Hammonton has also undertaken a program to identify and replace aging sewerage lines. Replacing these lines has eliminated groundwater and stormwater from entering the collection system, thereby reducing the volume of wastewater that needs to be treated and ultimately dispersed at the Town's wastewater treatment facility.

Hammonton's approach to improve water quality in Hammonton Creek and to conserve potable water supplies through the beneficial reuse of treated wastewater was brought about through compliance with the Pinelands CMP and cooperation between the Town of Hammonton and the Pinelands Commission.

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 2017, the Commission received and reviewed 140 ordinance and master plan amendments from 29 different municipalities. This included Housing Elements and Fair Share Plans from several municipalities seeking to address their affordable housing obligations, as well as redevelopment plans for the Shoreline Sand and Gravel property in Barnegat Township, a commercial property in Maurice River Township, the Browns Mills Center in Pemberton Township, the Municipal Landfill Redevelopment Area in South Toms River Borough and the Haines Boulevard Redevelopment Area in Waterford Township.

Pinelands Archaeology and Anthropology Symposium

As part of its efforts to identify, protect and document cultural resources of significance to the Pinelands, the Commission hosted an archaeology and anthropology symposium at its headquarters in October 2017.

The event was held in conjunction with the Archaeological Society of New Jersey, and it brought together a host of New Jersey archaeologists and anthropologists who presented and discussed papers on current cultural resource topics relevant to the Pinelands Area.

One of the papers detailed recent excavations at the Cedar Bridge Tavern in Barnegat. The site is listed on the State and National Registers of Historic Places. The tavern is recognized for its distinction as possibly the oldest intact colonial period bar in the United States, and it is believed to have been the site of one of the last recorded skirmishes of the Revolutionary War in 1782.

The papers provided new information about the Pinelands and contributed data that may be used for future planning, particularly for the possible refinement of cultural resource survey requirements within certain geographic areas of the Pinelands.

Permanent Land Protection

Pinelands Conservation Fund

In April 2017, the Pinelands Commission announced a new round of funding that includes a new criterion to permanently preserve properties damaged by off-road vehicle use.

The Commission designated a total of \$500,000 from the Pinelands Conservation Fund (PCF) toward the acquisition of lands in the Pinelands Area that feature significant ecological, cultural, historical and/or agricultural values. In conjunction with the Commission's interest to protect the Pinelands environment from the impacts of off-road vehicle abuse, the round of funding placed a new emphasis on preserving lands that contain evidence of off-road vehicle damage.

A total of eight projects were submitted for consideration, requesting a total of \$772,183 for the acquisition and permanent preservation of 1,142 acres. Ultimately, the Commission allocated funding for four projects, accounting for the full \$500,000. These projects were in the process of being acquired at the close of 2017.

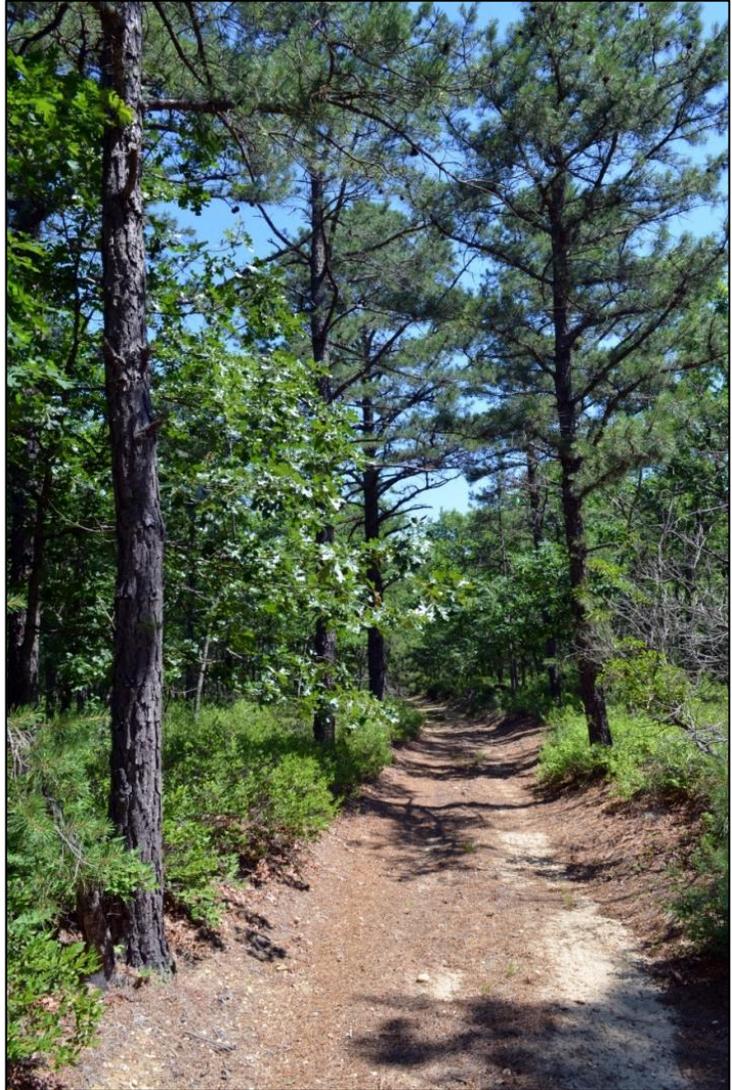
From 2007 to 2017, the Commission contributed \$9.4 million to 40 land acquisition projects in the Pinelands Area. Thirty-six of the 40 projects have been completed as of December 31, 2017, resulting in the permanent protection of 8,188 acres.

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.”



Above: In 2017, the Commission allocated PCF funding to help preserve the 44-acre Daniels property in the Forked River Mountains in Ocean Township. Ocean County closed on the property in December 2017. Photo/Paul Leakan

Zero rights were severed in 2017. A total of 6,043 rights were severed from 1982 to 2016, protecting 52,346 acres. In 2017, the mean sales price of PDCs was \$8,900 per right.

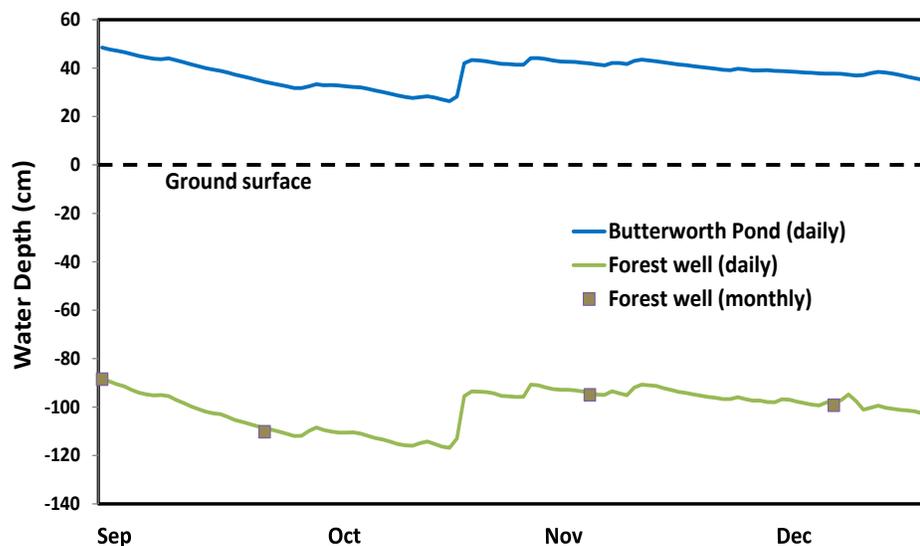
Science and Research Activities

Long-term Environmental Monitoring Program

In 2017, Commission scientists continued to conduct Long-term Environmental Monitoring Program research.

As part of the Commission water-level monitoring in the Pinelands, scientists have recorded water levels at 35 forest plots and 30 ponds on a monthly basis, and maintained continuous water-level recording devices installed in seven other ponds. In the fall of 2017, scientists installed a continuous water-level recorder in a shallow observation well associated with a pine lowland forest plot that has been monitored since 1986.

Comparisons of the continuous (daily) and monthly water levels for the same site can give insight into changes in water levels associated with storm events as well as other aspects of wetland hydrology. Long-term pond and forest-plot water-level data can also be used to determine if wetland water levels and pond hydroperiods (the length of time a pond holds water in a year) are changing over time.



Above: A hydrograph displaying water-level fluctuations over a four-month period in 2017 for a Pinelands pond and a pine lowland forest plot studied as part of the Long-term Monitoring Program.

Other 2017 Long-term Environmental Monitoring Program activities included measuring water quality at 47 stream sites, which has occurred on a bimonthly basis since 2006, and monitoring calling frogs and toads at a set of 20 ponds that have been studied 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 and off-road vehicles. 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.

Scientists began the first phase of the project by using aerial photography to compile an inventory of 2,742 natural ponds throughout the million-acre Pinelands Area. Ninety-nine of these ponds were selected for more in-depth study.



Above: This Calico Pennant, one of 42 dragonfly species found in the study, perches on a sedge at a natural pond in Camden County. Photo/Patrick Burritt

From 2014-2016, scientists monitored water quality and water

levels and completed plant, frog and toad, fish, and dragonfly and damselfly surveys at the 99 ponds. In another component of the study, Commission scientists and cooperators from the New Jersey Department of Environmental Protection and Pinelands Preservation Alliance used a combination of aerial photo interpretation and on-site visits to assess pond damage from off-road vehicles. In 2017, Commission scientists began data analysis and preparation of the final report with the goal of quantifying the impact of land use on these ponds. The final report is expected to be completed in 2018.

The Commission can use the results of this study to identify and prioritize ponds that need

enhanced protection and 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 pages 7-8 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, shallow excavations that intercept the groundwater (excavated ponds) and excavations designed to receive stormwater (stormwater basins). A total of 1,690 excavated ponds and 1,418 stormwater basins have been mapped. Fifty-two excavated ponds and 46 stormwater basins were selected for more in-depth study.



Above: Bayonet rush, a native Pinelands species, dominates this excavated pond in Atlantic County. Photo/Kim Laidig

As part of the study, scientists will compare landscape, 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 were selected to sample for pesticides and 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. Using the same methodology as in the Pond-vulnerability Study, excavated ponds were assessed for damage from off-road vehicles.

In 2017, Commission scientists initiated data analysis to quantify the impact of land use on these wetlands and compare created wetlands to natural ponds from the Pond-vulnerability Study. The final report will combine the results of the created-wetland and pond-vulnerability studies and be released in 2018.

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 pages 7-8 for additional information about the Fund).

Microorganism Study

In 2017, the Commission was awarded funding for a grant proposal, titled “Effects of land use on water quality and microorganisms in natural ponds, excavated ponds, and stormwater basins.” The proposed research will utilize a subset of the natural ponds, excavated ponds, and stormwater basin study sites from the pond-vulnerability and created-wetland studies for further monitoring and assessment.

In this project, Commission scientists and collaborators with the N. J. Department of Environmental Protection and U.S. Geological Survey will sample the surface water at all three wetland types for nutrients, metals, pesticides, and chlorophyll-a (an indirect measure of algal plant growth). Scientists will also characterize several groups of organisms that have historically received little attention in Pinelands wetlands. These organisms include periphyton (single-celled and soft-bodied algae attached to substrate), phytoplankton (free-floating algae in the



Above: This toe-biter, or giant water bug, is a large benthic macroinvertebrate that inhabits Pinelands ponds.

Photo/John Bunnell

water column), zooplankton (tiny animals that swim or drift in the water column), and benthic macroinvertebrates (primarily aquatic larval insects). The ultimate goals of this study are to assess the relationship between surrounding land use and the various water-quality and biological attributes and to more fully compare the functional equivalency of natural and created wetlands. Field work is scheduled to begin in the coming year.

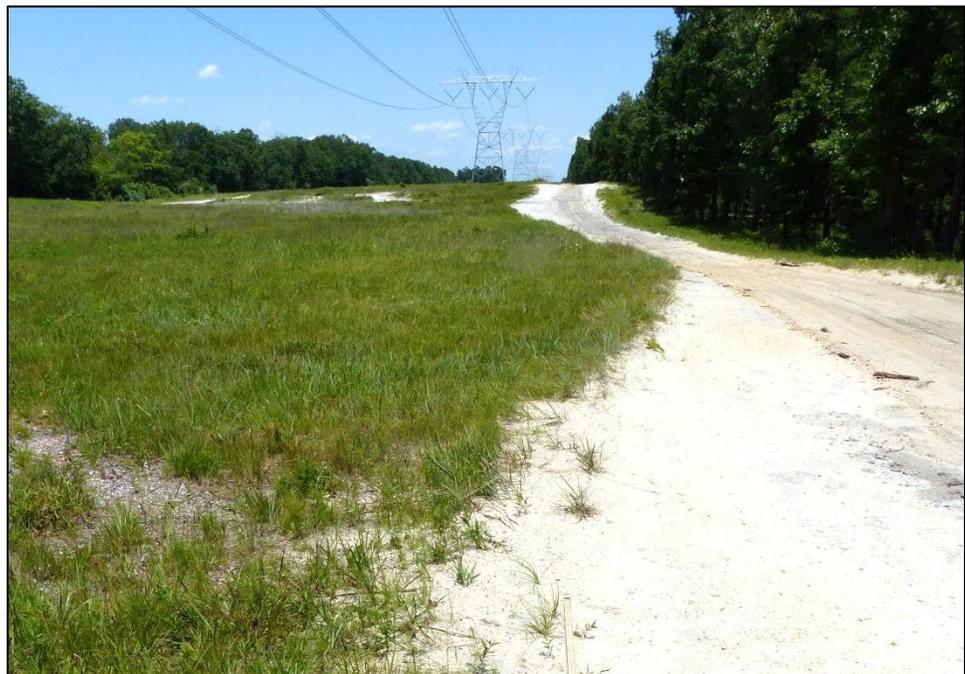
This research is being funded by a grant from the U.S. EPA and a match by the Commission through the Pinelands Conservation Fund (please see page 8 for additional information about the Fund).

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.

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



Above: In 2017, Commission scientists conducted additional plant surveys along access roads and near towers in electric-transmission rights-of-way such as this one in Camden County. Photo/Kim Laidig

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 2017, scientists completed the routine annual vegetation surveys at the established monitoring plots. Additional plant surveys were conducted near transmission towers and access roads to compare the plant species associated with these high-disturbance areas and the established monitoring plots. Commission scientists also completed an analysis that compared the woody vegetation found in the managed right-of-way plots and the adjacent forest plots measured in 2012. Other than the manual removal of trees or mowing of vegetation in the right-of-way plots, no major differences in woody plant communities, dominant shrub cover, or the number of woody species were found between right-of-way and adjacent-forest plots. Additional analysis of the vegetation data will occur in the coming year.

The pilot program is funded by 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 disrupting chemicals and the potential impacts on fish and frogs in the Pinelands. The proposed study was awarded funding in 2016.

The endocrine system is a collection of tissues in animals that produce hormones to regulate essential life processes, such as metabolism, tissue function,



Above: Water, frogs, and fish, such as this non-native largemouth bass, will be sampled for evidence of endocrine disrupting chemicals. Photo/John Bunnell

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 U.S. Geological Survey scientists will 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.

In 2017, field work began on the off-stream component of the project relating to water chemistry and frogs at ponds and stormwater basins. Water samples and green frogs were collected from a portion of the study sites for chemical and histological analyses, respectively. Data collection at on-stream sites will be initiated in the coming year.

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.

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 2017, the Commission's Project Review Office received 523 new applications (including public and private applications).

During the year, actions were taken on 1,737 applications. A total of 22 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 38 development applications from local, county and state entities in 2017, including:

- the establishment of a 13,200 linear foot hiking trail in Evesham Township;

- the establishment of a 6.26-acre cemetery in Shamong Township;
- the construction of a 190-foot-high local communications tower and 5,000-square-foot equipment compound in Waterford Township;
- the construction of an 800 linear foot access road and the installation of nine groundwater monitoring wells located on the same parcel as the closed, but uncapped, City of Estell Manor landfill;
- forest thinning in Brendan Byrne State Forest to reduce competition-induced mortality and reduce the risk of wildfire and attacks by southern pine beetles;
- forest thinning on another area of Brendan Byrne State Forest to regenerate and restore native shortleaf pine;
- construction of a 150-foot-high local communication facility in Manchester Township;
- the widening of Amelia Earhart Boulevard and Airport Road in Egg Harbor Township;
- the widening of Taunton Lakes Road in Evesham Township;
- the construction of a 200-foot-high wireless communication tower and 4,900-square-foot accessory equipment compound in Pemberton Township;
- the construction of a 194.5-foot-high wireless communication tower and associated 3,600-square-foot equipment compound in Jackson Township;

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 nine such permits in 2017.

South Jersey Gas Pipeline

On February 24, 2017, the Commission voted 9-5 to approve the South Jersey Gas Company's application to install a natural gas pipeline in the southern portion of the Pinelands.

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.

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.

New Jersey Natural Gas Pipeline

On September 14, 2017, the Commission voted 8-4 to approve the New Jersey Natural Gas Company's proposal to install a natural gas pipeline in the Pinelands.

New Jersey Natural Gas' application calls for building 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.

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.

The Commission's staff accepted and reviewed public comments, then issued a report recommending that the application be approved by full Commission.

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 47 violations were identified in 2017.

Commission staff members work with Pinelands municipalities to resolve violations. One example of a violation that was resolved in 2017 involved the clearing of 7,000 square feet of land for recreational purposes and the establishment of a gun range in Ocean Township. The

clearing requires an application to the Commission, and the gun range is not a permitted use on the parcel. The Township's Zoning Officer advised the Commission of the violation. The Commission notified the landowner of the violation, noting that the gun range must be removed. Additionally, the landowner was required to submit a schedule for restoring and reforesting the cleared land. The owner of the land has submitted a reforestation plan, which was accepted by the Commission's staff.

Public Information, Participation & Education

Outreach and Education

The Commission's Communications and Public Programs Office staff handled 130 press inquiries and responded to more than 6,200 public inquiries regarding the Pinelands in 2017.

Staff organized and carried out its eleventh annual, Pinelands-themed World Water Monitoring Challenge event. Held at the historic Batsto Village, the event attracted nearly 200 students and teachers who gauged Pinelands water quality and learned about the importance of protecting the region's unique natural and historic resources.



Above: Commission staff educated nearly 250 students during the World Water Monitoring Challenge at Batsto in 2017.

Photo/Paul Leakan

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 to the World Water Monitoring Challenge, Commission staff members educated approximately 700 students during in-class education programs and field trips in 2017.

Pinelands Short Course: Two events in one year

In 2017, the Commission and Stockton University teamed up to organize and carry out the 28th annual Pinelands Short Course on March 11th and the first-ever Summer Short Course on July 27th.

The event in March was held at Stockton's main campus in Galloway Township, while the event in July was held at Stockton's Kramer Hall academic building in the Town of Hammonton.

More than 600 people attended the March event, which featured 38 presentations that explored the unique history, ecology, culture and music of the Pinelands.

Meanwhile, the Summer Short Course attracted 80 participants, and it included six field trips and seven classroom presentations.



Above: Attendees of the first-ever Pinelands Summer Short Course had an opportunity to sample blueberries during a tour of the Atlantic Blueberry Farm in Hammonton. Photo/Paul Leakan

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

Pinelands Exhibits

The Commission continued to advance a major project to install Pinelands-themed exhibits in portions of its headquarters. During 2017, the Commission staff worked to obtain all necessary permits for the construction and installation of the exhibits. Construction is expected to commence in 2018.

Finances

Fiscal & Budget

The Commissions Operating Budget for Fiscal Year 2018 totaled \$5,025,838. Of this, \$4,286,323, or 85% percent, was budgeted for personnel expenses.

Budgeted revenue sources included \$658,500 in federal grants, a \$2,649,000.00 State appropriation, \$781,800 in State grants and other State funding, \$340,000 in application fees and \$596,538 from the Commissions fund balance and reserves.

The 2018 budget for the Kirkwood-Cohansey Study, funded through legislation passed in 2001, was \$163,792. The budget for the Pinelands Conservation Fund was \$1,299,075.

The Commissions Audit Report for Fiscal Year 2016, which ended June 30, 2016, is posted on the State Auditors web site. The website address is:

http://www.njleg.state.nj.us/legislativepub/auditreports_department.asp.

Pinelands Application Fees

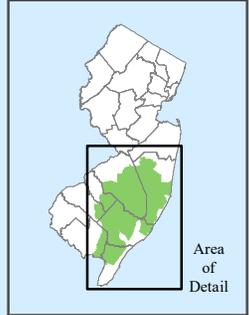
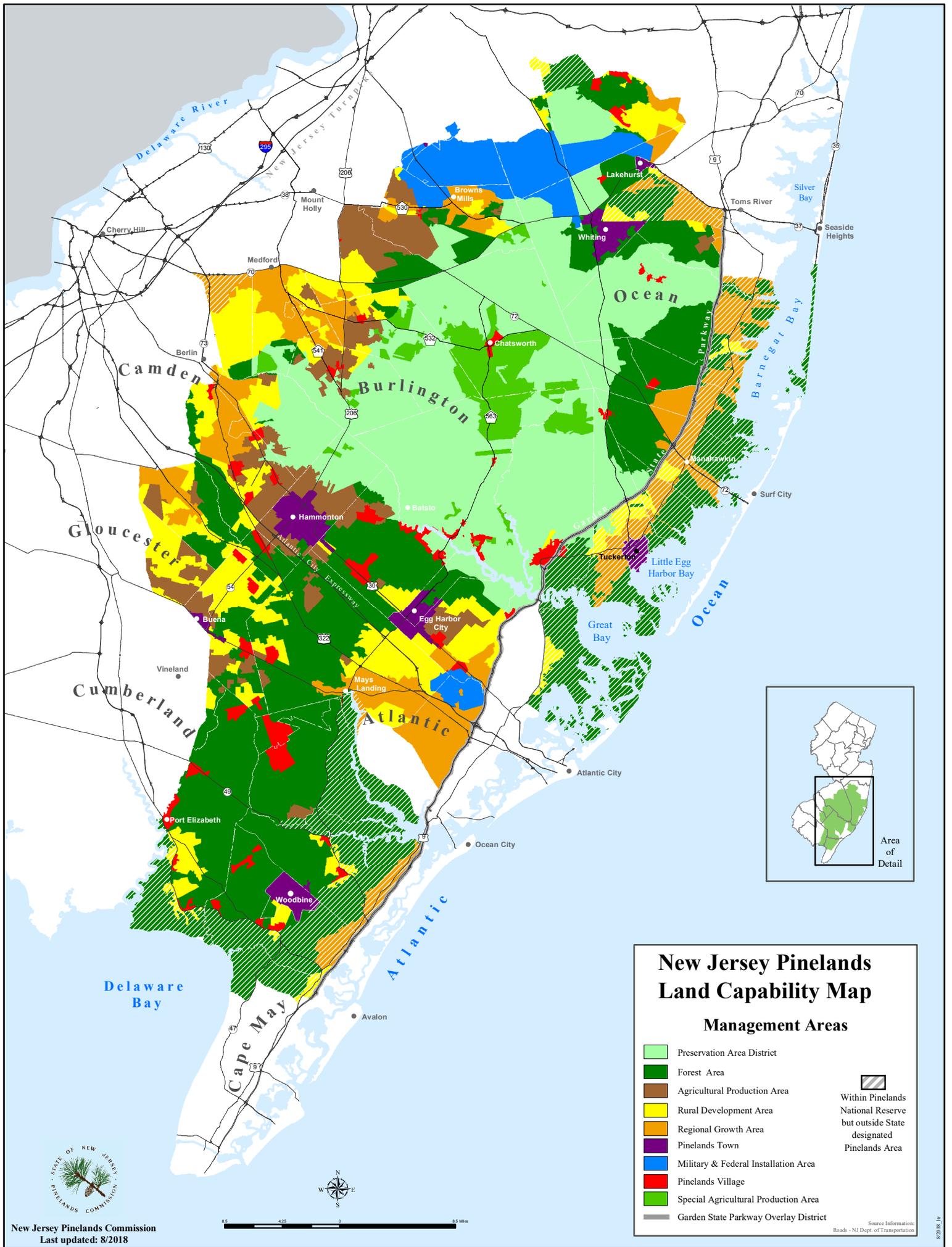
Since April 2004, the Pinelands Commission has received application fees to partially underwrite the direct costs associated with reviewing development applications in the Pinelands Area. During Fiscal Year 2018, unaudited application fee revenues totaled \$412,882 (\$69,684 more than Fiscal Year 2017).

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 2017 calendar year, all of the Commission's standards, procedures, and internal controls were followed.



Nancy Wittenberg
Executive Director



Area of Detail

New Jersey Pinelands Land Capability Map

Management Areas

- Preservation Area District
- Forest Area
- Agricultural Production Area
- Rural Development Area
- Regional Growth Area
- Pinelands Town
- Military & Federal Installation Area
- Pinelands Village
- Special Agricultural Production Area
- Garden State Parkway Overlay District
- Within Pinelands National Reserve but outside State designated Pinelands Area

