Dear Reader,

The Pennsylvania Parks and Forests Foundation is pleased to share with you the 2011 State of the Parks, State of the Forests Report. This report explores recent and past research of our state park and forest system, along with personal interviews, to assist in writing the story of our conservation history. It examines where we are, where we are going, and what legacy we want to leave our children. The report is not meant to be a static document, but instead we view it as the start of a conversation about what we, as the citizens of the Commonwealth, desire for future generations.

Pennsylvania has a rich legacy of conservation, beginning with William Penn and his direction to leave one acre of trees for every five acres cleared. Penn understood the value our forests provided, and while we did heavily log the commonwealth, sound management and visionary leadership reclaimed the once wasted lands.

Pennsylvania Parks and Forests Foundation would like to thank Paul Zeph for his tireless efforts in researching the report and performing interviews; the interviewees; and the steering committee that oversaw the report development. Research funding was provided via a grant from William Penn Foundation and the Heinz Endowments. Last, but not least, we send our appreciation out to Marla Rozyckie at the Design House for working with us through all iterations of the document.

Sincerely,

Marci Mowery
President

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Robert Wonderling
Andrew Mowen
Rick Carlson
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Introduction: What This Report Does

This report examines current conditions in our forest and park system and its value to our people, our economy, and ecology of Pennsylvania. It explores threats to the system and what could or should be improved for the sake of current and future generations.

This report asks: What we are going to do about an enormous resource that has overwhelming public support, more than pays for itself in an amazing variety of public benefits, attracts millions of people, supports thousands of jobs, creates billions in revenue, and yet is subsisting on a rapidly dwindling and unpredictable share of our budget dollar?

Enormous Value for Our Investments

Our parks and forests system generates up to $4 billion a year for our economy. The return on taxpayer investment in our state parks alone is estimated at nearly $10 for every $1 invested. Our parks have an estimated 35 million visitors a year and whose spending supports more than 10,000 jobs.

A Wealth of Opportunities

Pennsylvania has one of the nation's largest park systems, with 117 parks and three conservation areas encompassing nearly 300,000 acres. We have a nationally-recognized state forest system with 2.2 million-acres.

Our world-class state forests and parks are used by people for recreation, mental health, exercise, and spiritual renewal. Our impressive recreational offerings include a park within 25 miles of nearly every resident; thousands of miles of trails for hiking, biking, and snowmobiling; more than 30,000 picnic tables; 61 beaches for swimming; 286 cabins; more than 56 major recreational lakes and thousands of miles of flowing water; and educational and recreational programming.

A History of Good Management

In recognition of the quality of system management through the 1990s and 2000s, our park system won the 2009 National Gold Medal Award for Excellence in Park and Recreation Management.

For 12 consecutive years, Pennsylvania's forest management has met or exceeded environmental responsible stewardship standards and has been rewarded with sustainability certification.

Support for the Hardwoods Industry

Forest certification makes Pennsylvania's hardwood forest and forest products even more valuable. Our state forests help support a forest products industry with sales in excess of $16 billion annually and a total yearly economic impact of $27 billion, while employing more than 100,000 people.

A Wide Range of Physical & Environmental Benefits

The value of our parks and forests goes far beyond the sale of timber or cabin rentals. Our state forests are a 2.2 million-acre water treatment plant and air purification system.

Our forests and parks:

- provide habitat for plants, animals, insects, birds, fish, and other living things,
- help protect 25,000 miles of streams,
- offer carbon sequestration to improve air quality,
- are home to numerous rare plants and endangered species,
- offer a myriad of recreational opportunities, and
- offer a positive influence on millions of acres of privately-owned land.

Last, but not least, our parks and forests play a vitally-important role in physical and mental health by providing readily-accessible natural environments for outdoor activities, exercise, clean air, and aesthetic surroundings.

As green space gives way to more development across the state, our state parks attract an increasing number of Pennsylvanians.
Evolving to Meet Our Changing Needs

Pennsylvanian's recreation needs and demands have changed dramatically, and the state park and forest system has responded. Roads were improved, campgrounds established, and facilities, such as bathrooms, were modernized. Cabins have become increasingly popular as an alternative to campsites. In 2010, a pilot “nature inn” opened to explore a new type of ecotourism experience.

What Pennsylvanians Want

Surveys Show Public Interest & Desire for Enhancements

State park visitors now find fewer educational programs and naturalist-led activities, more frequent closed interpretive buildings and bathhouses, fewer services, and reduced personnel for security. The reduction of forestry staff results in reduced response to wildfires, fewer timber sales, reduced enforcement presence due to budget cuts, and less management of our timber resources.

This is in sharp contrast to what the public says they want.

Periodic surveys of park and forest users and the general public find Pennsylvanians consistently positive in their opinions regarding the value of their system and support for it.

Surveys also reveal people want:

• more and better connected trails,
• more parking,
• clean restrooms,
• more open space acquired and protected,
• publicly-owned habitat areas and natural resources protected for future generations,
• more parking,
• improved visitor centers and lodging,
• more visible staff,
• increased sense of safety,
• public funds used to improve general maintenance of existing facilities,

Maintenance: A Never Ending Task

Despite the tremendous value that Pennsylvanians place on their parks and forests, appropriations to address routine maintenance lag behind needs. While some maintenance needs are routine, others are more serious and address health and human safety, such as sewage upgrades, dam improvements, and water treatment.

Threats to the System’s Ecological Integrity

As some pressure DCNR to open up more of the forests to gas drilling leases, we do not know yet how existing leases on 700,000 acres will impact our system. Water issues are a major concern. It also is unclear how a checkerboard of five-acre drilling pads—along with access roads, truck traffic, distribution lines, and other intrusions—will fragment our forests and change their ecological integrity.

Decades of careful forest management could be wiped out with a careless push for a short-term economic gain. Many other threats are bearing down upon our state forests which require increased funding and staff to address, including invasive plants and insects that are spreading at an alarming rate and require control measures, research, and public education to manage.

If the funding gap continues, it might be impossible to catch up, even in our battle against nature's own threats.

Unpredictable Funding

During the past 15 years, the Commonwealth’s General Fund share of the DCNR operating budget has gone from 77 percent to 24 percent.

In a decade, the DCNR budget has gone from 0.53 percent to only 0.32 percent of our state’s General Fund budget. That is just 32 cents out of every $100 General Fund dollars. Revenue sources, such as the Oil & Gas Lease Fund and Growing Greener Funds have been shifted to other uses or are running out.

What the Future Holds

The top priority is to sustain the level of investments and resource protection that have enabled Pennsylvania to have a Gold Medal-winning system of state parks and a nationally-certified system of state forests that represent the level of quality that citizens and visitors to parks and forests have come to expect from these public resources. This continues a tradition that is so important to our natural heritage.

To achieve the above goals, the Pennsylvania Parks and Forests Foundation recommends at least maintaining the current level of operational and maintenance (O&M) funding during the current fiscal crisis to ensure that every Pennsylvanian has close-to-home and affordable access to quality natural resources and outdoor recreation opportunities. As soon as possible, the O&M funding should return to the 2002 level with regard to staffing, maintenance funding, training funds, and administrative funds. In today's dollars, accounting for inflation, that would be around $95M for state parks and $60M for state forests (assuming no augmentation from natural resource extraction funds). This amount would be subject to further review as the DCNR staff continues to take advantage of the latest innovative ideas to improve productivity.
Pennsylvania’s Natural Legacy

Pennsylvania has a long history of leadership and innovation regarding public lands. When looking ahead, it is helpful to know from where you came, so let’s take a look back at the complex history of our state park and forest system.

William Penn recognized the value of the Pennsylvania forests and in 1681 issued his Charter of Rights, ordering colonists to leave one acre of trees for every five acres of land cleared. Although this was disregarded, the woods remained relatively intact until about 1850.

Much of the American economy in the 19th century was based on forest products — demands for lumber were staggering. Early rail needed 80 million crossties a year. Every iron furnace (there were 145 in 1850) needed between 20,000 and 35,000 acres of forest to sustain it. Hemlock bark was the primary source of tannin for the leather industry. Pennsylvania, abundant with hemlock forests, attracted tanneries, which in turn brought sawmills and pulp mills for lumber and paper.

Behind the loggers came uncontrolled wild fires, soil erosion, and flooding leaving in their wake unbelievable devastation. By the late 1800s, Pennsylvania’s north central region became known as “The Pennsylvania Desert.”

Let Protection Begin

Spurred by the 1889 flood in Johnstown which took the lives of 2,200 people, Governor James Beaver recognized the need for restoring our lands. As timber companies abandoned land, they often failed to pay taxes. As these lands came up for tax sale, the state purchased them for watershed protection.

Joseph Rothrock was appointed the first Commissioner of Forestry in 1895. Rothrock promoted the ideas of conservation, recreation, and health. As commissioner, he began purchasing lands for a forest reserve, some of which later became state parks. The lands were used to preserve, protect, and propagate forests, as well as to protect watersheds. By 1900, 110,000 acres were acquired for the forest system. It was also at this time that the status of the Division of Forestry was raised to the State Department of Forestry.

To reduce the impact of devastating wild fires, Rothrock and his successor Robert S. Conklin worked to establish a forest academy, which later became part of the Pennsylvania State University. Campfire laws were enacted, and the first designated public camping areas appeared. By managing and containing campfires, forest fires were greatly reduced.

Pennsylvania’s state park system began in 1893 with the establishment of the first state park at Valley Forge. In the early years, the park system concentrated on preserving and protecting rare, scenic, historic, and natural areas. Some of the earliest buildings, such as Mont Alto, Caledonia, and Pine Grove Furnace state parks, contained recreation land from the previous private owners.

A New Department

Gifford Pinchot became the governor of Pennsylvania in 1923. Pinchot was well-known as the “Father of Conservation” for his work while in the US Forest Service. He worked tirelessly to increase the forest holdings of the state.
In 1929, legislation established the Bureau of State Parks with a commitment to provide outdoor recreation facilities in a natural setting, to preserve park areas, and to provide environmental education opportunities. By 1930, the bureau managed 13 parks and prepared the first statewide plan for the future growth of the park system.

The 1930s saw a growing demand for recreation. The Pennsylvania Parks Association formed to promote land acquisition and outdoor recreation.

Era of the Civilian Conservation Corps
During the time of the Great Depression, Pennsylvania was fortunate to receive assistance in park and forest restoration and development from the Civilian Conservation Corps. CCC workers, or "Roosevelt's Tree Army" as they were called, accomplished much in the commonwealth.

Within one year, Pennsylvania had 104 CCC camps, 92 of them in state forests and parks. Much of the work involved recreation and infrastructure projects, trails, and buildings such as park cabins, as well as reforestation, water quality, and flood control.

A 1936 survey that identified a need for parks near 10 major urban areas further influenced the system's development to include parks near cities as well as rural areas. After World War II, the demand for more day use parks near urban centers continued to increase.

The Goddard Era
The tenure of Forests and Waters Secretary Maurice K. Goddard, also known as "The Goddard Era of State Parks" (1955-1979), brought huge changes to the park system. Post WWII saw land being removed for housing, malls, industrial parks, schools, and roads. At the same time, decision-makers saw an increased demand for parks and forests due to shorter work weeks, an economic boom, more families with cars, improved roads, paid vacations, and increasing populations.

Industry was declining, and the state saw a potential new source of revenue—tourism. It was thought that an open space program could help with the economic and social woes of the commonwealth. Goddard set the goal of one park within 25 miles of every Pennsylvanian. With the determination of a man on a mission, Goddard established 45 parks during his tenure.

The growing public realization of environmental problems in the late 1960s led to the creation of the Department of Environmental Resources in 1971 with Dr. Goddard taking the helm as the agency's first Secretary. The inherent complexity of maintaining a healthy planet for people and wildlife was reflected in the legislative action of blending into one agency the state's parks and forests system with the regulatory programs of air, water, and mineral resources. The rising tide of environmental awareness then led to an historic addition to Pennsylvania's constitution, Article 1, Section 27:

"The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people."

In 1995, the Department of Conservation and Natural Resources was created to pull the Bureaus of State Parks and Forestry into their own agency to enhance their visibility and importance for the key role they play in managing 2.5 million acres of public lands and implementing Pennsylvania's "environmental constitution."

Today
More than a century after the first lands were purchased for the parks and forest reserve system, Pennsylvania has one of largest park systems in the nation, with 117 parks and three conservation areas encompassing nearly 300,000 acres of land and a 2.2 million-acre state forest system that has been a national leader since its inception. Many traditional facilities and resources serve as the backbone of the park system.

In recognition of "its skill in planning for and managing the diverse state park

Under the leadership of Secretary Goddard, 45 state parks were established from 1955-1979; forestry and park staff were professionalized, and Pennsylvania became a leader in the conservation movement.
system, and also for its innovative approaches that have drawn people into state parks in new ways and connected them to nature through outdoor recreation," the park system was awarded the 2009 National Gold Medal Award for Excellence in Park and Recreation Management by the American Academy for Park and Recreation Administration in partnership with the National Recreation and Park Association.

Pennsylvania has one of the most recognized forest systems in the U.S., consisting of high-quality hardwood forests. These forests are home to numerous rare plants and endangered species, while protecting 25,000 miles of streams and rivers and providing more than 5,000 miles of recreational trails.

For 12 consecutive years, Pennsylvania’s management of its state forest lands has met or exceeded the standards for environmentally responsible stewardship. The Rainforest Alliance SmartWood Program verified that the commonwealth’s operations in state forests comply with the principles and criteria developed by the Forest Stewardship Council (FSC). These principles are the international gold standard for environmentally- and socially-responsible forestry.

The Pennsylvania state park and state forest system is one that is designed to serve the needs of all Pennsylvanians—today and for generations—to come.:

Today, Pennsylvania state parks’ offerings are impressive: over 7,000 family campsites, 286 cabins, nearly 30,000 picnic tables, 56 major recreational lakes, 10 marinas, 61 beaches for swimming, 16 swimming pools, more than 1,000 miles of trails, and much, much more. Yearly, the Pennsylvania state park system serves an average 35 million visitors.

People have the right to clean air

The 2.2 million acres of state forests protect water quality while also supporting thousands of jobs in the forest product industry.

RESOURCES:
2. DCNR website, www.dcnr.state.pa.us
3. Adapted from text on PPFF website and DCNR website about history of PA State Parks, www.PaParksAndForests.org, www.dcnr.state.pa.us
Chapter 2

Benefits of Our State Parks and Forests

Pennsylvania state parks and state forests are not luxuries but vital economic and ecological assets to the commonwealth.

Each state park and forest is a local economic and tourism engine that collectively generates between two and four billion dollars of revenue each year to the state’s economy and supports thousands of local jobs.

Parks and Forests Drive Tourism

A recent study of the economic impact of Pennsylvania’s state parks was conducted by the Pennsylvania State University Department of Recreation, Park and Tourism Management. Their study concluded that in 2008:

- State parks hosted 34.1 million visitors who directly spent $818.3 million on their trips—an average of $22 per person per visit.
- This spending supported 10,551 jobs contributing $291.4 million in labor income, resulting in $464.7 million in value-added effects.
- For every tax-payer dollar invested in state parks, $7.40 of income (value added) is returned on investment to Pennsylvania. Revenue projections were even better for 2009, with a return on investment (ROI) of over $9.63 per every one dollar of taxpayer money invested.

Pennsylvania hosts 3.9 million wildlife watchers and 1.5 million anglers and hunters. Much of this activity takes place in state parks and forests. Tourism is Pennsylvania’s second most economically significant industry sector, following agriculture. In 2006, spending associated with wildlife watching in Pennsylvania amounted to $1.4 billion in retail sales; more than $2.6 billion for lodging, transportation, equipment, and supplies; and generated $880 million in salaries, wages, and business owners’ income.

Pennsylvania’s state forests generate millions of dollars in revenue to local economies from in- and out-of-state visitors. With more than 5,100 miles of trails, outdoor enthusiasts find endless opportunities for hiking, cross-country skiing, mountain biking, horseback riding, snowmobiling, and ATV riding. Many of the best hunting grounds, finest fishing streams, and grandest views in the state are found throughout the state forests. Most state forests also have one or more picnic areas equipped with tables, fire rings, and parking.

In a recent study on visitor use of state forests in north-central Pennsylvania, visitors responded that: 95 percent of them purchased gasoline and oil, 85 percent purchased food and drinks at local restaurants and bars, 69 percent purchased other food and beverages, and 45 percent used local overnight accommodations.

Eastern Mountain Sports added another store in Pennsylvania in the Philadelphia area, catering to the outdoor recreationist.

State Forests Support $27 Billion Forest Products Industry

Pennsylvania’s 2.2 million-acre state forest system, found in 48 of Pennsylvania’s 67 counties, comprises 12 percent of the forested area in the commonwealth and represents one of the largest expanses of public forestland in the eastern United States. This makes our state forest system a truly priceless public asset, not only providing an abundance of high quality forest products itself, but also supporting Pennsylvania’s private forest products industry.

As the largest producer of hardwoods in the country, Pennsylvania’s forest industry accounts for 10 percent of total U.S. hardwood output and much of the world’s supply of high-quality black cherry. State and private forestry efforts combined result in sales exceeding $16 billion annually, a total economic impact of $27 billion annually, and employment of more than 100,000 people.
DCNR’s Forest Stewardship Council™ (FSC®)-certification provides a market-advantage for companies that buy timber harvested from the state forests to produce certified wood products for the rapidly growing “green” market. This market advantage was particularly crucial for some Pennsylvania companies during recent tough economic times, and for the approximately 100,000 Pennsylvanians who make a livelihood in the forest products industry—over 10 percent of the state’s manufacturing workforce.

**State Parks and Forests Attract Businesses and Residents**

People desire to live in communities with outdoor recreation amenities. Workers are making job choices based on quality of life factors, and studies show that people rank parks, recreation, and open space amenities among most important quality-of-life factors. Companies are increasingly considering these factors when deciding on establishing a new business site.

Even retirees are showing that available recreation opportunities are a primary factor in their choice of retirement location.8

**Small Communities Depend on Parks to Make Businesses Viable Year-round**

Many small communities depend on state park visitors supporting local businesses to enable the businesses to exist. A prime example is Forry’s Country Store near Ole Bull State Park in southeast Potter County. This is the only grocery store for many miles around, and would not exist if it were not for the state park. Owner Deb Forry estimates that 80 percent of her store’s business is from park visitors, and this income just barely enables her and her two employees to keep the store open throughout the year for local residents. “Even if the park were to close for part of the season,” said Deb, “we would not make enough income to keep the store.”

This same story is echoed by Couch’s Sub and Grocery near Greenwood Furnace and Whipple Dam State Parks, in northern Huntingdon County. Mary Lou Couch, who employs nine part-time employees, estimates that half of their business during the summer comes from park campers, and numerous other businesses have established themselves due to the steady traffic created by the state parks nearby. “Closing them,” she said, “would severely hurt businesses throughout the region.”

Small stores throughout the state are inextricably linked to state park customers. Hills Creek, Gifford Pinchot, and King’s Gap are but a few other state parks with local stores that depend on park visitors for their survival. In turn, year-round residents living in those communities depend on those stores for local goods and services.9

**Parks are Critical Links for Rail Trail Tourism Income to Pennsylvania**

The Pine Creek Rail Trail is nestled within two forest districts, Tioga State Forest and Tiadaghton State Forest, and between two state parks, Leonard Harrison and Colton Point, as well as being conveniently located to Little Pine and Upper Pine Bottom state parks. A 2006 survey estimated that the number of unique user visits to the Pine Creek Rail Trail was approximately 125,000. It is estimated that the direct economic impact of these visitors for that year was $1,498,577 for soft goods purchases (snacks, drinks, food, etc), $3,621,708 for hard goods (bikes, gear, etc) and $1,851,035 for accommodations.10

The Great Allegheny Passage is a 125-mile bike trail that connects Point State Park in downtown Pittsburgh with Cumberland, Maryland, and between as well as being conveniently located to Little Pine and Upper Pine Bottom state parks. A 2006 study of the trail’s economic impact on businesses concluded that “on average, business owners indicated that one-quarter of their gross revenue was directly attributed to trail users and two-thirds reported that they experienced at least some increase in gross revenue because of their proximity to the trail.” It’s no surprise, then, that 75 percent of the business owners who started a business in the two years prior to the study’s publication cited the trail as a primary reason for their choosing the location they did.11
Benefits for Public Health and Welfare

The Centers for Disease Control & Prevention reports that 62 percent of Pennsylvania adults are overweight and 25 percent are obese. Obesity isn’t limited to adults; our youth also suffer from high rates of obesity. Youth are spending more time indoors and less time outdoors being physically active. The recent study, “The Future Cost of Obesity: National and State Estimates of the Impact of Obesity on Direct Health Care Expenses,” shows that 42 percent of Pennsylvanians will be obese and associated health care costs will surpass $13.5 billion by 2018.12

Accessible Recreation Opportunities

With an increasingly sedentary population, readily accessible green spaces are more important than ever before. Our state parks and forests can play a key role helping millions of Pennsylvanians achieve healthy lifestyles. They provide convenient and inexpensive places in which to recreate; and there is strong evidence that when people have access to parks, forests, and greenways they exercise more.13

The 2008 Pennsylvania State Park Visitor study by Penn State University found that Pennsylvanians who visit their state parks each year do so to have fun, reduce stress and anxiety, and connect to the outdoors. This is particularly important during times of economic downturn when more people vacation closer to home, choosing local and state parks and forests for their recreation destination.14 This can also reduce medical costs as studies show that 60 - 90 percent of doctor visits are attributed to stress-related illnesses and symptoms.15

Parks and Forests Promote Recreation and Exercise

Penn State University’s 2009 statewide outdoor recreation survey of visitors and residents to state parks in Pennsylvania showed the following: state parks represent a major proportion of outdoor recreation available in Pennsylvania; more than 38 million visitor days are recorded by parks annually; 63 percent of visitors said that they engaged in some form of moderate physical activity during their visit and almost half of respondents (49 percent) reported that they were more physically active during their state park visit than in their daily lives.16

State parks offer a tremendous number and variety of outdoor recreation programs statewide. In 2009, more than 365,800 people participated in the outdoor recreation programs offered at state parks.17 These programs include outdoor adventure camps like Eco-Camp, where kids are introduced to conservation and environmental careers; and Adventure Camp, which encourages city youth to explore state parks.

Get Outdoors PA is a statewide program to encourage children and adults to take part in a wide range of outdoor activities in state parks and forests throughout the year. The Pennsylvania Parks and Forests Foundation’s Great Pennsylvania Outdoor Challenge gives families the opportunity to take part in a wide range of recreational “challenges” at parks and forests across the state each fall.

Parks Help Combat Obesity

An alarming trend has developed over the past few decades—we have become increasingly inactive as a nation. More forms of recreation are available today than ever before, many of which burn few calories. Children, especially, are spending more time indoors in front of electronics, and less time outdoors with estimates as alarming as children spending up to seven hours per day in front of a screen (and as little as seven minutes per day in unstructured play time).

The link between physical inactivity and increasing rates of obesity has been established. In Pennsylvania alone, 64.2 percent of adults are overweight, and 29.7 percent of children between the ages of 10-17 are overweight or obese.18 If this trend continues, the current generation will experience a shorter life-span than their parents.19

Physical activity is clearly important to help reverse this trend. It has been shown to reduce the risk of dying from coronary and heart disease and of developing high blood pressure, colon cancer, and diabetes. It also has been shown to reduce blood pressure, help control weight, reduce symptoms of anxiety and depression, and promote a feeling of well-being.20

The connection between natural places and human physical and psychological health has also been well documented. Most community and state leaders now view parks not as amenities but rather as essential features for healthy ecosystems, protection of water resources, recreation, personal well-being, and overall health.
Providing Essential Ecosystem Services

Placing a Value on Ecosystem Services

It is extremely difficult to place a monetary value on the critical ecosystem services provided by forests and parks—services such as erosion control, water purification, air purification, carbon sequestration, ground water recharge, storm water runoff, shade, wind breaks, and noise buffers. One way to look at the state forests is as a two million-acre water treatment plant and air purification system.

When taken as a whole, the state forest system is the largest publicly owned habitat for plants and animals in the commonwealth. Also, add to this list the natural services of crop pollination, medicinal products, fertilization, and pest control.

According to the Trust for Public Land, if humans had to create a mechanical system to replace the natural processes we currently enjoy, it would cost an estimated $33 trillion each year. An example closer to home is the value that Philadelphia parks provide in water treatment, saving the city an estimated $5.4 million annually due to the natural removal of nutrients and pollutants from runoff.21

RESOURCES:
9. Quotes from telephone interviews conducted by Paul Zeph, August 2010.
17. Data compiled by the Pennsylvania DCNR State Parks Division of Outdoor Programming Services.
Changing Roles of State Parks and Forests

From the time they were first established to the present, Pennsylvania’s state parks and forests have evolved to meet the changing values, needs, and desires of the commonwealth’s citizens and natural resource leaders.

Forests were first acquired in the early 1900s to stop severe erosion within watersheds, protect drinking water supplies, and provide timber resources. Today, our state forests are still important for providing the ecosystem functions of water and air purification, but Pennsylvanians also depend upon them for much more.

Our state lands provide critical habitat for game and non-game wildlife including numerous animal and plant species of concern. Our woods produce high-quality forest products that fuel an industry that employs more than 100,000 people and adds more than $27 billion annually to the state’s economy. The state forests also provide mineral resources, numerous recreation activities, and an aesthetic backdrop that supports a vibrant rural tourism industry.1

The recreation needs and demands expressed by Pennsylvanians have certainly changed dramatically, starting in the 1940s. First, roads in the state forests and early state parks were improved; then campgrounds and bathrooms were modernized. More recently, swimming pools have been updated, and cabins have become increasingly popular as an alternative to campsites. 2010 marked the opening of a pilot “nature inn” to provide a new type of ecotourism experience.

For each new park that is added to the system, or even for each upgrade in facility, amenity, or service to existing parks, an additional cost is added to DCNR’s annual operating expenses. Some services are supported by fees, such as campground charges or boat and cabin rentals. Other improvements, like flush toilets, paved parking lots, graded state forest roads, and repaired bridges are expected improvements that Pennsylvanians assume are paid for with their state taxes.

Pennsylvanians Have Spoken

State Parks 2000

In 1989, Governor Robert P. Casey directed the (then) Pennsylvania Department of Environmental Resources (DER) to thoroughly examine the state park system. The system had reached a plateau from the vigorous growth years under Secretary Goddard and was showing severe signs of stress. The park system had a $100 million maintenance backlog, political pressures to construct elaborate resorts within park boundaries, growing public use, decreased staffing, and changing needs from an aging population. The State Parks 2000 (SP 2000) initiative was launched to see what changes were needed to guide the management and operation of the system into the 21st century.

What followed was a comprehensive and systematic evaluation and analysis of Pennsylvania’s state park program including: a widely disseminated public questionnaire, regional workshops, public meetings, input from outside recreation professionals, stakeholder input, and extensive research.

One outgrowth of this process was a new mission statement designed to underscore the commitment of placing first and foremost the stewardship of park natural resources “to provide opportunities for enjoying healthful outdoor recreation and to serve as outdoor classrooms for environmental education.”

The report was completed in early 1992, and included 18 recommendations designed, in DER Secretary Arthur Davis’ words, to: “develop clear guidance and a sound policy framework that can sustain and enhance the Pennsylvania state park system into the next century.”2

These recommendations from the people, for the people, can be categorized into three areas: Improving Programs and Facilities, Caring for Natural Resources, and Sustainable Funding (knowing that all categories have funding implications):

Improving Programs and Facilities
• Greater emphasis on environmental education
• Modernizing facilities and adding amenities
• Expanding recreational opportunities
• Removing barriers and expanding volunteerism

Caring for Natural Resources
• Developing management plans and managing for natural, cultural, and recreational resources
• Increased interaction between parks and the local community/government
• Connecting parks to other green spaces in surrounding communities

Sustainable Funding
• Finance capital improvements with bond issue or long-term trust fund
• Develop major maintenance plan to prioritize repairs
• Increase fees to help pay for repairs and operations
Changes in the State Park System Since SP 2000

Since 1992 when the SP 2000 report was published with its associated studies, findings, and recommendations, another generation has grown up and the previous one has grown older. Although many changes have taken place as a result of SP 2000, public demands continue to put pressure on our parks and forests, requiring DCNR to stay current and respond accordingly.

Environmental Education

One of the major shifts that took place over the past two decades has been increased emphasis on environmental education (EE), and a corresponding increased number of salaried positions to deliver EE programming in parks and to targeted schools. The past ten years has shown a growth in the number of quality education programs, including hands-on nature experiences, nature awareness presentations, guided walks, and week-long environmental immersion and problem-solving learning experiences. There has also been an increased emphasis on programming for urban audiences; more “adventure-learning opportunities”; and more exhibits, educational signs, and handout materials.

Yet despite the continued and increasing requests for education and guided outdoor experiences, recent budget cuts over the past several years have reversed some of the advances in this program.

Sustainable Maintenance Funding

Another initiative implemented from State Parks 2000 was increasing user fees and dedicating the income to a maintenance fund to begin addressing important infrastructure repairs. Unfortunately, this fund was later redirected by the administration to cover park staff salaries and other operational costs, rather than maintenance.

Other Recommendations Implemented

In addition to increased environmental education and creating a maintenance fund, most of the recommendations from SP 2000 were implemented. DCNR has continued to modernize bathroom facilities and added campground amenities. It has worked hard to connect park management activities with adjacent communities. Also, the agency has hired more women as park managers and has developed management plans for each park. Volunteerism is being emphasized more, and the Pennsylvania Parks and Forests Foundation was created (in part) to help grow the state parks’ friends groups program and increase the friends groups capacity to support community volunteers.

In 1989, a questionnaire solicited input from thousands of Pennsylvanians about the future of the state park system.

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<thead>
<tr>
<th>State Parks 2000 Questionnaire</th>
<th>Percent responding in favor</th>
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<tbody>
<tr>
<td>Want DCNR to protect exceptional park natural resources</td>
<td>90</td>
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<tr>
<td>Favor continued emphasis on outdoor recreation</td>
<td>89</td>
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<td>Support expanded environmental education</td>
<td>87</td>
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<tr>
<td>Desire upgraded restroom facilities</td>
<td>77</td>
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<tr>
<td>Desire upgraded camping area conveniences</td>
<td>67</td>
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<tr>
<td>Favor keeping the rustic nature of state parks</td>
<td>64</td>
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<td>Support increasing user fees for special activities</td>
<td>58</td>
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</tbody>
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2009 State Outdoor Recreation Plan

Almost two decades after the State Park 2000 surveys were completed, a series of surveys and public input sessions were conducted for the Statewide Comprehensive Outdoor Recreation Plan (SCORP). Developed every five years, SCORP is a process to obtain user and citizen input on how the parks and green spaces of the state are being used, what is liked, and what could be improved. Not surprisingly, users still want more education and more programs, more and better trails, and increased staffing and facilities.

Major findings from some of the SCORP surveys are listed below and include: a State Park Visitor Survey, a Pennsylvania Resident Survey, and Urban Youth and Baby Boomers Facilitated Discussions.

State Park Visitor Survey

A state park visitor survey, conducted in the summer of 2008, interviewed visitors at six parks chosen to represent the regional and size diversity of the parks throughout the state. Researchers found that a majority of state park visitors were day users. They represented a wide number of age groups and socio-economic levels but were less likely to reflect racial/ethnic diversity. Visitors were overall very satisfied with their state parks and evaluated most services/amenities very favorably. In particular, they felt that Pennsylvania state parks were scenic, provided a welcoming environment, and were a good value for the money.

When asked why they come to state parks, having fun, reducing stress and anxiety, and connecting to the outdoors were key reasons that visitors cited for their state park visit. Moreover, visitors believed that their visit resulted in mental health benefits (e.g., stress reduction) more so than physical health benefits (e.g., improving physical fitness).
When asked about the purpose of Pennsylvania state parks, responses fell into five themes: conservation, escaping/relaxing, family recreation, affordable place to recreate, and a place to exercise and improve health. The report notes one visitor’s comments that reflected many of the responses: “For me, it’s a place to get away without any worries, have good fun without computers and games, and just relax. One thing that hasn’t changed in 60 years, you can give a kid a ten cent cup and turn them loose in the stream, and it’s good for eight hours.”

When asked how important these park programs were to their overall visit, a majority of participants (79 percent) indicated that they were important or extremely important in their overall visit at that state park.

In terms of future improvements needed for the state parks, visitors felt that building connective trails, promoting more active park use, and improving visitor centers were important priorities. Continued efforts to link park trails (within parks and to connecting neighborhoods) are encouraged as are efforts to provide “setting appropriate” facilities that provide more active use of state parks (e.g., trails, canoe launches, playgrounds). These strategies were particularly important for younger state park visitors and for bicyclists.

Pennsylvania Resident Survey
A survey of Pennsylvanians, conducted in late 2008 through early 2009, asked a series of questions to a statistically-representative sampling of residents about outdoor recreation, available facilities, and perceived benefits. When asked about funding for park and recreation facilities, 90 percent of the respondents indicated that “maintaining existing park and recreation areas” was “important” or “extremely important.” This was the highest rated response out of a list of 12 priorities. Coming in a close second and third, respectively, were “protect wildlife habitat and conserve wild resources” and “acquire and protect open space (as undeveloped recreation land).”

Twenty-seven percent of the respondents’ recreation activities took place in state parks, forests, or game lands. Regarding the most popular types of outdoor recreation activities, the most popular (listed in descending order) were: walking, picnicking, viewing historic sites, driving for pleasure, and swimming. Following those activities were wildlife viewing, night sky viewing, dog walking, playground use, and bird watching. Bicycling, fishing, and jogging finished the list.

Of the list of areas or facilities that the public feels should be increased or improved, six of the top 10 items are provided in state parks or forests: bike riding, rental cabins, nature inns/lodges, wildlife viewing areas, environmental education areas, and natural or wild areas.

Finally, more than two-thirds of respondents indicated support for an improved, permanent source of state funding for park and recreation resources.

Urban and Baby Boomer Focus Groups
As a part of the 2009 SCORP, urban focus groups of youth and baby boomers were asked a series of questions about how they value outdoor recreation and what they feel is needed to help them participate in outdoor recreation.

Boomer Focus Groups: The baby boomer groups identified needs for more in-depth and diversified nature education programs in state parks; and easier access to web-based information about facilities, scheduling, trails, and local communities and resources. Boomers said they want better outdoor recreation access as they age and mobility becomes restricted. In addition, they want walking, hiking, and bicycling trails of varying difficulty. The boomers also expressed the need for better maintenance of state park facilities—especially restrooms and trails—and felt
that more availability of rental equipment (kayaks, canoes, and boats) and educational programs would increase their engagement in outdoor recreation activities.

Urban Youth Focus Groups:
Urban youth expressed concerns about safety and transportation if they are to increase utilization of parks. They are looking for more adult supervision at parks, better maintained restroom facilities, and more organized group recreational activities. The report also suggested that youth might be attracted to “non-traditional” outdoor activities incorporating electronic technologies, like geocaching and podcasts.

Summary of Public Input
Pennsylvanians are more active than ever in the outdoors and are consistent with their voice of support for more and better outdoor recreation facilities and opportunities, as well as more and better protected natural areas.

SCORP surveys show that Pennsylvanians desire the following from DCNR and from local recreation facilities:

Improving Programs and Facilities
- Building and maintaining trails and providing better outdoor recreation access
- Improving visitor centers, more programs, and improved parking
- More visible staff, updated and clean restrooms, and safety
- More cabins, inns, and wildlife viewing areas

Caring for Natural Resources
- Protecting public habitat areas and natural resources
- Acquiring and protecting more undeveloped open space

Sustainable Funding
- Funding to improve general maintenance of existing facilities
- Permanent source of funding for park and recreation resources

Respondents to the surveys are looking to state parks and forests to provide more and better services to help them enjoy and recreate in the natural resources of the commonwealth and want state funds utilized to ensure that high-quality, safe park and forest facilities are increasingly available.

Pennsylvanians enjoy their state parks and state forests and for decades have shown support via votes for funding and requests for improvements in their park and forest system. In 2009, when several parks were threatened with closure, Pennsylvanians spoke out against any loss of public lands.

In response to public requests, state parks have opened designated camping areas for humans and their pets.

Playground facilities are being updated in state parks, such as this one at Locust Lake State Park.

RESOURCES:
Chapter 4
Funding for Our State Parks and Forests

Summary

Over the past decade, the Bureau of State Parks has seen its field staff reduced by 30 percent and its major maintenance fund diverted to daily operations and supplanted by a sunsetting bond, Growing Greener II. It now receives fewer general fund revenue dollars than it received 10 years ago. The Bureau of Forestry (BOF) also experienced a drop in general revenue funding over the past decade while threats to the forests continued to increase and traditional forestry staffing was reduced. Additionally, revenue from timber sales declined due to the slow-down in housing construction.

Other traditional funding sources have likewise been reduced or eliminated. Although DCNR has implemented a number of cost-reduction measures totaling more than $1 million per year in savings, the continued budgetary losses erode DCNR’s ability to perform basic functions in caring for our recreation lands.

With fewer field staff, both parks and forests are beginning to suffer a backlog of maintenance of basic infrastructure and facilities. Visitors to our Gold Medal Park System are finding fewer educational programs and naturalist-led activities, more frequently closed interpretive buildings and bathhouses, fewer services, and reduced personnel for security. The reduction of forestry staff is resulting in reduced response to wildfires, reduced enforcement presence, and less management of our timber resources.

Growing Greener funding was providing some help, but even that has slowed to a trickle. With the maintenance fund from state park fees redirected to cover operations costs, major maintenance suffers.

The Early Years

The Commission of Forestry, formed in 1901, began Pennsylvania’s national leadership in forest management. With little infrastructure to maintain, expenditures were primarily for acquisition of lands and for personnel to manage and care for the forests. Public and landowner education was a growing need in the early 1900s, as was a forest fire suppression program. In addition, fighting forest pests became a critical need with the chestnut blight arriving in Pennsylvania around 1908, and a feverish battle against gypsy moths and white pine blister rust taking place in the 1920s.

The Bureau of State Parks was officially created with the Administrative Act of 1929. Prior to that time, the Department of Forests and Waters managed an assortment of parks that served as picnic grounds, summer recreation facilities, beaches, and scenic overlooks. The Civilian Conservation Corps, created in 1933; and the Works Progress Administration, created in 1935; employed young men to build bridges, buildings and roads, plant trees, fight forest fires, and construct park facilities. Many Pennsylvania state parks were created or vastly improved by these efforts up until World War II in 1942.

When Dr. Maurice Goddard was appointed Secretary of the Department of Forests and Waters in 1955, there were 45 state parks—most of which had gravel roads, pit latrines, and primitive campgrounds. Goddard’s vision to expand and improve Pennsylvania’s park system coincided with the public’s desire to have more and better outdoor recreation facilities. New funding sources would be needed to make the vision a reality.

Creative Funding Fuels Park Expansion

Established in 1955, the Oil and Gas Lease Fund Act was one of the first of its kind in the country. It required that the rents and royalties from oil and gas taken from state-owned land be put into a restricted fund to be used for recreation, conservation, land acquisition, and flood control.

For the next six years, funds from the oil and gas leases enabled the purchase of land and the development of numerous parks across the state. A lot more money was needed, however, if Goddard’s expansive vision of parks near every urban area was to be realized. A $70 million bond initiative, called “Project 70,” included $40 million for the development of state parks, and was passed by a public referendum and signed into law in 1964.

By 1966, more funding would be needed to continue building Pennsylvania’s park system, at the same time there was legislative interest in raising $200 million to begin addressing the abandoned mine lands of the state, and $100 million for new sewage treatment plants. “Project 500” packaged these needs together into another bond issue with $125 million to develop state recreational lands that were purchased with Project 70 funds.

On-going maintenance is needed in both state parks and state forests.

14 • State of the Parks/State of the Forests Report
Project 500 became law in 1968, enabling more parks to be developed and existing parks to be improved and expanded.

In 1981, Act 51 was passed that enabled fees collected in state parks to be spent for park operation and maintenance, rather than deposited into the General Fund.

In 1993, the Keystone Recreation, Park and Conservation Act was passed authorizing a $50 million bond issue referendum (which voters subsequently approved overwhelmingly), creating a “deferred maintenance account” by earmarking a portion of the realty transfer tax for state parks, historic sites, libraries, zoos, and higher education facilities. “Key 93” resulted in $17 million from the bond for the Department of Environmental Resources—30 percent of which was dedicated for state parks and forests to be used for facility rehabilitation and construction.

Growing Greener
In 1999, Governor Tom Ridge and the General Assembly created the five-year, nearly $645 million “Growing Greener” program, investing in watershed restoration, parks and recreation; preserving open space; reclaiming abandoned mines and wells; and upgrading sewer and drinking water systems.

In 2002, Governor Mark Schweiker and the General Assembly expanded the funding for the basic Growing Greener I (GG1) program by adopting a new $4.25/ton fee on municipal waste disposed in the state, expanding the investment from $650 million to $1.3 billion through 2012. In 2005, Governor Ed Rendell and the General Assembly passed Growing Greener II (GG2), allocating a $625 million bond issue passed by voters in 2004 and added to the basic Growing Greener purposes.

Though a portion of the GG1 and 2 funds was directed for capital projects in the state parks and forests, it was also used to address some major maintenance needs. Starting in 2002, the administration reduced General Fund appropriations for state parks operations and required DCNR to use its maintenance fund to fill in the gap for salaries and other operational costs. The only way to fix some of the broken infrastructure was to package it with new capital projects being funded with GG. Revenues from GG1 were then used to pay down the debt of GG2, thereby redirecting those funds from their intended purpose. Furthermore, GG2 sunsets in 2011, removing that revenue stream from the system. Today, an effort is underway to renew Growing Greener funding.

Growing Greener

Between 1955 and 2008, the Oil and Gas Lease Fund has generated more than $154 million dollars for conservation purposes including the purchase and creation of 26 state parks, the acquisition of state forest lands, the development of the Pine Creek Rail Trail, and the support of natural heritage programs. Pennsylvania’s fund is widely seen as the model for the federal government’s Land and Water Conservation Fund (created in 1965).

For over 50 years, the fund revenues were dedicated to its legislatively-directed purpose of taking the money from the sale of nonrenewable oil and gas resources owned by the state and reinvesting this money into public conservation assets benefiting all Pennsylvanians. While the bulk of the funding supported infrastructure as well as land acquisition and investments for our state parks and forests, there has been periodic political tension over the fund’s use.

In 1991, a review of the law was requested by former Secretary Goddard, concerned that the fund was being used for non-conservation purposes. The review resulted in stricter guidelines to help protect the fund.

In 2009, the State Assembly mined the Oil and Gas Lease Fund, and a total of $526 million has been transferred from the Oil and Gas Lease Fund to the General Fund since FY 2008-2009. Then, in an unprecedented move, the Assembly passed budget legislation that included shifting a large part of the fund over to the General Fund, and eliminating all restrictions on its use—disregarding its historical purpose for conservation. No longer are the funds at the discretion of the DCNR Secretary. The Fiscal Code now caps the amount of future royalty payments that can flow to DCNR-administered categories of uses.

The intention of the Oil and Gas Lease Fund was to protect the natural assets of Pennsylvania for all generations to enjoy. Historically, it did this through traditional means—fixing dams, buildings, roads, bridges, trails, equipment, and remediation of environmental problems in our state parks and forests. The extraction of non-renewable resources that will help fund this vision and other conservation investments are just that—not renewable. When these resources are gone, future generations will not have the opportunity that is before us today.2

General Revenue Appropriations

Looking back 15 years, the General Fund provided 77 percent of DCNR’s operating budget in FY1996. In 2010-2011, taxpayer funds only provide 51 percent. The growing gap has needed to be filled each year by other sources, such as higher user fees and oil and gas drilling revenues. The agency is being forced to become increasingly dependent on oil and gas extraction revenues for its operating budget.3
Mineral extraction revenues are not within the agency’s control. Of the several millions of dollars in Marcellus Shale drilling lease revenues that the agency received in 2010, all but $750,000 was reallocated for use elsewhere in state government. The decline of general revenue appropriated to DCNR will take a toll. A few years of under-funding can perhaps be absorbed without adverse consequences, but long-term erosion will undermine our award winning park system and our nationally-recognized forest system.

Appearances are Deceiving for State Parks and Forests

Despite the cutbacks, parks and forestry staff have an extremely high level of commitment to their bureaus and have always worked to fill gaps as best they can. Bureau directors credit their field personnel who work very hard to shield park and forest visitors from the evidence of funding cuts/reductions and a loss of seasonal positions. Regardless of funding cuts, the bathrooms get cleaned, grass gets mowed, and the public view of our parks and forests is a system that does not look compromised. If a seasonal position was eliminated and staff was not able to do all the maintenance needed, it is not uncommon for a manager to roll up his or her sleeves and assist with mowing, cleaning, or repair activities. Unfortunately, this has resulted in the appearance of a system that is able to sustain itself on the declining appropriation from general revenues. The public fails to see the deferred maintenance that eventually costs more to fix.

State park and forestry operations have always relied on other monies to supplement general revenue funds, but no more so than the past several years. Despite cost-saving measures of deferring critically-needed maintenance, closing facilities and operations for longer periods than in the past, and undertaking the requisite severe staffing cuts, DCNR’s general revenue appropriation has steadily required an increasing percentage of augmentation by other funding sources. The charts below show the increase in proportion that other funding sources have been needed to make up General Fund decreases, as well as the corresponding decade decline in staffing resulting from the funding cuts.

The cost to taxpayers of running the entire daily operations of the state park system in a sustainable fashion is estimated to be about $60-$95 million from general revenue. This amount of money would equal the cost of running only one state prison in Pennsylvania, and we currently support 28 prisons in Pennsylvania with general revenue funds, with two more currently under construction. In the FY 2009-2010 state budget, $1.6 billion was appropriated for Department of Corrections. Most citizens would agree that operating a quality system of 117 state parks is at least as good an investment of tax dollars for the commonwealth as funding one prison.

| BUDGET YEAR COMPARISONS for Selected Fiscal Years (General Fund only) Data Source: DCNR |
|---------------------------------|-----------------|
| 2001-02                         |                 |
| Education                       | 5.60%           |
| Public Welfare                  | 40.24%          |
| Corrections                     | 32.33%          |
| DCNR                            | 0.53%           |
| 2010-11                         |                 |
| Education                       | 6.70%           |
| Public Welfare                  | 34.04%          |
| Corrections                     | 40.81%          |
| DCNR                            | 0.32%           |

DCNR receives a small percentage of the general budget pie.
**Relying on Other Funds**  
The primary use of special funds like the Keystone Recreation, Park and Conservation and the Oil and Gas Lease Funds to operate our parks and forests goes against the original intended purpose of these funds. The Governor and the General Assembly redirected Oil & Gas Fund revenues ($2.5M/year) from state parks to other state budget uses. The Oil & Gas Lease Fund was historically earmarked for items such as computers, vehicles, picnic tables, and communication radios. Vehicles and computers need to be replaced now, but funding no longer exists.

In parks, $19 million is being collected annually in fees (campground use, cabin rentals, etc.). These fees were being used to fund basic annual maintenance activities, but all of it is now being directed to operations in order to replace the cuts made from general revenue. The Keystone and Growing Greener Funds were then used, where possible, for some major maintenance projects, often bundled with new capital projects.

In order to erase the entire maintenance backlog, $106 million per year over the next five years is needed to adequately maintain the infrastructure of the state park and forest systems.

**Park Operations**

**History of no entrance fees**

The growth of the state park system through the 1950s and 1960s greatly increased the number of parks from 45 in 1955 to 87 by 1970. This expansion was primarily funded from the Oil and Gas Lease Fund, Land and Water Conservation Fund, Project 70, and Project 500, which paid for land costs and initial construction but was not designed to cover ongoing maintenance.

Developing a funding source for park maintenance has been a challenge since the inception of the park system.

From the beginning, Secretary Goddard stood steadfastly opposed to entrance fees for the parks, arguing that it was bad public policy as parks should be free to make them available to the greatest number of people. During one of the Project 70 hearings in 1963, Goddard stated that “the economic and social benefits of the present system are so far-reaching that the commonwealth can afford this small subsidy.” (At that time, the parks budget was two-tenths of one percent of the state’s General Fund budget; in 2010 it was even lower at 1.6 tenths of one percent)

“You don’t put parking meters on shopping plazas, because you want people to come” he said. “We want people to use our parks, too.”

In 1985, Governor Dick Thornburgh quelled this hotly-debated public issue by signing Act 242 into law, which included a measure prohibiting the charging of admission fees in state parks.

In 1993, as part of the 100-year celebration of the Pennsylvania State Park System, DER Secretary Arthur A. Davis launched an initiative to look ahead at the next century. State Parks 2000 involved a series of surveys and public input on the future of the state park system, resulting in recommendations regarding management, education, and partnerships, as well as financing ongoing maintenance and capital improvements.

During this time, admission fees for state parks were again thoroughly examined by the agency, and again it was determined to not be economically feasible because of the many entrances to most parks and the cost of purchasing and maintaining the hundreds of gate machines that would be needed.

**Forestry Operations**

Linked to the housing market

Revenues from timber harvesting in the state forests provided some financial stability for Bureau of Forestry operations from 1990 - 2006. Pennsylvania hardwood sales relate directly to the housing market as new home sales and renovation upgrades often use Pennsylvania hardwoods, such as oak and cherry. During the 1990s and much of the 2000s, timber revenues were increasing 10 - 15 percent per year. Housing sales and renovations were very robust and provided a steady revenue flow to pay for staff salaries and equipment.

Linking bureau operational funding to lumber sales income, however, only pays the bills when the economy is thriving. As soon as the housing market begins to cool, sales drop off and so does the revenue for operations—the last few years have been lean. Managing a sound state forest with continued forest certification supports thousands of jobs, attracts recreation, and supports local and state economies.

**Major Maintenance Backlog**

In 1990, an examination of state parks operations brought to the surface an increasing backlog of major maintenance, which had accumulated for the preceding 15 years. With an estimated need of $50 million, the State Parks 2000 report listed a backlog of all too familiar list of recurring projects: “building and re-paving roads and parking lots, repairing bridges and dams, repairing and restoring existing buildings, sewer and water facilities, and other needed improvements to recreation facilities.” Furthermore, modernization was called for in the report, including more showers and running water for campers, as well as increasing electrical hookups and other facilities. In addition, the public has been demanding flush toilets to replace pit latrines, and changes in safety standards has necessitated swimming pool upgrades.

Twenty years later, the backlog has grown to $400 million for state parks alone with additional maintenance needs in our state forests. Money has been appropriated to build...
new facilities but not enough to maintain existing facilities that are aging. Additionally, more roofs, structures, and facilities have deteriorated in the past two decades; and new sewer and water facilities requiring regular maintenance have been constructed. Available maintenance funds are often spent on health and safety projects, such as repairing broken drinking water facilities and rebuilding deteriorating bridges and dams.

Act 51 of 1981 enabled fees collected in state parks to be spent for park operations and maintenance. By 2005, this fund was finally generating the $13 million needed each year for annual maintenance needs, but a state bond or other financing initiative was still required to address the backlog. This fund did not last long; however, and with the passage of Growing Greener II in 2005, the administration started requiring the bureau to use the major maintenance fund for salaries and other operating costs.

State Parks Infrastructure: A Cycle of Upgrades and Repairs

Years of under-funding for major maintenance and capital improvements have left some parks with deteriorating bridges, poorly-functioning sewer and drinking water systems, and dams that are increasingly unsafe. In addition, dozens of roads and parking areas in our state parks are in extremely poor condition. Between 1995-2010, DCNR spent about $250 million on state park improvements and upgrades. Yet, like our own home maintenance list, as one project is removed, another is added. Acts of nature such as flooding, wind storms and heavy snows, time, changes in safety standards, and increased visitor demands all play a part in this evolving maintenance and upgrade list.

Many of the projects listed to the right are health and safety needs that will result in park or park facility closings if not addressed soon.

▲ DRINKING WATER

State parks have 170 drinking water treatment systems. Without drinking water, park concession businesses must close, and visitors go elsewhere. New state drinking water regulations will require more testing, filtration, and treatment of surface and ground water sources. Department of Environmental Protection (DEP) developed new regulations in 2009, which are now in effect for surface water sources to better address pathogens found in drinking water. DEP also has just finalized new regulations for treating ground water that is withdrawn for drinking water. With these new requirements, a number of park water treatment systems will need to be upgraded.

$8.1 million is needed for drinking water system repairs and water line replacements.

▲ WASTEWATER TREATMENT PLANTS

State parks have 58 wastewater treatment plants—several of which service adjacent communities: Gifford Pinchot, Bald Eagle, Moraine, Canoe Creek, and Shawnee. Flush toilets have replaced most pit toilets as a result of public demand. With these upgraded sanitation facilities comes added costs of water treatment, pipe and septic tank maintenance, and heating buildings and pipes in winter.

$8.8 million is needed for sewer system repairs.

▲ BRIDGES

DCNR has 798 vehicular bridges to move visitors across rivers and streams within the state parks and forests. Some bridges provide the only entrance to a park. When one of those bridges fails, so does the local economic engine. Unlike bridges on public roads, bridges owned by DCNR generally cannot be repaired using funds generated by gasoline taxes in Pennsylvania.

$8 million is needed to repair or replace the worst of deteriorating bridges, however.

$20 million is required to do all that is needed.

▲ ROADS AND PARKING AREAS

With 3,000 miles of roads inside our state parks and forests, potholes, gravel ruts, washouts, and crumbling asphalt is a part of business. Roads steadily deteriorate but can continue to be used by vehicles that can negotiate ruts, potholes, and broken pavement. We often realize the problem as it is not as critical as a broken water main or fallen bridge. Rainstorms make a marginal road impassible with mud and ponding, but this eventually dries up and once again becomes usable.

$45 million is needed for road and parking lot maintenance.

▲ DAMS

DCNR is responsible for maintaining 125 dams. As dams have deteriorated without maintenance funds, a number of them have reached the point of being designated as "unsafe" by DEP. At that point, water behind the dam is released, and the lake is drawn down to a safer level in the event there is a major rain event in the watershed. Several lakes have been drawn down already while waiting for funds to rebuild the crumbling dam, resulting in a large mudflat or remnant lake that is closed to swimming, boating and fishing and is no longer an aesthetic place for park users. Visitors go elsewhere, and the economic benefits to that community or county are eliminated. Some still in operation are at risk of breaching with a large rain event that could cause destruction and flooding for many miles and many communities downstream.

$35 million is needed to immediately replace four state park dams, and to repair another eight in very serious condition.
Pymatuning State Park’s Tuttle Campground has been closed due to an aging sewage treatment plant and reduced funding with a resulting economic impact on Espyville. Closing the campground eliminated 198 camping sites and closed a beach. The state park on the Ohio side of the lake has seen an increase of visitors as a result. From an interview posted on a Youngstown, Ohio, news media website, the Ohio park manager said he has seen an increase in the use of beaches and campgrounds. Park visitors told him that Tuttle Campground had closed and that they came to the Andover, Ohio, side as an alternative. Pennsylvania’s economic loss in Espyville has been Andover, Ohio’s, gain.

Sampling of major maintenance funding needed for backlogged projects at individual parks:

- Pymatuning: $28.8 million
- Moraine: $19.8 million
- Ohiopyle: $17.8 million
- Cook Forest: $15.5 million
- Presque Isle: $14.75 million
- Raccoon Creek: $14.4 million
- Laurel Hill: $11.6 million
- M.K. Goddard: $11.6 million
- Bald Eagle: $10 million
- Hickory Run: $9.0 million
- Evansburg: $7.2 million
- Promised Land: $6.5 million
- Prince Gallitzin: $6.1 million
- Gifford Pinchot: $5.4 million
- Shikellamy: $4.9 million
- Tobyhanna: $4.6 million
- Ricketts Glen: $4.4 million
- Sinnemahoning: $4.4 million
- Neshaminy: $4.2 million
- Nockamixon: $3.8 million
- Keystone: $3.75 million
- Ridley Creek: $3.4 million
- Codorus: $2.2 million

**LAKES**

Lakes are a major attraction in many of the parks and are important water resources in many state forests. The lakes are mostly man-made from damming a stream in a valley, and silt naturally builds up behind the dams and across the bottom of the lakes. Eight lakes need immediate dredging due to silting, or their usefulness will be seriously impaired. This need is not always apparent, as a lake can look fine with only a few inches of water above the silt. Boating has already become impossible in many lakes and is extremely limited in others where some dredging has kept open a channel or two. Swimmers who venture beyond a dredged beach stand knee-high in muck.

$7.5 million is needed to dredge lakes that are nearly filled in with silt. Millions more will be needed in the decades ahead for other lakes where silt is accumulating, particularly in watersheds where development is occurring upstream.

**BUILDINGS**

State parks contain 5,000 buildings, such as visitor centers, offices, maintenance and storage buildings, education buildings, pavilions, cabins, bath houses, modern and rustic bathrooms, and pumping stations. All of these need roof repair or replacement on a regular schedule. They all have periodic maintenance needs for their heating and cooling systems, wiring, plumbing, carpeting, painting, and all the ongoing maintenance that a business or home would need.

**OTHER FACILITIES**

With the struggle to find funding to pay park and forest staff to keep open facilities and basic operations, it is easy to lose sight of the many other facilities for which DCNR is responsible — facilities including 16 public swimming pools, 10 marinas, four public downhill ski facilities, and two golf courses. Additionally, DCNR maintains other public recreation facilities, such as boat launches, trails, parking lots, picnic areas, restrooms, and campsites. Proper maintenance of all these assets is critical to providing public safety, appropriate stewardship of park and forest natural resources, and a high-quality visitor experience.

**STATE FORESTS MAINTENANCE BACKLOG**

Our state forests also have many bridges, buildings, restroom facilities, and roads in need of regular maintenance. The number of facilities in the forests is fewer than in the state parks, but many are in similar dire need of repair.

More than $12 million is needed for infrastructure maintenance in our state forests, including repairing or rebuilding bridges, repairing the worst of the damaged roads and parking lots, and fixing broken restroom facilities.

RESOURCES:
1. Oil and Gas Lease Fund Act; P.L. 865, No.256; Act 256. Signed into law by Governor George Leader on Dec. 15, 1955.
2. Adapted from (article name), PPFF Spring 2010 Newsletter.
4. From interviews/conversations with current and former state parks and forestry bureau directors.
Visitation at Pennsylvania state parks and forests reached a near record high in 2009 with over 38 million visitor days. Yet, these well-used and enjoyed systems face a myriad of threats. As detailed in Chapter 4, inadequate funding and decreasing staff are causing challenges with regular maintenance, long-term infrastructure decay, and lack of equipment needed to perform basic operations. There are additional challenges; however, that also need to be addressed if our system is to provide all the services that our citizens are seeking, and if we are to maintain the ecological integrity of the natural resources.

Suggested Improvements by State Park Users

Park and forest visitors, as well as the general public, have consistently identified improvements, additions, and changes that they would like to see in their public lands. The Resident Survey, discussed previously regarding changing expectations and needs of park visitors, was a part of the 2009 State Comprehensive Outdoor Recreation Plan (SCORP). This survey also specifically asked participants questions about improvements needed in state parks and forests.1 These findings differed very little from earlier surveys of users.

Recurring suggestions for improvement to state parks included improving general park maintenance, maintaining and building new parking lots, stocking fish, providing bilingual signage, improving ADA access, advertising and promoting park programs, and adding more playgrounds. Also mentioned in some areas was the need to improve park signage, restroom cleanliness, and the visibility of staff.

More Active Facilities

In terms of strategies to improve state parks, visitor survey participants felt that building connective trails, promoting more active park use, and improving visitor centers were important priorities. Continued efforts to link parts of parks with trails, as well as connecting parks to adjacent neighborhoods and communities, were encouraged. Respondents also wanted more “setting-appropriate” facilities that provide more active use of state parks (e.g., trails, canoe launches, and playgrounds). These strategies were particularly important for younger park visitors and bicyclists.

Safety

Visitors also expressed safety concerns, as a reduced work force means fewer visible staff. The focus groups with urban youth and baby boomers had very similar responses regarding safety.2 Boomers, especially women, expressed high levels of concern about frequenting parks by themselves or in small groups. This anxiety revolved around personal safety issues and fears. Safety concerns were emphasized across all groups and significantly restricted their willingness to use state parks.

Problems with Bureau Operations

The bureaus of Forestry and State Parks have long suffered personnel shortages and needed funding to properly sustain the commonwealth’s resources of 2.2 million acres of forests, 117 parks, and three conservation areas. These problems have been exacerbated by the General Assembly’s redirection of purpose of the Oil and Gas Lease Fund, state park fees, and other funds that were used for purchasing equipment and supplies for headquarters and field operations. These special funds were originally to be used for major maintenance and infrastructure rehabilitation, replacement of heavy equipment and vehicles, support equipment like radios and computers, and the purchase of strategic parcels of land such as in-holdings. The Oil and Gas Lease Fund was never intended to fund staff salaries or other programmatic operations.

The impacts that these cuts are having on equipment are also measurable. Vehicles are inoperable for longer periods of time, and staff are spending more time trying to keep them operational. Computer equipment is too old to operate effectively, and communications equipment needs to be replaced. Without basic equipment, the bureaus cannot operate efficiently, nor can they adequately provide the safety needed for the millions of visitors annually using forests and parks.3

Personnel

Fewer staff impacts not only operations, but also the bureaus’ ability to raise revenues (that are) dependent upon personnel. For example, fewer forestry staff to manage timber sales means fewer sales, resulting in less revenue; and the use of overtime funds needed to take advantage of
time-critical timber salvage opportunities has been restricted. Funding for research on forest regeneration and data automation also has been reduced or eliminated.

Severe cuts have been made to funding for gypsy moth suppression on state forest lands, which results in greater losses of high-quality timber and important food-producing trees for wildlife. Other insect pests are also showing up in our state, which will require aggressive action to contain, as well as research to effectively combat. Without the personnel or funding for forest pest management, our forests (public and private) are (being put) at great risk.

In addition, fewer state park staff translates into fewer programs that are offered to visitors. In part, Pennsylvania was recognized as a Gold Medal park system due to our innovative programs; ironically these same programs suffer when budgets decline. Visitor surveys show that these programs are extremely important to their park experience, and a less-attractive park experience reduces visitation—many of whom pay fees for rentals and programs. Fewer seasonal park staff results in some bath houses and toilet facilities being closed, resulting in fewer visitors still.

**DCNR Vehicles**

DCNR field staff depends on vehicles to perform their daily operations, e.g., safety patrols, restroom cleaning, trash pickup, and fire suppression. Many smaller parks are grouped with larger parks as “complexes,” and staff need dependable vehicles to travel to the smaller parks daily for maintenance, patrolling, and meeting groups for educational programs. Similarly, state forests tend to be spread across wide geographic areas, requiring dispersion of staff for day-to-day operations.

Due to the agency’s dependence on vehicles for basic duties, an efficient system of management, maintenance, and replacement was worked out after decades of fine-tuning and had been in place for some time. A major problem developed a few years ago; however, when it was mandated that the Department of General Services (DGS) manage all state agency vehicles; which, unfortunately, has turned out to be inefficient and costly.

One example of this inefficiency is that DCNR cannot replace its heavy-use field vehicles when it is cost-effective to do so. Another example is the required use of the DGS garages for all maintenance and repairs, which dramatically slows down the turn-around time for even simple services (like an oil change).

**Threat of Privatization**

During the past few years, privatization of state park and state forest operations is an idea that has been floated around by various politicians. The Bureau of State Parks already privatizes the concession operations at many parks with annual vendor agreements, though this is not the case in all locations, or for all services.

A study that provides some insight on the public’s view of the potential privatization of state park services was conducted by Andrew Mowen of Pennsylvania State University in 2006.4 This study asked nearly 1,500 visitors in 13 state parks to evaluate the

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**Staffing Decline for DCNR**

Comparisons of state park and forest staffing

DCNR's full time complement of staff has been reduced by seven percent since FY2002-3, and its wage complement is down 32 percent since 2003. The main results have been reduced service levels/quality in the state parks, especially outside of the peak season, and compromised ability to manage multiple demands, including infrastructure maintenance and wildfires, in the state forests.
concession program within the parks and asked a series of questions to ascertain the confidence level in the bureau’s fiscal and natural resources management.

Table 1 shows the responses for visitor preferences on types of services that could be contracted to private operators.

The responses to this question showed clearly that the visitors surveyed were strongly in favor of the agency providing the basic operation services of maintenance, campground operations, and recreation and education programming; but respondents were split on whether they preferred the state or a private contractor to provide the services that currently are contracted out at many of the parks (food, rentals, and special events).

The study also reviewed the public’s perception of State Parks’ stewardship of our resources (see Table 2). According to Mowen, people who feel positively about the performance of an agency and feel the agency is fiscally responsible are less likely to support private-sector operations. Survey respondents showed strong confidence in the Bureau of State Parks and its management of natural resources and stewardship of tax dollars.

Table 1: Visitor Preference for the Operation of Services and Amenities

<table>
<thead>
<tr>
<th>Type of Service</th>
<th>Preference for State Park Operation</th>
<th>Preference for Private Contractor Operation</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food &amp; Beverage</td>
<td>43%</td>
<td>55%</td>
<td>2%</td>
</tr>
<tr>
<td>Watercraft Rentals</td>
<td>58%</td>
<td>40%</td>
<td>2%</td>
</tr>
<tr>
<td>Park Maintenance</td>
<td>92%</td>
<td>7%</td>
<td>1%</td>
</tr>
<tr>
<td>Campground Operations</td>
<td>92%</td>
<td>7%</td>
<td>1%</td>
</tr>
<tr>
<td>Pool &amp; Beach Staff</td>
<td>82%</td>
<td>16%</td>
<td>2%</td>
</tr>
<tr>
<td>Special Events &amp; Festivals</td>
<td>51%</td>
<td>46%</td>
<td>3%</td>
</tr>
<tr>
<td>Outdoor Recreation Programs</td>
<td>81%</td>
<td>17%</td>
<td>2%</td>
</tr>
<tr>
<td>Environmental Education Programs</td>
<td>94%</td>
<td>5%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Data Source: A Concession Program Evaluation for Pennsylvania State Parks, Andrew Mowen, PhD, et al.

“Survey respondents showed strong confidence in the Bureau of State Parks and its management of natural resources and stewardship of tax dollars.”

Table 2: Visitor Evaluation of State Parks Resource Stewardship

(Using the Perceived Organizational Responsibility Scale)

<table>
<thead>
<tr>
<th>Perception of Resource Stewardship</th>
<th>Level of Agreement</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pennsylvania’s State Parks provide outdoor recreation opportunities for all of its citizens</td>
<td>Strongly Agree</td>
<td>4.42</td>
</tr>
<tr>
<td>Pennsylvania State Parks are a good steward of the natural environment</td>
<td>Strongly Agree</td>
<td>4.40</td>
</tr>
<tr>
<td>Pennsylvania State Parks care about making parks accessible to a broad population</td>
<td>Strongly Agree</td>
<td>4.29</td>
</tr>
<tr>
<td>Pennsylvania State Parks protect sensitive natural areas</td>
<td>Strongly Agree</td>
<td>4.26</td>
</tr>
<tr>
<td>Pennsylvania State Parks promote an understanding of the natural environment</td>
<td>Strongly Agree</td>
<td>4.18</td>
</tr>
<tr>
<td>Pennsylvania State Parks are a good steward of tax dollars</td>
<td>Strongly Agree</td>
<td>3.93</td>
</tr>
<tr>
<td>I trust that Pennsylvania State Parks will spend their non-tax revenues (e.g., camping fees, concession payments) wisely</td>
<td>Strongly Agree</td>
<td>3.87</td>
</tr>
<tr>
<td>Pennsylvania State Parks ensure that their services and amenities are distributed equitably across various regions</td>
<td>Strongly Agree</td>
<td>3.79</td>
</tr>
<tr>
<td>Pennsylvania State Parks spend their money wisely</td>
<td>Strongly Agree</td>
<td>3.70</td>
</tr>
</tbody>
</table>

Data Source: A Concession Program Evaluation for Pennsylvania State Parks, Andrew Mowen, PhD, et al.
Abusing our Natural Resources

History of Compatible Uses
The original purchasing by the commonwealth of large tracts of forest land was in response to an abusive use of the forests for monetary gain, with no regard for the ecological health or future generations. Starting in 1898, “forest reserves” were created by purchasing cut-over and burned-over lands in headwater areas “for watersheds and fire protection, but also for growing and harvesting wood on a sustainable basis.”

Soon after the state forest acquisitions had begun, the management of the forests for sustainability became a critical part of the mission of the fledging Pennsylvania Department of Forestry. Since that time to the present, the state forests have a long history of being managed and used for commercial and industrial purposes; but with staff guidance and through professional resource planning, these activities have successfully coexisted with other forest activities.

In addition to managing the forests for timber production and wildlife habitat, the utilization of commonwealth-owned oil and natural gas resources beneath state forest lands has been a major program of the Bureau of Forestry for the past 60 years. The bureau issued its first oil and gas lease in 1947, and since then more than 1,300 wells have been drilled resulting in approximately $150 million in revenues to DCNR. Revenues from oil and gas leases during 2007 were approximately $4.3 million. Oil and gas utilization is a part of the bureau’s history and will continue to be a part of its future in helping to provide both clean energy and economic returns that have historically been invested back into conservation initiatives.

Pressure for Using State Lands for Energy Development
The current push for several forms of energy could lead to a reduction in the integrity of the forest system that has been so carefully managed for more than a century. The projected forest fragmentation caused by the drilling and distribution system for Marcellus Shale natural gas and the use of our forested ridgetops for industrial wind power plants could seriously harm the ecological, economic, and recreation values of our state forests for generations to come.

According to a recent study conducted by a collaborative of conservation groups led by The Nature Conservancy, about 40 percent of the most ecologically-valuable large forest blocks in Pennsylvania could see impacts from these two forms of energy development alone.

Marcellus Shale Drilling
DCNR is facing the biggest change in its history: the entrance of deep formation horizontal drilling in the Marcellus shale play.

Seventy-one percent of Pennsylvania’s state forest lands, or 1.5 million acres, are located above the Marcellus Shale gas field. Of that, nearly half (700,000 acres) are subject to gas extraction activity by either private ownership of mineral rights or leasing by the commonwealth of its gas rights. Forty percent of it (525,000 acres) is in the Pennsylvania Wilds. This is the same region that attracts hundreds of thousands of visitors each year for elk watching, trout fishing, deer hunting, hiking, paddling, and fall leaf-peeking. It is also a critical nesting area for a number of species of songbirds that the National Audubon Society is working to protect as their numbers are in steep decline due to habitat loss and fragmentation.

As mentioned previously, drilling for natural gas is not new; it has been a compatible use of these lands for the last 63 years. Approximately 1,700 wells have been drilled; today, there are approximately 800 royalty-producing wells on state forest land. With the new deep-drilling technology, however, comes the potential for thousands of new natural gas wells over the next decade on the approximately 700,000 acres of state forest land that are already leased. This represents one-third of the entire state forest system. Additionally, 80 percent of the mineral right beneath state parks in the Marcellus play area are owned by outside entities, thus putting drilling pressures on our Gold Medal park system.

Oil and gas development requires the clearing of forests to construct well pads and other infrastructure. This clearing directly impacts forested habitats by increasing forest fragmentation and reducing the overall amount of forest cover. Marcellus shale exploration of one-third of the state forest already has the potential to negatively impact a wide range of environmental and social values of the state forest system, including water quality and quantity, plant and animal habitats, recreation and aesthetics, forest health and biodiversity, and soil and air quality.

And yet, pressures continue to mount for additional drilling on public lands. Some have even suggested that oil and gas leases could pay for most of the agency’s operating costs and remove DCNR from having to receive much general revenue funding.

Leasing Moratorium Needed
DCNR professionals have determined that the integrity of the forest system may already be jeopardized and that further leasing should not take place until the current leased acreage is studied to determine the extent of...
impacts that will result. At risk are (is compromising) the critical ecological services that the forests provide and the tourism revenue that is generated. The widespread drilling also raises questions on the future of Pennsylvania’s “ecologically sustainable” certification.

Any effort to put economic gain ahead of resource protection is fundamentally inconsistent with wise stewardship and is completely against DCNR’s conservation mission and the environmental amendment to the Pennsylvania constitution. To further require the agency to increase reliance on resource extraction for operations funding serves to degrade the integrity and the credibility of the agency.

Commercial Wind Development

Industrial-scale wind facilities are being placed on ridge-tops throughout Pennsylvania and are clearing vast swaths of forests in very sensitive places. Scientists estimate that for every 40 turbines installed along a ridge top, nearly 1,000 acres are severely impacted ecologically and another 1,600 are compromised ecologically due to the fragmentation that results. This calculation is for the turbines alone and does not even take into account new transmission lines needed to move the electricity across the landscape. The other concerns are impacts to raptors and songbirds during migration and flying bats.

Draft wildlife monitoring protocols have been created for wind turbine sites on state forest land. The bureau will use the environmental review process to determine if site-specific areas will be considered for commercial wind development.

No industrial wind facilities are on state forest land yet; and the total impact that wind energy development could have on state forests (i.e. fragmentation, noise pollution, and disrupting recreation activities) is still unknown. What is clear, however, is that wherever a wind facility is installed, the impact is significant on that specific area. At this time, the Bureau of Forestry has no statutory authority to address wind turbine development.

Ecological Problems in our State Parks and Forests

Invasive Species

Invasive species are one of the most significant threats to native ecosystems in the nation. As defined by Federal Executive Order 13112 (1999), a species is considered invasive if it is not native to the ecosystem under consideration, and its establishment causes or is likely to cause economic, environmental, or human harm.

Many non-native diseases, weeds, insects, and animal pests currently threaten the forests and recreational resources of Pennsylvania. Examples include Asian longhorn beetle and emerald ash borer that can severely impact timber resources and recreational areas by killing trees. Another invasive insect, the hemlock woolly adelgid, is negatively affecting our state tree, the eastern hemlock, from Penn’s Woods. The loss of this year-round, shade-producing conifer will have a devastating impact on many cool water brook trout streams, degrading watersheds and terrestrial habitats, and impacting recreational and aesthetic qualities of our parks and forests. Invasive weed species, such as Japanese stilt grass, adversely affect biodiversity and restrict forest regeneration. Aquatic invasive species like zebra mussels and Eurasian water-milfoil can block waterways and restrict recreational use of lakes, streams, and estuaries and reduce the capacity of these waterways and lakes to support native aquatic life.

Many invasive species, particularly forest pests, do not directly nor immediately destroy native habitats. Rather, these pests weaken native species and increase their susceptibility to secondary attack or invasion by a different species. Forest pests, for example, often initiate tree health decline that progresses for multiple years.

Controlling invasive species is profoundly expensive. For example, in 2005 DCNR’s Division of Forest Pest Management (FPM) programs spent $400,000 of combined state and federal funds for hemlock woolly adelgid suppression alone on state lands. FPM spends $250,000 per year just for forest pest surveys and detection on state lands. The cost of gypsy moth suppression on state lands historically has ranged from $500,000 to $15 million per year, depending on moth population levels. The bureau is currently being appropriated less than $2 million for forest pest management operations and nothing for pest species suppression, yet we are currently seeing an exponential increase in populations of non-native pests, from the emerald ash borer to kudzu. A few state parks have spent up to $30,000 per year each for invasive species control within their jurisdiction.

Many parks and forest districts have identified the need for additional resources to address the invasive species problems that threaten the quality of park habitats and visitor experiences. The impact of invasive species is increasingly challenging the abilities of land managers to provide natural resource stewardship for public and private lands.

In 2003, DCNR created the Invasive Species Team, which conducted a survey of land managers and appropriate program staff. Responses overwhelmingly urged DCNR to make invasive species
management a higher priority within the agency. Respondents also encouraged immediate and ongoing action, primarily educational activities, to prevent the introduction and spread of invasive species.  

DCNR’s list of common invasive species of plants is included at the end of this chapter for reference.

Other Ecological Problems

Prescribed Fire
There is increasing concern among natural resource professionals that fire-dependent community types are being lost through the processes of natural succession and the exclusion of fire. To help sustain these important community types in Pennsylvania, the Bureau of Forestry is working closely with the Pennsylvania Prescribed Fire Council.

Deer on State Forest Lands
The 2003 public input process identified deer browsing impacts as a critical challenge to achieving BOF’s goals of maintaining a diverse, naturally-regenerating forest. Currently, the forest understory across vast areas of the state has been reduced to a diminished group of species not preferred by deer, such as beech, striped maple, hay-scented fern, sweetfern, and huckleberry. Fewer deer are able to survive in this denuded habitat condition. Many species of forest plants (Canada yew, some viburnums, pink ladyslipper, and many other shrubs and wildflowers), have been, or are on the verge of being, eliminated from our forest ecosystems.

The bureau has been working closely with the Game Commission to implement a series of strategies aimed at balancing deer populations with habitat conditions across the commonwealth and restricting the areas of browsing impact. These strategies include participation in the Deer Management Assistance Program (DMAP), the installation of deer fencing exclosures, increasing hunter access to remote state forest lands, supporting research, habitat monitoring, public education, and advocacy for continued adaptive change.

Deer Management Assistance Program
In 2003, PA Game Commission’s (PGC) deer management program provided DMAP as a tool for forest landowners to meet their specific land management goals. The Bureau of Forestry is currently using DMAP to focus additional hunter pressure on specific areas to reduce the deer browsing pressure on its habitats.

In the first year of the program, for example, the bureau enrolled 446,821 acres in the program and distributed 16,312 antlerless coupons to hunters. The results of DMAP are currently being evaluated for effectiveness at meeting ecological restoration goals.

Recent reductions in the deer herd in some areas have allowed the more

Invasive Insects
There are about a dozen species of insects that sometimes reach outbreak numbers and cause a lot of damage to forest trees. These can also be a nuisance for people who live, work, or recreate in the forest. Below are a few of the more troublesome and potentially devastating non-native invasive insect species to Pennsylvania’s forest resources.

The Gypsy Moth is responsible for millions of acres of defoliation annually. The Gypsy moth was first discovered in Pennsylvania in 1932. It has now advanced into the Midwest, with populations reaching outbreak levels every 5-10 years. DCNR uses integrated pest management to monitor populations and treat the most heavily impacted areas with biological insecticides.

The Hemlock Woolly Adelgid is a serious pest of eastern hemlock in the northeastern states. This insect was first reported in southeastern Pennsylvania in the late 1960s and has spread to both ornamental and forest hemlocks. To date, 52 counties in the eastern two-thirds of Pennsylvania have been infested with this insect. DCNR is currently experimenting with several species of adelgid-eating beetles and is hopeful that the most important hemlock stands will eventually be protected using a combination of biological and chemical controls.

The Emerald Ash Borer was first discovered in western Pennsylvania and has since been found in a number of western counties and several central counties of the state. Ash trees make up 3.6 percent of the forests in Pennsylvania, with more than 300 million trees throughout the state. The ash component in urban areas could be significantly higher as it is a favorite landscaping tree statewide. If the emerald ash borer becomes widely established, the impact on forest biodiversity, wildlife habitats, quality of riparian areas, ash resources, and urban living could be enormous.

The Asian Longhorned Beetle was first identified in North America in New York in 1996 and is a potential serious new threat to urban, park, and forest trees in Pennsylvania. Larvae of the beetle feed in the stems and branches of many hardwood tree species including maple, box elder, alder, elm, birch, poplar, and willow. Continued feeding can lead to the death of branches and entire trees. To date, this insect has not been found in Pennsylvania, but an aggressive education program has been launched to identify and eradicate any that appear.

The Sirex Woodwasp was originally detected in New York state just north of the Pennsylvania line, and was recently discovered in ten north-central Pennsylvania counties. The wasp affects hard pines which include Scots and red pine in Pennsylvania, and poses a serious threat to the hard pine resources south of the Mason-Dixon line. An intense effort is underway, in cooperation with federal and state agencies, to survey for the insect and stop its southward movement.
common species of forest regeneration to begin increasing in height growth where previously the plants were restricted by overbrowsing. Few changes in species diversity have been documented; however, at this point.

**Deer Fencing**

Fencing enclosures have had an immediate and dramatic effect on forest regeneration. Fencing is used to exclude or deter deer from areas where regeneration is being established to replace a harvested stand or to restore areas that have been severely over-browsed in the past. From an informal survey of Bureau of Forestry field staff in September 2004, many reports were made of native plants showing up that had not been seen in some state forests for decades, such as: native bush honeysuckle, bristly sarsaparilla, long-leaved holly, and red elderberry. One forester counted 52 species of shrubs and herbaceous plants inside the fenced area and only two species outside.

Fencing out deer, however, is a costly and labor-intensive technique and one that the bureau would like to phase out. In 2005, the bureau was maintaining over 900 deer-deterrent fences surrounding nearly 31,000 acres. Since that time, fencing contracts have declined by approximately 40 percent.

**Human Pressures**

The popularity of our parks and forests have overwhelmed some areas with visitors. Overuse can cause an increase in pedestrian and vehicle traffic, which leads to erosion from overuse of trails and shorelines; trampled vegetation from feet, cars, and recreational equipment; and litter, noise, and water pollution. Increased visitorship means increased needs for rangers, facilities, maintenance, and programming.

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**Common Invasive Plants of Pennsylvania**

**Flowers**
- Aegopodium podagraria; goutweed
- Allaria petiolata; garlic mustard
- Carduus nutans; musk thistle
- Cirsium arvense; Canada thistle
- Cirsium vulgare; bull thistle
- Datura stramonium; jimsonweed
- Galega officinalis; goats rue
- Heracleum mantegazzianum; giant hogweed
- Hesperis matronalis; dame’s rocket
- Lythrum salicaria; purple loosestrife
- M. liriophyllum scapatum; Eurasian water-milfoil
- Ornithogallum spp.; star-of-Bethlehem
- Pastinaca sativa; wild parsnip
- Perilla frutescens; beefsteak plant
- Polygonum cuspidatum; Japanese knotweed
- Ranunculus ficaria; lesser celandine
- Trapa natans; water-chestnut

**Grasses**
- Bromus tectorum; cheatgrass
- M. liriophyllum scapatum; Japanese stilt grass
- Phragmites australis; common reed

**Trees**
- Acer platanoides; Norway maple
- Acer pseudoplatanus; sycamore maple
- Ailanthus altissima; tree-of-heaven
- Paulownia tomentosa; princess tree
- Ulmus pumila; Siberian elm

**Shrubs**
- Berberis thunbergii; Japanese barberry
- Berberis vulgaris; European barberry
- Elaeagnus angustifolia; Russian olive
- Elaeagnus umbellata; autumn olive
- Euonymus alatus; winged euonymus
- Ligustrum obtusifolium; border privet
- Ligustrum vulgare; common privet
- Lonicera spp.; bush honeysuckle (5 species)
- Rhamnus catharticus; common buckthorn
- Rhamnus frangula; glossy buckthorn
- Rubus phoenicolasius; wineberry
- Rosa multiflora; multiflora rose
- Spiraea japonica; Japanese spiraea
- Viburnum opulus; guelder rose

**Vines**
- Akebia quinata; fiveleaf akebia
- Ampelopsis brevipedunculata; porcelain-berry
- Celastrus orbiculatus; Oriental bittersweet
- Lonicera japonica; Japanese honeysuckle
- Polygonum perfoliatum; mile-a-minute vine
- Pueraia lobata; kudzu

**Aquatic Plants**
- M. liriophyllum scapatum; Eurasian water-milfoil
- Trapa natans; water-chestnut

For details on each of these troublesome plants and suggested actions you can take to protect your property from them, visit [www.dcnr.state.pa.us/forestry/plants/invasiveplants/index.htm](http://www.dcnr.state.pa.us/forestry/plants/invasiveplants/index.htm)

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**RESOURCES:**
3. This section developed from a series of staff interviews, October - December, 2010.
6. From DCNR website [www.dcnr.state.pa.us](http://www.dcnr.state.pa.us)
8. From DCNR’s Transition Paper to the Governor, November 2010.
9. From aerial photograph analysis by Audubon Pennsylvania and The Nature Conservancy of wind turbine complexes installed along the Allegheny Front in Pennsylvania. For specific calculations, see slideshow at: [www.slideshare.net/pzeph/pa-marcellus-other-energy-fragmentation](http://www.slideshare.net/pzeph/pa-marcellus-other-energy-fragmentation)
10. This text was adapted from DCNR’s Invasive Species Management Plan, [www.dcnr.state.pa.us/ocs/invasivespecies/invasiveplan/foc.aspx](http://www.dcnr.state.pa.us/ocs/invasivespecies/invasiveplan/foc.aspx)
Chapter 6
Summary

In summary, Pennsylvania is very fortunate to have high-quality systems of state parks and forests providing many solid benefits as the result of continuing wise investments and high-quality management. To most citizens, the value of their parks and forests is “priceless” to themselves, their children, grandchildren, and future generations.

Studies show that the public is very supportive of Pennsylvania’s park and forest system for all the benefits provided, including recreation, health, nature experiences, and ecosystem services. Visitor and general public surveys point out desired changes to accommodate an aging and more urban population, but the bureaus have always been responsive to public recommendations and have a good history of evolving to keep pace with changes in society. This ability to be innovative and adaptive is just one of several reasons that the Pennsylvania park system was recognized as the best system in the nation in 2009 by the National Recreation and Park Association and the American Academy for Park and Recreation Management.

Many state park improvements were made during the 1980s and 1990s as most of the recommendations from the State Parks 2000 report were implemented. This led to many changes, such as improved park management, an expanded environmental education program statewide, modernization of facilities, a greater connection with local communities, and increased fees to help pay for maintenance. These improvements, including the “greening” of state parks by reducing their carbon footprint, is yet another quality feature recognized by the Gold Medal Award.

Studies show that the state parks and forests are regional economic engines with an estimated taxpayer dollar return on investment (ROI) for state parks of more than nine to one. Parks and forests serve as magnets that attract not only tourism dollars, but also businesses, homeowners, and retirees who value the many health and recreation benefits of public open space.

Recommendations
The top priority is to sustain the level of investments and resource protection that have enabled PA to have a Gold Medal—winning system of state parks and a nationally certified system of state forests, which represent the level of quality that citizens and visitors to parks and forests have come to expect from these public resources. This continues a tradition that is so important to our natural heritage.

Further, managers should take advantage of opportunities as they occur to further improve ROI by utilizing public input from a wide range of stakeholders, performance metrics and targets, innovative management approaches; effective collaboration with traditional and non-traditional partners, and wise financial investments.

To achieve the above goals, we recommend at least maintaining the current level of O&M funding during the current fiscal crisis to ensure that every Pennsylvanian has close-to-home and affordable access to quality natural resources and outdoor recreation opportunities. As soon as possible, the O&M funding should return to the level that we had in 2002 with regard to staffing, maintenance funding, training funds, and administrative funds. In today’s dollars, accounting for inflation, that would be around $95M for state parks and $60M for state forests (this represents operating costs without supplemental revenue from timber sales or oil and gas). This amount would be subject to further review as DCNR staff continues to take advantage of the latest innovative ideas to improve productivity, as well as enhance income from augmentation sources. While park and forest staff have done a commendable job adapting to tighter budget restricts, continuing along this path of inadequate funding will impact the condition of the resource as well as the quality of the visitor experience. Recent studies have found that Pennsylvania residents want MORE from their state parks and state forests, not LESS. Continued preventive and corrective maintenance will ultimately save on capital improvement costs in the future.
There is a continuing need for capital improvement projects (as noted in Chapter 4) to keep the system up to speed as facilities age through normal wear and tear and to meet current visitor and stakeholder expectations identified through interaction with users, consistent with sound management practices. We recommend continuing the investment in capital improvement projects in an amount of $50 million or more per year consistent with the DCNR capital improvement schedule and emphasizing safety concerns such as dam repair as a priority (see Chapter 4 for details on safety and infrastructure needs). The Keystone Fund, the Oil and Gas Lease Fund, and the annual state Capital Budget are sources for the capital project funding. In particular, the Oil and Gas Lease Fund revenues are expected to grow from royalties and should be considered a primary source to expand capital improvement projects, which will have wide ranging benefits for a number of communities that rely on state parks and forests for many outdoor recreation opportunities.

### Additional Enhancement Priorities

- ** Maintain the state parks and state forests at a level where they are “Clean, Safe, and Ready to Use” offers another measure of performance consistent with the award winning standards used above, and it reflects desires outlined by park and forest users in satisfaction surveys. For example, restrooms need to be clean; park rangers and other staff need to be available to assist users; and trails should be open and well-maintained.  

- ** Continue to invest tax dollars in park and forest operations and maintenance. Studies have demonstrated that these investments provide a strong economic return to the state. A recent study by The Pennsylvania State University on the economic impact of PA State Parks provided conservative estimates of direct and indirect spending and found that the total contribution of visitor spending to the state economy was $818.3 million in sales, 10,551 jobs, and $291.4 million in labor income. For every dollar invested in parks in 2008, $7.62 of income (value added) is returned to Pennsylvania. When projecting economic returns based on increased park visitation of 2009, the return is estimated at $9.63 for every $1 invested. Forest studies yield similar results. In a recent study on visitor use of state forests in Pennsylvania, visitor respondents that 95 percent of them purchased gasoline and oil; 85 percent purchased food and drinks at local restaurants and bars; 69 percent purchased other food and beverages; and 45 percent used local overnight accommodations. Additionally, the forest product industry in Pennsylvania has a total economic impact of $27 billion annually and supports more than 100,000 jobs. The new Statewide Comprehensive Outdoor Recreation Plan (SCORP) for Pennsylvania provides clear recommendations on how the outdoor recreation opportunities can be enhanced to improve the overall health and wellness as well as reduce the medical costs for Pennsylvanians. One key finding from citizen surveys conducted as part of SCORP was that Pennsylvanians evaluated their state parks and forests extremely favorably but they also recognized the importance of continued funding investments in maintaining the infrastructure, modernizing activity/overnight accommodations, and creating better trail connections. Programs like “Get Outdoors PA,” coordinated primarily by the Bureau of State Parks, should be continued and expanded to include all park facilities in Pennsylvania - state, local, county and federal. Outdoor activities are also known to help attract and retain top quality workers, as well as businesses.  

- ** Keep state parks and forests free— free admission and free parking. Studies have shown that admission fees are not cost-effective. Additionally, public lands need to be available to all citizens, regardless of economic means.  

- ** Modify and enhance state parks and forests to better serve the changing demographics of Pennsylvania as the population becomes more diverse and older. Our seniors who have invested in the state parks and forests should be able to visit and enjoy them in their twilight years. Often these are intergenerational visits with many generations of one family visiting a favorite park.  

- ** Adjust natural gas drilling to include adequate oversight protection of sensitive areas not appropriate for drilling and innovative/best practice utilization. Drilling also need consider the recreational impacts that could occur so as not to diminish the visitor experience to our state parks and forests.  

- ** Continue evaluation and strong public participation in the management of the state parks and forests.  

- ** Engage more of the public through friends’ organizations and active volunteer engagement, both statewide and on an individual park or forest basis.  

- ** Engage in increasingly more corporate partnerships— such as corporate work days— to connect businesses to the amenity that supports a quality of life that makes working and living in Pennsylvania attractive.  

- ** Continue to invest in “green” technology to serve both as a model for energy efficiency as well as promote cost-saving measures through energy conservation and renewable sources of energy.  

- ** Continue to address threats to park and forest ecosystems to support healthy ecosystems, clean water, soil maintenance, and landscape integrity. These are all components critical to maintaining FSC certification in state forests, as well as providing ecosystem services to all Pennsylvanians through clean water, fresh air, and biological diversity. These threats can be addressed through management plans, funding for invasive plant and animal control, and environmental reviews of activities that could impact ecosystem health.  

- ** Enhance state parks and forests as strong components of the state’s tourism industry— prime locations for family reunions and special events for all communities; hubs for rail-trail systems like the Great Allegheny Passage and supporting Trail Towns; information available through smart phone “apps”; partners in the DCNR Conservation Landscape Initiative regions; service locations for outfitters and other outdoor adventures; generators of small businesses such as local stores, bait shops, boat storage; and sales at larger businesses for various equipment.  

- ** State parks and forests have a history of quality management, as evidenced by awards and certifications that each has received. Retain park and forest operations with the respective bureaus, not privatized for individual or corporate gains.