

New Jersey Pinelands Commission



Annual Report 2003



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: Cranberry bog at Speedwell, Washington Township during the 2003 fall harvest.
(Photo by Francis Rapa, NJ Pinelands Commission.)

New Jersey Pinelands Commission

2003

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Chairman's Message

Passage of the State and federal Pinelands Protection Acts some 25 years ago laid the foundation for what is likely the most successful regional smart growth plan in existence anywhere. The Pinelands Plan is a harmonious balance of land-use planning and zoning, water and natural resource protection, scientific monitoring and research, permanent land protection, economic and cultural resource programs, transfer of development rights and rigorous development standards. Nevertheless, times change and so do environmental, economic and political conditions. That is why the State Pinelands Act explicitly requires the Pinelands Commission to conduct periodic reviews of the Pinelands Comprehensive Management Plan (CMP). These reviews provide the Commission with an opportunity to take a step back and assess its accomplishments and shortfalls and to decide where changes are warranted to address changing conditions and new challenges.



2003 was yet another year of progress for the Pinelands Commission. The Third Review of the Pinelands CMP was completed and, with that, the Commission issued a set of ambitious recommendations for building upon the many successes of the CMP. The ink was barely dry on the document when the Commission began the work of implementation. For example, the Commission broke new ground by pursuing a sub-regional conservation plan in the Toms River Basin of Ocean County. This effort is designed to address a geographic area where potential conflicts exist between Pinelands development and conservation objectives. The Commission is also looking at future projects in other sub-regions that pose unique challenges to the implementation of the Pinelands land-use and resource protection standards.

Also as a direct result of the Third Plan Review, the Pinelands Commission authorized the creation of a Housing Task Force to develop up-to-date, long-term housing demand projections for the 24 Pinelands Regional Growth Area communities. The Task Force will work with State, regional and county planners to assess the future housing needs of southern New Jersey and determine what housing share can be apportioned to the Pinelands, while considering factors such as available vacant land, infrastructure and environmental constraints. The pioneering work of the Task Force will prove invaluable to planners beyond the Pinelands who have always struggled with the development of growth projections.

2003 also marked a major milestone in efforts to better manage and protect the nearly 18-trillion gallon Kirkwood-Cohansey Aquifer, which serves as the ecological lifeblood of the Pinelands and provides water to the region's residents and agricultural industry. A \$5.5 million study of the relationship between the capacity of the aquifer and the ecology of the Pinelands began in earnest during 2003. This intensive study will help officials to make more informed decisions about the impact of proposed groundwater withdrawals on the Pinelands environment. The Pinelands Commission first called for such a study twenty years ago, and in 2001, legislation was passed authorizing and funding the study. The Commission science office is leading a research team of biologists, geologists, and hydrologists from State, federal and University research groups, and we expect that the results of this study will have far-reaching environmental and economic benefits.

As you read through this 2003 Annual Report, keep in mind that the many accomplishments listed on these pages result from the hard work of 15 appointed Commissioners who volunteer, without compensation, hundreds of hours annually to the Pinelands mission, as well as a staff of fewer than 60 people. This is a notable fact considering that, each year, the Pinelands staff reviews thousands of development applications and scores of municipal zoning ordinances and collects environmental data at hundreds of sites. The Commission and staff work cooperatively with officials from 53 municipalities, seven counties, and numerous federal and State agencies as well as non-governmental partners. This highly dedicated organization is responsible for protecting natural and cultural resources and supporting a high quality of life in an area that represents nearly a quarter of the total land area of New Jersey. This is no small task and I am proud of their work.

Is there room for improvement? Of course, and as part of our continual fine-tuning of the Pinelands protection program, I invite all interested citizens to keep the Commission informed of their concerns and viewpoints. The decision-making process at the Pinelands Commission is open and transparent, with abundant opportunities for public input. Please join me and my colleagues in helping to protect the New Jersey Pinelands, one of our nation's great natural treasures, for future generations. Thank you.

Sincerely,
James J. Florio
Chairman



One of several major projects started in 2003, the Kirkwood-Cohansey Aquifer study will help the Pinelands Commission to better protect water resources throughout the Pinelands. Above is Atsion Lake in Shamong Township. *(Photo by Dr. Robert Zampella, NJ Pinelands Commission.)*

PINELANDS COMMISSION HIGHLIGHTS FOR 2003

- *The Third Review of the Pinelands Comprehensive Management Plan was completed after nearly two years of work. It concluded with the Commission issuing a set of goals and strategies to guide its efforts over the next five years. See page 4.*
- *The most comprehensive study ever undertaken of the relationship between capacity of the 18-trillion gallon Kirkwood-Cohansey Aquifer and the ecological health of the Pinelands began in earnest. See page 15.*
- *Following implementation of a new Pinelands Direct Easement Purchase Program by the State Agricultural Development Committee in cooperation with the Pinelands Commission, farmland preservation efforts in the Pinelands gained momentum, protecting some 1,900 acres. See page 11.*
- *The Commission began developing sub-regional approaches to protecting important natural resources in areas where development and conservation objectives are in conflict. The Toms River Basin is the location of the first such conservation planning effort. See page 5.*
- *The Pinelands Excellence Program helped two growing communities to develop visions for their futures and strategies for achieving those visions. See page 4.*
- *Following two years of research and data collection, the Pinelands Commission released its second in-depth study of water and aquatic resources in a major Pinelands watershed - the Rancocas Creek Basin. See page 13.*
- *A Reorganization of Pinelands Commission staff resulted in cost savings and greater operational efficiency. See page 21.*
- *For the first time in its 23-year history, the Pinelands Commission initiated a fee program for the review of certain development applications. See page 22.*
- *Advanced implementation of the Pilot Alternate Design Wastewater Treatment Program began. This program will have far-reaching effects in reducing the threat to Pinelands water resources from residential septic systems. See page 7.*

THIRD REVIEW OF THE PINELANDS COMPREHENSIVE MANAGEMENT PLAN

In July 2003, the Pinelands Commission passed a resolution establishing goals, strategies and initiatives to guide its resource protection efforts over the next five years. This action brought the Third Review of the Pinelands Comprehensive Management Plan (CMP) officially to a close and began the implementation phase. The original Pinelands Protection Act called for periodic reviews of the CMP to ensure that it remains a living and workable document that responds to changing conditions.

The review officially commenced in January 2002 when Commission staff issued a progress report on the recent and historical accomplishments of Pinelands programs since CMP implementation in 1981. The report also provided exhaustive baseline data on Pinelands land-use planning and permitting activities. Release of the report was followed by a series of four public panel discussions which brought together representatives of the environmental and conservation community, agriculture, business and industry, academia, local government, as well as a host of legal, planning and other experts from the private, governmental and non-profit sectors. In addition, the Commission received extensive public comment throughout the process. The forums were then followed by two special Pinelands Commission meetings, in December 2002 and June 2003, to consult with staff and direct the creation of strategies for achieving goals and objectives. The Commission's July vote signaled the formal adoption of a guidance document which outlines vision statements, goals and initiatives in three major topic areas: permanent land protection; Regional Growth Areas; and "other issues," which includes water resources, wetlands, habitat protection, land uses, permitting, and enforcement.

Permanent land protection efforts will focus on preserving, protecting and managing critical ecological and agricultural lands through innovative techniques, regional and coordinated efforts and development of a region-wide priority system. The Commission plans to examine and identify new opportunities for techniques such as clustering as well as expansion of the Pinelands Development Credit (PDC) program to help protect important lands outside of the current "PDC-sending" areas. As part of the "other issues" recommendations, the Commission will be considering: developing design and management standards for golf courses; improving planning for siting of schools; developing detailed survey protocols for threatened and endangered species; identifying opportunities for the re-use of wastewater; improving coordinated CMP enforcement efforts with municipalities; preventing uncontrolled use of off-road vehicles as well as other important objectives.

LAND-USE & PLANNING ACTIVITIES

The Pinelands Excellence Program

In 2002, the New Jersey Pinelands Commission received a \$187,000 planning grant from the Geraldine R. Dodge Foundation with the goal of fostering the development of "livable communities" in the rapidly developing Pinelands Regional Growth Areas. Through a competitive process the Commission selected two of these developing municipalities, Hamilton Township in Atlantic County and Winslow Township in Camden County, to participate in a "Pinelands Excellence Program". Working with the participating municipalities the Commission engaged the services of nationally renowned planning firms to help each community develop a strategic vision of its future and prepare concrete proposals for zoning, subdivision, site planning, and infrastructure improvements to achieve that vision.

During early 2003, following selection of participating municipalities and professional consultants, a planning process was begun in earnest. The planning process relied on community participation, beginning with a series of interviews with key stakeholders to gain additional insight into existing conditions and local concerns. Next, the Townships formed "visioning teams", comprised of representatives of the community, to work with the consultants to develop a vision statement to guide preparation of the Livable Community Action Plan. The team used a community-based observation technique in which they were provided with cameras and asked to document, in pictures and words, what they liked and did not like within their communities and in surrounding areas. Input from this process helped ensure that the resulting visioning statements were grounded in reality and not just abstractions from a theoretical exercise.

At the close of 2003, draft Community Action Plans had been developed, which included specific action strategies designed to achieve the goals of the vision statements.. For example, model ordinances were developed to address community design issues, land clearing, and stormwater management. Other measures are designed to preserve small-town character and community historic assets as well as enhancing circulation systems and supporting greater pedestrian and bicycle use.

The Pinelands Excellence Program is expected to wrap up in early 2004 with the finalization of the Community Action Plans. The plans will be presented at a series of educational workshops aimed at sharing the results of the program with planners and municipal officials from throughout New Jersey. The Pinelands Commission will also consider whether or not a second phase of the Pinelands Excellence Program would be helpful in assisting other Pinelands municipalities.

Conservation Planning & The Toms River Corridor Project

During 2003, the Pinelands Commission began developing innovative sub-regional approaches to protecting critical habitat and natural resources. This effort was initiated to address potential problems in areas where current zoning and development objectives conflict with the protection of rare or high-quality natural resources. As a result of the Third Review of the Pinelands CMP, the Pinelands Commission recommended that alternative land protection techniques be pursued in areas where natural resource values and development pressures clash. The Commission authorized the staff to first undertake such an effort in the Toms River Corridor of Ocean County.

In April 2003, the Pinelands Commission authorized the creation of a Toms River Corridor Task Force. A portion of the Barnegat Bay watershed located within the Pinelands Area of Jackson and Manchester Townships, the project area encompasses nearly 17,000 acres, or 21 percent of the 124-square-mile Toms River Watershed. The Corridor includes approximately 7.8 miles of the Toms River main stem and 4.6 miles of the Ridgeway Branch, one of its major tributaries. The area contains extensive tracts of forest and wetlands and habitat for a wealth of plant and animal species, many of which are classified as threatened or endangered. In addition, the Corridor is currently home to several thousand people and is facing mounting development pressures.

Recognizing the need for coordinated action, the Task Force was asked to assess the natural resources of the Corridor, prioritize protection areas, suggest and implement land protection strategies, and craft a regional land use/protection strategy for the area, which could then be reviewed and implemented by the Townships, County, and Pinelands Commission.

Twenty individuals representing natural resources, planning, and governmental interests were invited to serve on the Task Force. In addition to Jackson Township, Manchester Township, and Ocean County officials, representatives from a variety of offices of the NJDEP, including the Endangered and Nongame Species Program, the Division of Watershed Management, the Office of Policy, Planning and Science, the Green Acres Program, and the Water Monitoring Program participated. Also participating were representatives from the New Jersey Audubon Society, New Jersey Conservation Foundation, Pinelands Preservation Alliance, and the Trust for Public Land. The US Naval Air Engineering Station Lakehurst, located on the southern edge of the Corridor, was also represented. The task force was supported by staff from the Pinelands Commission and the US Geological Survey.

At year's end, the Task Force was wrapping up its analysis and planning efforts and was preparing a report on its findings and recommendations for release in early 2004. The report will set forth a comprehensive strategy for protecting threatened and endangered animal species and other natural resources in the region through coordinated zoning, site design and permanent land protection. The project is expected to serve as a model for sub-regional conservation plans.

Review of Municipal Ordinances

All municipalities and counties in the Pinelands Area are required to revise their master plans and land use ordinances in order to implement the objectives and standards of the CMP. To date, all 7 counties and 52 of the 53 municipalities with land in the state-designated Pinelands Area have had their master plans and land use ordinances certified by the Commission. Amendments to certified county and municipal master plans and land use ordinances must also be submitted to and reviewed by the Commission.

During 2003, the Commission reviewed and certified 114 such ordinances and master plans from 37 different Pinelands municipalities. Notable among these were master plans and ordinances that implemented a reduction in residential density and a revised zoning plan within the Regional Growth Area of Winslow Township, Camden County and the establishment of a new planned commercial zoning district along a portion of County Route 347 in Maurice River Township, Cumberland County.

Housing Task Force

In late 2003, the Pinelands Commission authorized creation of a Housing Task Force to recommend how future population projections should be factored into housing opportunities for Pinelands Regional Growth Areas. Under the project, the Pinelands Commission will request County planning offices in southern New Jersey to review population and labor market projections for the entire southern New Jersey region and help determine how much population growth should be anticipated within the Pinelands. A broad-based task force of government agencies and non-governmental organizations will then recommend ways to apportion future growth within the 24 Pinelands Regional Growth Area municipalities. As part of its charge, the Task Force will assess the capabilities of Regional Growth Areas to accommodate future growth by looking at environmental constraints, infrastructure, available land, development patterns as well as other factors that will influence growth.

Long-Term Economic Monitoring Program

A cooperative project administered by the Pinelands Commission and funded by the National Park Service, the Pinelands Long-Term Economic Monitoring Program monitors, collects, and analyzes data to gauge the economic health of the Pinelands region over time. In 2003, the program tracked nineteen core variables and four supplemental variables. The design and format of the report was completely revised, enhancing the report's readability and usefulness, and was published on CD-ROM for the first time.

Data collected in 2003 reveals some key findings about the Pinelands economy:*

- Following a decline in 2001, the average number of building permits issued in Pinelands communities in 2002 increased by 17%;
- Regarding home sales, the inflation-adjusted median home price rose by 8.4% in the Pinelands to \$122,500, the first significant increase in 14 years. This compares to an increase of 6.6% to \$129,200 for a non-Pinelands home. The Pinelands share of the state's total real estate transactions increased steadily from 8.2% in 1999 to 9.4% in 2002;
- An analysis of block-level census data revealed that approximately 276,890 people live inside of the Pinelands boundary, while 412,560 people live in areas of Pinelands municipalities that lie outside of the Pinelands boundary;
- The population density of the Pinelands municipalities was 304 people per square mile, compared to 1,046 people for the non-Pinelands region;
- The unemployment rate rose from 4.7% in 2001 to 5.3% in 2002, but is still lower than areas outside of the Pinelands. Unemployment rose from 4.5% to 6.0% in the non-Pinelands region and from 4.2% to 5.8% for the state as a whole; and
- The average inflation-adjusted 2002 property tax bill in the Pinelands was \$3,010. This is \$500 lower than the non-Pinelands region and \$1,740 lower than the state average;

The 2003 report features a Municipal Fact Book which provides a better understanding of the unique characteristics for each of the 53 Pinelands municipalities. The most current data for each Pinelands municipality is ranked and averages are compared using data from 202 South Jersey Municipalities. The Fact Book was redesigned in color in 2003 and included more data, population graphs, and development area maps.

Work continued on special studies in 2003. Data collection for a vacant land analysis was almost concluded, and analysis is set to begin in 2004. Work began on a replacement for the municipal comparables analysis, which was discontinued in 2002. The new analysis will examine the economic monitoring variables for several distinct regions in South Jersey inside and outside the Pinelands. A first draft of the municipal health study was also completed in 2003.

Pilot Program for Alternate Design Wastewater Treatment Systems

The Pinelands Commission implemented a program in 2002 to strengthen protection of water resources from pollution from residential septic systems. The program requires the use of residential wastewater systems that are two to three times more effective than conventional and pressure-dosing systems in reducing groundwater pollution. The new systems will be required for new unsewered homes on lots smaller than 3.2 acres in size. Five advanced treatment technologies (Amphidrome, Bioclere, Cromaglass, FAST and ASHCO RFS III) have been authorized for use subject to a number of stringent operation and maintenance standards. The culmination of a two-year effort, these technologies were selected by an Ad Hoc Committee comprised of representatives from the Commission, the Pinelands Municipal Council, the New Jersey Builders Association and the Pinelands Preservation Alliance, with the support of engineers and scientists from the NJDEP.

Throughout 2003, Commission staff continued to provide technical and administrative support to Pinelands municipalities and health departments to assist in implementing the program. In support of this effort, Commission staff drafted implementing ordinances for the 40 municipalities that are affected by the program. Twenty-eight of these municipalities adopted the necessary ordinance provisions during 2003. Commission staff continued to meet with municipalities to explain the program and answer questions posed by municipal representatives and residents.

Also during 2003, the Commission held its second pilot program training seminar. This program provided technical guidance to engineers and public health officials involved in the preparation and review of engineering plans for the Pinelands advanced treatment technologies. Attended by more than 125 professionals, the seminar included presentations by the five alternate technology manufacturers, NJDEP and Pinelands staff. The seminar was approved by the New Jersey Department of Health and Senior Services for credit toward Health Officer Registered Health Specialist license renewal.

Pinelands Scenic Byway

2003 saw considerable progress toward nomination to the New Jersey Department of Transportation for creation of a State Scenic Byway in the Pinelands National Reserve. Scenic byways have been designated throughout the nation as a result of the federal Intermodal Surface Transportation Efficiency Act of 1991. The Act provides grant funding and other incentives to entities seeking formal recognition of public thoroughfares with surpassing natural and/or cultural qualities. New Jersey adopted a parallel program a few years later and delineated its first byway not long after.

The Pinelands Commission has been working with sixteen municipalities and five counties to develop a scenic byway through the southeastern portion of the Pine Barrens. The Byway meanders through areas of striking natural beauty and rich historic heritage. With a focus on maritime portions of the Pinelands, the route takes particular advantage of the scenic qualities and historic hamlets of the Mullica, Maurice and Tuckahoe River Corridors. The impetus for the byway designation arose from the Pinelands Rural Economic Development Program, which examined economic conditions in several Pinelands towns and recommended measures to stimulate environmentally suitable growth through various planning initiatives, incentives, public improvements, and redevelopment. One suggestion was for a New Jersey and National Scenic Byway that would bring widespread awareness of, and interest in, the natural assets of the Pinelands.

In late 2003, a draft byway nomination and a detailed narrative of the byway route were nearing completion. An organizing committee of municipal representatives established in 2002 to oversee completion of the nomination will review these documents in early 2004. An inventory of the many natural and cultural attractions along the byway was also being finalized for submission to the organizing committee, municipalities and counties involved for their review and comment. At year's end, 15 of the 16 municipalities and four of the five counties through which the byway passes adopted resolutions supporting its designation.

After the byway receives state recognition, the nomination will be forwarded to the US Secretary of Transportation for federal designation. Listing as a byway enables the sponsors to apply for program-affiliated grants and provides access to a variety of promotional and marketing opportunities, including development of visitor centers, wayside exhibits, and self-guided tours. The byway will also be featured in the US Department of the Interior's byway website and in other state and national tourism materials and maps and will feature highway signage supplied by the NJ Department of Transportation.

Cultural Resources

In April 2003, the Commission entered into an agreement with Dr. Peter Pagoulatos, formerly the archeologist at Fort Dix Army Base, for the development of a predictive model of prehistoric site occurrence. The predictive model involves an examination of the Commission's prehistoric cultural resource data in order to clearly identify locations where the presence or absence of evidence of Native American occupation is securely documented. With the help of GIS staff, this information is being combined with data about certain environmental attributes. The results will then be subject to a statistical analysis wherein it is hoped that reliable patterns will emerge that demonstrate, with a reasonable degree of accuracy, the probability of site occurrence at other locations with similar attributes. It is anticipated that, when completed, the model will increase efficiency and help prevent unnecessary surveys at individual development sites.

In 2003, the Commission's staff archaeologist reviewed 231 development applications for the need for a cultural resource survey. He also evaluated 25 completed surveys and archeological excavation reports and undertook three preliminary cultural resource surveys for forestry and public development applications.

PCS and Cell Tower Plan Amendments

In 2003, the Pinelands Commission authorized amendments to its comprehensive plans for local communications facilities to include AT&T Wireless of Philadelphia, LLC. The Comprehensive Cellular and Personal Communications Services (PCS) Plans previously enabled five service providers to apply to the Commission for approval to construct no more than 22 new towers in the million-acre Pinelands region. Under this amendment, AT&T may apply to the Commission to construct up to six new towers. The amendments will also allow the installation of up to 74 additional antennae on existing towers or other structures.

The Cellular and PCS Plans were approved in 1998 and 2000, respectively, to provide adequate communications services in the Pinelands while protecting the scenic and natural resources of the region. Prior to the implementation of the plans, there were strict height limitations on structures throughout the Pinelands, except for Pinelands Regional Growth Areas and Pinelands Towns. The Commission revised the Cellular and PCS Plans to provide important communications services to the public and to ensure that Pinelands regulations are in compliance with the mandates of the Federal Telecommunications Act.

The new amendments resulted from more than two years of discussions among Commission staff, the Commission's radio-frequency consultant and AT&T representatives. Also key to the success of the plans, the amendments incorporate the concerns of the other service providers to ensure full cooperation on the co-location of antennae on towers. Under the plan, applicants must demonstrate that facilities to be located in the Pinelands Preservation District and other ecologically important management areas are the least number necessary to provide adequate service. There are also strict standards for the protection of certain scenic resources from visual impacts, including wild and scenic rivers, the Forked River Mountains, and the Pine Plains pygmy forests.

Water Supply Planning

The Pinelands Commission is continually engaged in activities to protect Pinelands surface and ground water from depletion. Over exploitation of Pinelands water resources could have devastating effects on the fragile ecological balance of the Pinelands as well as the region's residents and agricultural interests. The Commission's planning office routinely reviews requests filed with the NJDEP for new wells and water diversion permits. In 2003, staff met with NJDEP to ensure a cooperative and ongoing commitment to minimize impacts to the Kirkwood-Cohansey Aquifer.

The Commission urged the NJDEP to permanently close Berlin Well Number 12. The Commission originally recommended in the early 1990's against installation of this municipal water supply well, which is located just outside the Pinelands but next to a stream flowing into the Pinelands. Later, the well was temporarily closed after adverse impacts to a local wetlands complex, which is home to the federally endangered swamp pink, resulted.

Commission staff also helped the NJDEP craft an approach to a growing water demand in the Whiting area of Ocean County. A NJDEP Administrative Consent Order to Crestwood Village Water Company's water allocation permit will result in increased reliance on deeper aquifers to reduce the impact on the surficial Kirkwood-Cohansey. The Commission reviewed and commented on several other well applications and reviewed numerous applications for agricultural diversions. In many cases, staff encouraged the implementation of Best Management Practices for farm wells.

In 2003, the Pinelands Planning and GIS Offices began development of a well allocation and capacity analysis to assess potential impacts of new well allocations on stream flow and the Kirkwood-Cohansey aquifer. This will ensure that decisions on new wells can be environmentally based, until the time that the Kirkwood-Cohansey Study is completed. The Commission also participated in NJDEP's effort to update the Statewide Water Supply Master Plan's assessment of the use of all state watersheds. Additionally, Commission staff assisted and supported a State effort to examine a water supply deficit situation in the southeastern portion of the State and Pinelands. Results included proposals to direct the appropriate uses of treated wastewater and identifying alternate groundwater sources for potable water.

As part of two cooperative water supply planning efforts, the Commission continued to monitor and assess the impacts of the consumptive interbasin transfer of water in the upper Mullica River basin of southern Camden County and the Great Egg Harbor River Basin of Gloucester County. These long-term projects use planning and zoning approaches along with scientific monitoring to manage the out-of-basin transfer of water from the headwaters of the two Pinelands rivers. In 2003, no deleterious impacts were observed and the Commission secured funding for continued monitoring.

Mullica Watershed Planning

Under a contract with the NJDEP, the Pinelands Commission oversees the development of management strategies for the Mullica River Watershed, also known as Watershed Management Area No. 14. The Mullica Watershed encompasses parts or all of 24 municipalities in four counties - Atlantic, Burlington, Camden and Ocean.

In 2003, the Commission developed a revised scope of work for the Mullica Watershed Planning Project in consultation with NJDEP to realign the watershed planning project's objectives with current objectives of the Division of Watershed Management. The NJDEP sought to introduce new strategies for managing the Mullica Watershed in 2003 largely because the Commission had fulfilled the earlier objectives of the watershed planning process during the period of 2000 through 2002.

Also during 2003, the Commission developed and submitted to NJDEP a new, multi-parameter assessment methodology and ranking system to identify impaired streams in the Mullica Watershed. The "Assessment Strategy to Rank Stream Impairments in a Coastal Pinelands Environment" was developed as an alternative to existing stream ranking methods which failed to recognize the unique aquatic chemistry and biological communities of characteristic Pinelands water bodies. Prior to the development of this Pinelands specific assessment tool, pristine Pinelands streams were inaccurately characterized as impaired when standard, generic stream ranking methods were applied. Further, staff provided the NJDEP Water Assessment Team with proposed corrections to the Department's draft "Integrated List of Impaired Water Bodies" regarding the appropriate ranking of Mullica watershed water bodies.

Staff provided input to the NJDEP during the development of Total Maximum Daily Load (TMDL) values for surface water resources located in the Mullica Watershed. In addition, Pinelands staff assisted the NJDEP, and Hammonton Town officials in the development of strategies to meet TMDL target values for Hammonton Lake.

Staff developed a detailed protocol to assess the recharge function of existing stormwater infiltration basins in the Mullica watershed. A methodology for sample selection based on soil types was developed to identify basins for inclusion in the Commission's basin retrofit study. Basins were observed for the presence of standing water 72 hours after rainfall and then mapped on a GIS database. Municipal engineers, local officials, representatives of the NJ Builders Association and the Camden and Cape-Atlantic Soil Conservation Districts all provided assistance to the Commission in identifying potential methods to enhance basin infiltration performance. Basins identified under this assessment could benefit from reconstruction and retrofit efforts by restoring groundwater recharge and nonpoint source pollution control functions. Staff also continued to work with several Pinelands area municipalities to identify potential funding sources to upgrade existing stormwater systems.

Efforts continued on behalf of Bass River Township to explore the feasibility of a New Gretna community wastewater treatment system. This included meetings with the USDA-Rural Development Agency, Burlington County Water Resource Coordinator and Bass River Township's Mayor as well as preparation of a funding proposal to the National Onsite Demonstration Project.

PERMANENT LAND PROTECTION

Farmland Preservation

In 2003 the State Agricultural Development Committee (SADC) completed the first purchases of development easements under a Memorandum of Agreement between the Pinelands Commission and the SADC to share the costs of purchasing the deed restrictions on Pinelands farms. This agreement compliments a revised valuation formula developed by the SADC that changed the way farmland easement values are calculated in the Pinelands. A total of 21 Pinelands farms covering nearly 1,900 acres were preserved in 2003 under this shared funding initiative.

Under the Pinelands Direct Easement Purchase Program, the SADC purchases the development rights – including Pinelands Development Credits -- on farmland. Because those credits are permanently retired, the program helps to reduce potential development in Pinelands Regional Growth Area communities – areas where developers can redeem credits to increase housing densities. The SADC allocated \$9 million toward the purchase of development rights on farms in this round, while the Pinelands Commission provided \$2.1 million in Pinelands Development Credit Special Purchase Program funding.

Pinelands License Plates

In 1998, Pinelands specialty license plates became available to New Jersey motorists who want to demonstrate their support for the Pinelands while helping to protect open space in the region. After reimbursement of the Division of Motor Vehicles for expenses associated with the plates, proceeds from application and renewal fees are deposited in the Pinelands Preservation Fund for acquisition of ecologically sensitive land in the Pinelands. The fund is managed by the NJ Department of the Treasury and land acquisitions are administered by the NJDEP Green Acres Program. During Fiscal Year 2003, 818 new sets of Pinelands plates were issued and 3,783 sets were renewed. The fund balance at the close of Fiscal 2003 stood at \$291,485.

Cape May County Municipal Utilities Authority Acquisition Fund

The Cape May County Municipal Utilities Authority (CMCMUA) fund was established under an agreement between the Pinelands Commission and the CMCMUA under which the CMCMUA pledged \$2.25 million to fund acquisitions throughout the Pinelands National Reserve. In 1999, the Pinelands Commission entered into an agreement with The Nature Conservancy (TNC) of New Jersey to jointly administer the program, with TNC matching acquisition costs dollar-for-dollar.

During 2003, the Pinelands Commission reimbursed TNC \$533,100 to help fund the acquisition of 550 acres in the Oswego River Lowlands of Bass River Township. This brings the total amount of land acquired under the CMCMUA Fund to 940 acres in four counties.

In April 2003, the Commission, TNC and the NJDEP Green Acres Program awarded \$400,000 in land acquisition grants to four projects under a grant program also funded through the CMCMUA Fund. The projects are: the 384-acre Franklin Township Piney Hollow Natural Area; the 80-acre Galloway Township Heron Rookery Preservation Project; the 82-acre Ocean County Forked River Mountain South Project; and the 97-acre Woodford Cedar Run Wildlife Refuge of the Rancocas Headwaters Greenway. A grant board consisting of a representative of all three organizations reviewed and approved the applications, which were open to qualifying non-profit and local government organizations.

Pinelands Limited Practical Use Program

The Limited Practical Use (LPU) Program offers owners of small properties in the Pinelands (less than 50 acres), whose application for a Waiver of Strict Compliance (a variance from normal Pinelands zoning or environmental standards) has been denied by the Commission, the opportunity to sell their land to the State of New Jersey. In 2003, 21 land parcels, totaling 11 acres, were declared eligible for this acquisition program by the Commission, bringing the total number of parcels declared eligible since the inception of the program in 1995 to 427, totaling 1,450 acres.

To date, more than \$1.5 million has been spent to buy and permanently protect 352 of these parcels totaling 1,035 acres, using a combination of Green Acres funds and federal reimbursements. Acquired land may be subsequently transferred to Pinelands municipalities, other government agencies and conservation organizations. All of the purchased parcels are permanently deed restricted to ensure they remain undeveloped.

Pinelands Development Credit Program

Pinelands Development Credits (PDCs) are allocated to landowners in the Preservation, Agricultural and Special Agricultural Production Areas (known as sending areas). These credits can then be purchased by property owners and developers interested in developing land in Regional Growth Areas (known as receiving areas) and used to increase the densities at which they can build. Once credits are "severed" from a sending area property, the property is permanently protected by a conservation deed restriction and the credits on the property can then be sold. Credits are bought and sold in units called "rights." Four rights are equal to one credit. During 2003, 103 rights were severed, protecting over 1,200 acres of ecologically sensitive areas and farmland. This brings the total land area protected through the severance of PDCs since 1982 to 37,974 acres.

NJDEP Green Acres Pinelands Acquisition Program

The Pinelands Commission continued to work cooperatively in 2003 with the New Jersey Department of Environmental Protection Green Acres Program to identify and permanently protect sites of important ecological value in the Pinelands. Green Acres oversees an ambitious land protection program in the Pinelands which includes acquiring land under the Pinelands Limited Practical Use Program and the federally funded Section 502 Pinelands land acquisition program.

During 2003, Green Acres acquired 4,420 acres of land throughout the Pinelands at a cost of just over \$5.5 million. Among the largest buys were a 576-acre acquisition in Little Egg Harbor Township and 550-acres in Berkeley Township, both in Ocean County, and a 461-acre parcel in Hamilton Township Atlantic County. In addition to the State land acquisition program, Green Acres assisted county and local governments and non-profit organizations with the acquisition of 800 Pinelands acres.

SCIENCE & RESEARCH ACTIVITIES

Rancocas Creek Basin Study

In May 2003, the Pinelands Commission released a comprehensive report on the aquatic and wetland resources of Pinelands portions of the Rancocas Creek Basin. The report characterizes the water quality and ecological resources within 69 percent of the watershed, which comprises about 243 square miles in sixteen municipalities in Burlington, Camden and Ocean Counties. It compares environmental data with types and levels of land use development. The report is the second of its kind released by the Commission following the release of the Mullica River Basin Study in 2001.

Taking about two years to complete, the Rancocas study examines water quality and populations of hundreds of species of plants, fishes, frogs and toads at about 70 sites throughout the basin. The data is compared with existing land-use patterns to determine how land-use activities impact wildlife, aquatic and wetland habitat and water quality.

About 75 percent of the study area is undeveloped forest land and wetlands, about 14 percent is developed and the remainder is predominantly agricultural. The study found that areas with the least amount of development, especially protected lands, have ecological communities and water quality that are most characteristic of Pinelands species and water quality. The study concluded that significant portions of the basin do not display water quality or biological characteristics considered typical of the Pinelands, with land use and disturbance having a substantial impact on most of the North Branch and Southwest Branch sub-basins as well as parts of the South Branch. However, the Greenwood Branch basin, which is dominated by state forest land, displays those qualities associated with the essential character of the Pinelands.

Most of the Rancocas Creek monitoring sites were co-located with the NJDEP Ambient Biomonitoring Network and Index of Biotic Integrity monitoring sites. Commission staff used the data presented in this report to rank water bodies based on the composition of biological communities. As with the Mullica River basin data, NJDEP used these ranks to revise the Integrated List of Water bodies.

Mullica River & Great Egg Harbor River Stream-Discharge Monitoring

The Commission and the United States Geological Survey (USGS) continued to implement two cooperative stream-gaging programs. Funded by the Camden County Municipal Utilities Authority (CCMUA), the first project is designed to determine whether waste-water transfers from the lower Camden County area are affecting stream flows in portions of the Mullica River basin. An initial trend analysis of streams in the study area revealed no changes in streamflow during the period 1991-1998. In 2003, staff completed a trend analysis for the period April 1991 through September 2002. Decreases in streamflows were detected within the study area and the changes appeared to coincide with an increase in wastewater flows to the Delaware River. However, for most of the study sites that showed a material decrease in flow, the annual percentage decreases estimated through the analysis far exceeded the amount of water withdrawn.

The Commission and the USGS are conducting a similar stream-gaging project at five stream stations in the Upper Great Egg Harbor River basin in cooperation with the Monroe Township Utilities Authority. Staff is initiating an analysis of stream-flow trends in this study area.

Mullica River Basin Study

A Commission-authored paper, titled "Landscape changes in the Mullica River Basin of the Pinelands National Reserve, New Jersey, USA," was published in the journal *Environmental Management*. The paper, based on the Commission's 2002 Mullica River Basin Report, describes changes in the Mullica River landscape over a twelve-year period. A second published study was also based on work completed as part of the Mullica River Basin assessment. The paper, titled "Functional equivalency of natural and excavated coastal plain ponds," appeared in the December issue of *Wetlands*. In this study, natural intermittent ponds and ponds that were created more than 50 years ago were compared. Of major importance was the general absence of non-native plants in the 13 natural ponds studied, suggesting that created wetlands may be more susceptible to invasive species.

The data presented in the Mullica River Basin report proved invaluable in revising the NJDEP's Integrated List of Water bodies which rates streams and lakes throughout the state. Commission staff ranked Mullica River water bodies based on the composition of biological communities, and the NJDEP used these ranks to classify Pinelands streams.

Great Egg Harbor River Watershed Management Area Study

Water-quality sampling at 61 sites in the Great Egg Harbor River Watershed was completed in 2003. During 2002, fish were surveyed at 33 stream sites and 11 stream impoundments, frog-vocalization surveys were completed at 44 stream impoundments, and stream vegetation was sampled at 40 stream sites. Data analysis and report writing has been initiated and a report describing the results of this assessment will be completed in 2004.

Toms River Basin Study

A significant part of the 2003 field season was dedicated to completing a survey of the Toms River Basin and other Barnegat Bay drainage systems. Monthly pH and specific conductance measurements were completed at 65 stream stations during 2003. Fish were surveyed at 42 stream sites and 17 stream impoundments, frog-vocalization surveys were completed at 46 stream impoundments, and stream vegetation was sampled at 49 stream sites.

Cranberry Agriculture and Wetlands Study

In 2000, the Commission initiated a USEPA-funded study of the potential effect of past and present cranberry agriculture on selected landscape features and aquatic communities in the Mullica River and Rancocas Creek basins. From 2001 to 2002, water-quality sampling, stream-habitat characterizations and fish, macroinvertebrate, and vegetation surveys were completed and diatoms (algae) were sampled at 17 streams on two occasions. In 2003, a second round of diatom sampling was conducted, streamflow monitoring was concluded, and an analysis of stream patterns was initiated.

Littoral Communities Study

Another USEPA-funded study, begun in 2001, is examining the ecological integrity of Pinelands wetlands. Specifically the Commission is looking at the effect of watershed disturbance on the littoral, or near shore, communities of stream impoundments. During 2003, water quality was measured at 47 sites. Fish, vegetation, and selected environmental features were surveyed at four impoundments. The results of this study of littoral biota will allow the existing baseline inventory of Pinelands vegetation, fish, and anuran communities to be expanded to include impoundments and help to refine previously developed land-use/ecological relationship models.

Water-level Monitoring: Forested Wetlands and Coastal Plain Ponds

In 2003, monitoring of growing-season water levels at five pitch pine lowland reference sites continued for the sixteenth year. With the exception of one year, these sites have been monitored continuously since 1987. Growing-season water levels were monitored at 14 coastal plain ponds for the eighth consecutive year (1996-2003). The results of these monitoring programs have been applied directly towards development of the Kirkwood-Cohansey Project Work Plan (see below).

Coastal Plain Pond Study

The Pinelands Commission is participating in a study of coastal plain ponds conducted by the NJDEP Office of Natural Lands Management. The study, which is funded by the USEPA, builds upon the Commission's ongoing coastal plain ponds investigations and will contribute to both the Commission's long-term environmental-monitoring program and the Kirkwood-Cohansey Project. In 2003, the NJDEP organized and analyzed the data, including data collected from eighteen ponds by Pinelands scientists in 2002.

The Kirkwood-Cohansey Research Project

2003 marked a milestone in Pinelands Commission efforts to improve understanding of the relationship between the 18-trillion-gallon Kirkwood-Cohansey aquifer and the unique Pinelands environment that it supports. Legislation passed in 2001 appropriated \$5.5 million from the State Water Supply Fund to the Pinelands Commission to determine how the current and future water-supply needs within the Pinelands area can be met while protecting the Kirkwood-Cohansey aquifer system and avoiding adverse ecological impact in the Pinelands. The study is being implemented in cooperation with the NJDEP, Rutgers University, the United States Fish and Wildlife Service (USFWS) and the United States Geologic Survey (USGS). The study addresses two major research questions. First, what are the probable hydrologic effects of groundwater diversions from the Kirkwood-Cohansey aquifer on stream flows and wetland water levels? Second, what are the probable ecological effects of induced stream-flow and groundwater-level changes on aquatic and wetland communities? Under the Work Plan, models will be developed to predict the ecological effects of different water-diversion scenarios.

During 2003, scientists from the cooperating agencies and institutions completed a Work Plan for the Kirkwood-Cohansey Project. The Plan, which underwent peer review by a panel of scientists, was approved by the Commission in October 2003 following a public hearing. Contracts between the Commission and the participating institutions were prepared and Commission staff has initiated component studies for which it has primary responsibility. Additionally, a work group completed an analysis to select study areas in the Pinelands where the relationship between key hydrologic and ecological attributes will be characterized.

Timber Rattlesnake Study

2003 marked the conclusion of field work related to a three-year study of Eastern Timber Rattlesnakes in the Pinelands. In 2000, the Commission reached a settlement agreement with a real estate development firm over litigation involving construction of an Evesham Township housing development. As part of the agreement, the developer funded a two-part study. The NJDEP conducted a Pinelands-wide study, while the Pinelands Commission conducted research on the behavior of rattlesnakes in the vicinity of the Evesham housing development. The purpose of the Commission's study component is to assess the movements of snakes relative to the constructed portion of a development and to evaluate the effectiveness of fences and culverts intended to direct snakes away from the development.

Nine snakes were radio-tracked by the Commission during the study. Progress reports describing the study methodology and results of the first and second years of snake monitoring were released in 2002 and 2003. Field work for the third and final year of the study was completed in October 2003. Preliminary results indicate that the rattlesnakes, particularly males, have far-reaching activity ranges. It is also apparent that the fences and culverts have met with very limited success in redirecting snakes away from developed areas. A final report summarizing the entire three-year results is expected to be released in mid-2004.

Remotely Sensed Indices of Land-use Intensity

In 2003, Pinelands Commission scientists participated in a study conducted by the Rutgers University Center for Remote Sensing and Spatial Analysis. The objective of the study, titled "Remotely Sensed Indices of Land-use Intensity for Watershed-level Monitoring," was to monitor land-use and habitat changes in the Mullica River basin and to relate those changes to surface water quality. The water-quality component of the project was built upon the results of the Commission's long-term environmental monitoring efforts in the Mullica Basin. Funding for the study was provided by the National Oceanic and Atmospheric Agency's Cooperative Institute for Coastal and Estuarine Environmental Technology Program. Commission staff and Rutgers cooperators are preparing a comprehensive report on this study and the results of a previous analysis funded through the National Park Service and USEPA.

Science Advisory Committee & Pinelands Commission Science Committee

The Pinelands Science Advisory Committee, established in 2000, advises the Pinelands Commission and its Science Office on the role of science in achieving the goals of the Comprehensive Management Plan. The Committee is Chaired by Dr. Richard Lathrop of Rutgers University. The Science Advisory Committee met in February 2003 to review recent Science Office activities, the Rancocas Creek Basin report, and a survey of Pinelands Commission research priorities.

The deliberations and recommendations of the Science Advisory Committee are coordinated through the Pinelands Commission Science Committee, chaired by Commissioner Robert McIntosh of the US Department of the Interior. The Commission's Science Committee met three times in 2003. Major agenda items included the evaluation of prior Commission research projects and a review the Kirkwood-Cohansey Project work plan.

PROJECT REVIEW ACTIVITIES

Permitting

Commission staff reviews municipal and county permitting decisions and development approvals to determine potential impacts on Pinelands natural resources. In cases where the local approval may be inconsistent with Pinelands standards, the Executive Director has the authority to refer the approval to the Commission, which may modify or overturn it. During 2003, the Project Review office received 1239 new applications and had active files on 3068 applications. This compares with 1,283 applications received and 2,969 active files in 2002. In 2003, Atlantic County led in new applications with 429 received, followed by: Burlington 291; Ocean, 276; Camden, 120; Gloucester 69; Cape May, 22; and Cumberland 21.

Of the 2011 local permits that were reviewed by the Pinelands Commission in 2003, 1396 (69%) were processed through the faxed permit procedure. Under the faxed permit procedure, a local code or health official can telefax a construction or septic application to the Commission prior to issuing the permit. The file is then reviewed and the municipality or county is notified within two days as to whether the issuance of a permit will raise any regulatory issues with the Pinelands Commission. The permit can then be issued or the applicant advised of a problem to be addressed or corrected. This process dramatically reduces the 15-day review period provided under the Pinelands Protection Act.

Commission staff work with other public agencies to authorize certain activities important to the public, with proper safeguards that facilitate a streamlined process while ensuring that there will be no adverse impacts to the environment. In a continuing effort to improve its coordination with Pinelands Area municipalities, the Pinelands Commission enters into Memoranda of Agreement with municipalities to streamline the Commission's application process for certain minor development activities. These activities generally involve development that disturbs less than 5,000 square feet.

Another streamlined procedure is the Local Review Officer Program, which allows participating municipalities to process applications for single-family dwellings on conforming lots with no substantial issues. Of the 757 private and public applications for development that were completed with the Commission in 2003, 205, or 27 percent, were through the MOA or LRO streamlined procedures.

Forestry Applications

Based on a 1996 amendment to the Pinelands CMP forestry regulations, the Commission continues to jointly review most private forestry applications in the Pinelands Area in partnership with the New Jersey Department of Environmental Protection, Forest Service under the auspices of the New Jersey Forest Stewardship Program. In 2003, the Pinelands Commission reviewed and approved seven private forestry applications. In addition to private forestry applications, the Commission also reviews forestry applications that are submitted by public agencies. No public forestry applications were received in 2003.

Wetlands Permits

In addition to the other initiatives that the Commission has instituted to streamline its permitting processes, the Commission has also been delegated the responsibility for issuing NJDEP Freshwater Wetlands General Permits in the Pinelands Area. In 2003, the Commission issued 12 such permits on behalf of the NJDEP.

Violations

The Pinelands Commission continues its efforts to provide assistance to municipalities in pursuing and resolving violations of the local land use ordinances and the Pinelands regulations. Reflective of those efforts, during 2003, Commission staff participated in site inspections with municipal officials and provided support and expert testimony in municipal court proceedings and pursued multiple violations of local land use ordinances and the CMP. Staff also worked closely with the State Attorney General's Office on a number of violations. Of the 110 violations reported to the Commission in 2003 the largest categories of violations were illegal uses (55) and wetlands filling (19). Of the total new and open violations in 2003, 42 were resolved.

Southern Pine Beetle Agreement

The Pinelands Commission can enter into special Memoranda of Agreement (MOAs) with other governmental agencies to carry out specified activities to address unique challenges. The MOAs may allow Pinelands standards to be waived as long as the agreement results in equal or greater protection of Pinelands resources. In 2003, the Commission entered into such an agreement with the NJDEP to implement a streamlined permitting procedure to facilitate a program to suppress a widespread southern pine beetle infestation in the Pinelands. Some 264 outbreaks of the harmful forest pest had impacted nearly 1,300 acres during a period of about one year. The MOA allowed the NJDEP Forest Service to cut, chip, burn or remove pine trees from a prescribed number of infested areas without securing individual development approval from the Pinelands Commission. Results of the suppression effort are expected to be reported by NJDEP in 2004

PUBLIC INFORMATION, PARTICIPATION & EDUCATION

Pinelands Educational Advisory Council

The Pinelands Educational Advisory Council (PEAC), an advisory body of educational professionals to the Pinelands Commission, met four times during 2003. Led by Council Chair Walter B. Freas, Jr., the PEAC recommend ways to improve, expand and better coordinate Pinelands educational and interpretive programs. In 2003, the Council assisted Commission staff in planning for future outreach programs and organizing the 14th annual Pinelands Short Course. In late 2003, the PEAC provided valuable guidance to the Commission in recruiting for a public programs staff position. The PEAC also continues to advocate and support the enhancement of interpretive and outreach programs through the implementation of a marketing effort for the Richard J. Sullivan Center for Environmental Policy and Education at the Pinelands Commission headquarters.

Pinelands Interpretive Exhibits

Pinelands Commission Public Programs staff, working in close cooperation with the National Park Service and the New Jersey Division of Parks and Forestry, completed the design and construction of dozens of Pinelands interpretive kiosk panels and wayside exhibits. In 2003, sixteen themed kiosks and 70 wayside exhibits were distributed to five Pinelands State Forests – Bass River, Belleplaine, Byrne, Double Trouble, and Wharton – as well as to the Forest Resource Education Center in Jackson Township, Ocean County.

The kiosk panels—"Visiting the Pinelands," "Exploring the Pinelands," and "A World Class Ecosystem" introduce visitors to this region, describe its unique features and explain its designation as the nation's first National Reserve. The six wayside exhibits—"Born of Fire," "A Million Acre Resource," "More than just Mats of Moss," "A Limited Resource," "Carnivorous Plants" and "A Biological Time Line" are strategically placed next to the resources and landscapes they describe.

14th Annual Pinelands Short Course

The Pinelands Short Course is a day-long adult educational opportunity for the public at large that has been held on the first Saturday in March each year since 1989. The 2003 Short Course, held on March 1st, was co-hosted by the Pinelands Commission and The Richard Stockton College of New Jersey Office of Continuing Professional Education. The 2003 event was attended by nearly 300 people and offered 19 educational sessions and workshops on a wide range of topics, including Protecting the Pinelands: A Long-Term View and Pinelands Owls and Hawks. New workshops for 2003 included Pinelands Ethnobotany, an examination of how people of the Pinelands, throughout history, have used plants for food and medicinal purposes. The Pinelands Commission is a registered New Jersey Professional Development Provider and teachers who attend the course receive professional development certificates.

Pinelands Educational Workshops

The Pinelands Commission Richard J. Sullivan Center for Environmental Policy and Education held two successful educational workshops during 2003. A May workshop, Creative Landscape Uses for Native Pinelands Plants, was led by environmental consultant and botanist Joe Arsenault. Arsenault's detailed landscaping recommendations highlighted by slides, samples of Pinelands vegetation ideal for local landscaping and a helpful question and answer session gave the capacity audience useful information for their own home gardening efforts.

The landscaping workshop was followed up by an August workshop geared toward teachers and environmental interpreters, titled Pinelands Habitats: Home Sweet Home. An adaptation of a National Geographic Society conservation awareness program, the professional development workshop was jointly sponsored by the Commission, Burlington County College's Pinelands Institute for Natural and Environmental Studies (PINES), the Whitesbog Preservation Trust and the New Jersey Geographic Alliance. The event brought 38 teachers to historic Whitesbog Village where experts delivered presentations on topics such as forest fire ecology, bird migration, wetlands, and the use of mapping in geography. Participants walked away from the day's hands-on workshops eager to apply what they learned in the classroom and other learning environments.

Pinelands Municipal Council

The Pinelands Municipal Council, created under the Pinelands Protection Act of 1979, is comprised of mayors (or their designees) of the 53 municipalities in the Pinelands Area. The Council is empowered to review any changes to the Pinelands CMP, and advises the Pinelands Commission on any matters of interest. During 2003, the Council met six times and provided important guidance and oversight to the Commission on a number of key issues, including for example, the Pinelands Excellence Program (see page 4 for details).

In March 2003, the Council elected its executive committee. Woodbine Mayor William Pikolycky was elected chairman; Buena Vista Mayor Chuck Chiarello, vice chairman; Berkeley Township designee Steven Ewing, secretary; Bass River Township Mayor T. Richard Bethea, treasurer; and Mullica Township Mayor Robert Hagaman, member at large.

In May, at the Council's request, NJDEP Commissioner Bradley Campbell addressed the Council to discuss issues of concern to the council and about projects where the NJDEP and Pinelands Commission are working cooperatively.

Each year, the Pinelands Commission and the Pinelands Municipal Council jointly sponsor an orientation session for newly elected and newly appointed local officials to familiarize them with the Pinelands environment and the Pinelands CMP. The program is well attended by mayors, municipal council/committee members, planning and zoning board members and members of municipal environmental commissions. The 2003 session was held in March and was attended by 50 local officials from 19 municipalities.

General Outreach & Education

The Pinelands Commission routinely participates in public meetings and events to enhance the public awareness of the uniqueness and importance of Pinelands resources and to increase public understanding of the Pinelands protection policies and programs. In 2003, Commission staff had informational booths at the Family Funfest and Earth Day celebrations at Fort Dix and as well as the Pinelands Month Celebration held at Whitesbog in October by the Pinelands Preservation Alliance.

Pinelands Commission Chairman James Florio addressed many public assemblies during 2003 in his capacity as Commission Chair, including delivering the opening remarks at the Pinelands Month Celebration and keynote addresses before meetings of the New Jersey Forestry Association, the Builders League of South Jersey and the Pinelands Municipal Council. In February, Chairman Florio addressed the Annual Sound Off for South Jersey Legislative Conference, sponsored by the Southern New Jersey Development Council. He also appeared on Comcast Newsmakers, a televised public affairs program, to discuss Pinelands initiatives.

In 2003, the Pinelands Commission Science Office continued to share their extraordinary insight into Pinelands natural resources with a host of public audiences. Science staff addressed several community sessions on what Pinelands residents need to know about living near rattlesnakes. They also conducted educational sessions, seminars and workshops on a variety of topics, including presentations to an elementary school class, the Pinelands Short Course, and as part of University-based continuing education programs for professionals. The science staff also provided technical training and outreach for Pinelands Commission staff, State environmental officials as well as college faculty. Staff also participated in a Pinelands Fire Ecology Forum and led a canoe tour for members of a national conservation organization.

The Commission's wastewater specialist was busy in 2003 providing technical guidance to county and municipal officials on the implementation of the Commission's alternate wastewater treatment system program. He provided technical guidance to public health officials, engineers and contractors through various forums including a session at the annual League of Municipalities Convention as well as conducting a two-day seminar at Stockton State College.

The Commission's Communications and Public Programs Office continued to provide support to the media and keep the public informed. Staff handled over 170 press calls from the print, broadcast and electronic media during 2003. They issued 24 press releases and media advisories regarding activities and policy directions of the Pinelands Commission. They also published one issue of The Pinelander informational newsletter which was mailed to over 2,300 subscribers. In addition, the office responded to over 500 general public inquiries received by telephone, e-mail, postal mail and office visits. During 2003, the Pinelands Commission continually increased the use of its Internet website to provide the public with programmatic updates and public records and reports. The Pinelands Commission Custodian of Records processed 26 formal public records requests under the provisions of the New Jersey Open Public Records Act as well as handled dozens of general public records requests.

FACILITIES & OPERATIONS

Executive Director Transition

In March 2003, Annette Barbaccia announced that she was stepping down as Executive Director in April to pursue new endeavors after leading the Pinelands Commission staff for nearly three years. During that time, Barbaccia achieved much. She spearheaded efforts to implement much-needed technology improvements at the Commission and made significant strides in permanent land protection efforts. During her tenure, nearly 13,000 privately owned acres were permanently protected under the Pinelands Development Credit Program and she was instrumental in improving opportunities for the preservation of farmland in the Pinelands. Barbaccia also established the Pinelands Excellence Program, a special project aimed at helping Pinelands Regional Growth Communities address growth-related planning challenges through visioning processes. In April, the Pinelands Commission and staff honored Barbaccia for her service and contributions to the preservation and protection of the Pinelands.

Soon after Barbaccia's departure, the Pinelands Commission unanimously appointed John C. Stokes as Executive Director. Stokes brings 23 years experience as Assistant Director for Planning to his new position. One of the chief authors of the original Pinelands Comprehensive Management Plan (CMP), Stokes joined the fledgling Commission staff in March 1980. He was instrumental in bringing 52 Pinelands municipalities into conformance with the CMP and has built a reputation as a consensus builder, leading efforts to develop a number of cooperative partnerships. Prior to joining the Commission, Stokes worked for the Interior Department, serving in various policy and planning positions in Philadelphia and Washington, DC. In 1979 he was awarded a National Intergovernmental Fellowship. Stokes holds a B.S. degree from North Carolina State University. He is a licensed New Jersey Professional Planner and member of the American Institute of Certified Planners.

Office Reorganization

Shortly after taking the helm as Executive Director, Pinelands Commission Executive Director John Stokes directed a reorganization of the Pinelands Commission staff which consolidated the organizational structure of the agency, allowing it to operate more efficiently. The plan is credited with achieving short-term cost savings of about \$85,000. The reorganization was supported by the Commission's Personnel and Budget Committee, chaired by Commissioner Leslie Ficaglia.

The reorganization plan eliminated two Assistant Director positions and created five offices that report directly to the Executive Director. This streamlined the chain of command, delegated more decision-making authority to staff and increased the ability for management to provide direct input in executive decisions. The five offices are:

- Regulatory Programs - consolidation of the Regulatory Programs and Project Review Offices;
- Land Use & Technology Programs - combines the Planning Office with Management Information Technology and Geographic Information Technology Offices;
- Business Services - merges Business Services and Office Services staffs;
- Communications - consolidates the Communications and Public Programs Offices; and
- Science Office - remains as previously structured.

Several new positions were created including Chief Permit Administrator and Chief Planner. In addition, the Executive Office was re-structured, including the creation of two new positions - a Legal Advisor who handles legislative affairs and provides legal support to all offices, and a Director of Special Programs, who coordinates special planning initiatives and projects. These changes did not result in an increase in the number of Pinelands Commission staff positions.

Fiscal & Budget

The Pinelands Commission's operating budget for fiscal year 2004 (July 2003 through June 2004) is \$4.19 million. Of this, \$3.27 million, or 78 percent, is budgeted for personnel expenses. The 2004 fiscal year budget anticipates revenues of \$3.84 million and projects expenditures of \$4.19 million and the use of \$347,270 from the Commission's fund balance and reserves. Revenue sources include \$438,750 in federal grants, a \$2.95 million State appropriation and \$162,250 in State grants and other State funding.

In addition to the operating budget, the fiscal 2004 budget for the Pinelands Development Credit Special Purchase Program is \$2.97 million, and \$900,000 was budgeted for the Commission's commitment to the special land acquisition program funded through the Cape May County Municipal Utilities Authority. The 2004 budget for the Kirkwood-Cohansey Aquifer Study, funded through legislation passed in 2001, is \$1.05 million. The balance of the Kathleen M. Lynch-Van de Sande Fund for the reforestation of the New Jersey Pinelands totaled \$13,075 at the end of 2003. The fund is maintained by private contributions.

Pinelands Application Fees

At its August 2003 meeting, the Pinelands Commission authorized a measure to establish modest fees for the filing of certain development applications. This is the first time that application fees will be required for certain development activities. However, the majority of applications typically received by the Pinelands Commission will not require application fees. Specifically fees will not be charged for:

- applications for residential developments consisting of only one dwelling unit;
- requests for Letters of Interpretation for the allocation of Pinelands Development Credits;
- development applications from public agencies; and
- Waivers of Strict Compliance.

The Pinelands Commission established the fee program to address a serious budgetary shortfall caused by rapidly increasing operational and insurance costs and other fiscal stresses. Like other state and local government agencies, the Commission has struggled to find ways to make its operations more efficient and cost-effective in the face of difficult economic conditions. A host of cost-saving measures have been implemented by the Commission, including reductions in staffing levels. However, these have not been enough to fully address fiscal limitations. Although the Commission continues to look for ways to economize on expenses, it cannot maintain a sound financial or operational position without assessing fees.

Fees are often viewed as a way for the costs of a regulatory program to be borne by the regulated community rather than the public-at-large. However because of the public benefits realized from these regulatory programs, the Commission determined that the public-at-large should help to underwrite permitting costs. The proposed Pinelands fee schedule will capture less than half of the \$950,000 in direct personnel costs expended by the Commission annually to review development applications. This recapture rate drops significantly when indirect costs are included.

The fee rule proposal was published in the October 6, 2003 issue of the New Jersey Register and is expected to be adopted in early 2004.

Technology Improvements

During 2003, the Pinelands Commission Management Information System (MIS) Office and Geographic Information System (GIS) Office continued to implement technology improvements and provide critical support to Commission planning and regulatory programs. Notably, significant progress was made in the ongoing redesign of the Commission's legacy information systems. Working with a technology consulting firm which specializes in data application development, the Commission is redesigning its antiquated information system based on state-of-the-art programming language, database and GIS technologies. The new system will greatly expand upon and combine the functionality of permit review, violations tracking, zoning information, and PDC-tracking systems. All of these functions will be linked to the Commission's GIS so that users can view information geographically. Ultimately, the Commission hopes to provide public access to this information over the Internet.

In cooperation with the New Jersey Office of Information Technology, the MIS office embarked on a redesign of the Pinelands Commission Internet website in 2003. The newly designed site is expected to be online in late 2004 and will help enhance the Commission's ongoing efforts to provide information about the Pinelands protection program to the public.

Fenwick Manor Restoration

2003 saw long-awaited progress in efforts to "rescue" Fenwick Manor, the Pinelands Commission's historic office complex. Dating back to the 1820s, the Fenwick Manor property is a 4.5-acre remnant of a farmstead of special historical significance to the Pinelands. The property contains a main building, a carriage house, a barn and an outbuilding, in addition to the new Richard J Sullivan Center. The property and the historic buildings, included on both the State and National Registers of Historic Places, are in a state of deterioration and are in need of major improvements, many of which are essential to the continued use and occupation of the buildings.

In February 2003, an architect/engineering firm was selected to begin the investigation and design phase of the required renovations. In December 2003, the final design plans and specifications were developed. Work was started to relocate the employees currently in Fenwick Manor and the carriage house to the Sullivan Center on a temporary basis. This required the hiring of an architect/engineer to evaluate and design plans to accommodate the additional electrical and teledata requirements.

Abbreviations used in this report

CMP - (Pinelands) Comprehensive Management Plan
GIS - Geographic Information System(s)
NJDEP - New Jersey Department of Environmental Protection
NPS - National Park Service
PDC - Pinelands Development Credit(s)
SADC - State Agricultural Development Committee
USEPA - United States Environmental Protection Agency
USFWS - United States Fish and Wildlife Service
USGS - United States Geological Survey